Chapter I: Introduction to the College

MISSION STATEMENT OF THE COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS

To achieve pre-eminence in creating, preserving and applying knowledge and academic values, to enrich the lives of students, and to transform them into leaders and citizens who challenge the present and illuminate the future.

LSA ADMINISTRATION

Professor Terrence J. McDonald, Ph.D. (History) Dean

Professor Anthony (Rick) Francis, Ph.D. (Chemistry) Associate Dean for Special Projects

Professor James Penner-Hahn, Ph.D. (Chemistry) Associate Dean for Budget

Professor Robert Megginson, Ph.D. (Mathematics) Associate Dean for Undergraduate Education

Professor Myron Campbell, Ph.D. (Physics) Associate Dean for Natural Sciences

THE COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS

The College of Literature, Science, and the Arts at the University of Michigan is one of the nation's oldest and finest public institutions dedicated to the liberal arts. An academic powerhouse – our departments and programs rank among the top 10 in the nation – LSA excels in preparing students to assume leadership roles in a wide variety of future enterprises, whether they be academic or artistic, social or scientific, political or professional.

As many of our alumni will attest, a liberal arts education is the cornerstone for future success. Our students leave LSA well prepared to understand the value, benefits, and obligations of active citizenship in a global economy. They have developed strong analytical and communication skills, resulting in intellectual and emotional adaptability and flexibility of mind. They have gained knowledge, and have learned many of the ways it can be used to make our world a better place.

The liberal arts experience requires a rich distribution of academic disciplines and exposure to an array of courses in the natural and social sciences, in the arts, and in languages and cultures. Students are encouraged to understand broad contexts, learn discrete areas of expertise, and discover and develop new information through research. Most importantly, they are expected to be able to express what they have learned in traditional written form and through technological media.

The College of Literature, Science, and the Arts achieves these ambitious goals by offering unique strengths.

Interdisciplinarity

Key to the liberal arts tradition is interdisciplinarity, a quality for which the University of Michigan is internationally known and highly regarded. From our living-learning communities, to area studies, explorations in the arts, and cross-campus science collaborations, students are encouraged to reach across disciplinary boundaries to work with experts to solve the challenging problems of our day in new and exciting ways.

Undergraduate Research

The College's Undergraduate Research Opportunity Program (UROP) is the nation's foremost program offering undergraduate

Professor Derek B. Collins, Ph.D. (Classical Studies) Associate Dean for Humanities

Professor Susan Juster, Ph.D. (History) Associate Dean for Social Sciences

Peggy Burns, B.S. Assistant Dean for Advancement

Esrold A. Nurse, Ph.D. Assistant Dean for Student Academic Affairs

Marjorie S. Horton, Ph.D. Assistant Dean for Undergraduate Education

Evans Young, Ph.D. Assistant Dean for Undergraduate Education

students the opportunity to work alongside faculty researchers and to engage them in discovery-based learning from their earliest days on campus. UROP introduces new students to the intellectual excitement of discovery and fosters important skills endemic to the discipline of research. The program builds a sense of community for students within the larger academic world and serves as a base for their future intellectual and emotional development.

First-Year Seminars

The College's First-Year Seminar program introduces master teachers, tenured faculty from the upper divisions, to first-year students in an intimate and supportive classroom experience. The seminars, which feature small classes and provide an in-depth look at specific areas of expertise, fire the imagination, and shine a light on the possibilities for scholarship.

Resources and Support

No one is "just a number" in LSA. From the Sweetland Writing Center to the Language Resource Center, from the Science Learning Center to the Math Lab, from the Physics Help Room to the Newnan Academic Advising Center, the College goes to great lengths to provide resources to support you and ensure your success.

A Tradition of Excellence

With outstanding faculty, highly-ranked departments across the board, and a long tradition of instilling public ethics and a desire to "do good" in the world at large, the College of Literature, Science, and the Arts is a leader in education, research and public service. Our students exemplify the highest ideals of the College. They are not only talented and dedicated scholars, they are highminded young people, whose accomplishments, current and future, will further embellish our reputation.

Welcome to the College of Literature, Science, and the Arts. We have every expectation that you will take full advantage of all that we have to offer and, in turn, reflect back to the world all that is best of the liberal arts experience.

Chapter II: Student Academic Affairs

LSA Student Academic Affairs

Esrold A. Nurse, Ph.D., Assistant Dean for Student Academic Affairs

Timothy M. Dodd, M.A., Director, Newnan LSA Academic Advising Center

David Brawn, Ph.D., Associate Director, Newnan LSA Academic Advising Center

Susan Gass, M.A., Associate Director, Newnan LSA Academic Advising Center

LSA Student Academic Affairs serves students, the College, the University, and the larger society by contributing to the intellectual and personal growth of students in the liberal arts tradition. Our staff shares with teaching faculty and other academic departments the task of facilitating the student's academic path through the College. In achieving its mission, LSA Student Academic Affairs:

- Assists students in defining educational goals and in designing a plan to meet these goals.
- Guides students in assuming responsibility for their education.
- Teaches students to appreciate the values of a liberal arts and science education.
- Provides accurate and accessible information to assist students in making informed decisions.
- Articulates the standards of the College and assists students in meeting these standards.

LSA students are encouraged to be actively involved in shaping their own undergraduate experience. To help them accomplish this, the College provides academic advising support to students for reaching their academic goals and objectives. Students are expected to meet with academic advisors to discuss course selections and the wider issues of educational planning. The Comprehensive Studies Program, the Honors Program, and the Residential College Academic Services are responsible for academic advising and, in the latter two units, for academic actions and academic auditing for students admitted to their respective programs, and each of these programs is described separately in *Chapter VI*.

LSA Student Academic Affairs provides the following services: Academic Advising, Academic Standards and Academic Opportunities, Academic Auditing, Advising Technology, Central Files, and the Office of the Assistant Dean for Student Academic Affairs. Student Academic Affairs is responsible for helping undergraduates achieve the expectations and rewards of the liberal arts and science education afforded by the College. A liberal arts and science education, first and foremost, is a natural forum for an inquiring mind, and the staff of Student Academic Affairs serves students and contributes to their intellectual and personal growth by encouraging informed decision making, self-assessment, and the assumption of self-responsibility.

Office of the Assistant Dean for Student Academic Affairs 1255 Angell Hall

(734) 764-7297 www.lsa.umich.edu/facstaff/saa www.lsa.umich.edu/students/dean

The Assistant Dean of LSA Student Academic Affairs is responsible for the overall administration of the Student Academic Affairs division. The Office of the Assistant Dean provides guidance and support to the faculty of the College by communicating and interpreting College policies that govern the instructional milieu. Policy and procedural matters affecting students and their progress to degree are reVirginia Reese, M.L.S., Associate Director, Newnan LSA Academic Advising Center

Cathleen Conway-Perrin, M.A., Director, Academic Standards and Academic Opportunities

Toni Morales, M.S.W., Associate Director for the Academic Standards Board

Philip Gorman, M.A., Director, Advising Technology

Herb Loner, M.A., Associate Director, Advising Technology

solved by the Assistant Dean on behalf of the College. Also, personal assistance is provided to students who encounter difficulties that affect their college experience.

The Assistant Dean oversees the Academic Judiciary for Student Academic Affairs and is responsible for ensuring that a fair and judicious process exists for adjudicating cases of academic misconduct.

In addition, the Assistant Dean manages the communication effort between Student Academic Affairs and academic departments and programs of the College, as well as the communication between the College and other units of the University. All faculty instructors are encouraged to contact the Assistant Dean's office with any inquiry regarding student issues.

Newnan LSA Academic Advising Center

1255 Angell Hall (734) 764-0332 e-mail: ask.lsa.advising@umich.edu www.lsa.umich.edu/advising

The Academic Advising Center serves LSA undergraduates by:

- Helping them make informed decisions about educational goals and LSA curriculum.
- Encouraging them to formulate an academic program appropriate to their individual interests and abilities.
- Assisting them in evaluating their academic progress and performance.
- Providing them accurate information about LSA policies and procedures.
- Furnishing them an opportunity to explore the purposes of a liberal arts and science education.

Students first meet their academic advisors during the orientation period prior to their first term of matriculation. Student-advisor contact during orientation occurs over two days and includes a group meeting and two individual meetings. The group meeting includes a discussion of LSA and its mission as a liberal arts college. The student and advisor become acquainted during the first individual meeting and explore the student's interests and academic purpose. During the second meeting, they plan the student's first term elections. Advisors then follow up these contacts by inviting their advisees to come in for an appointment after the fall academic term has begun. The expectation is that students will want to discuss progress and challenges in the College with their advisors at this time. A similar outreach occurs during the winter academic term. Students generally choose to consult with the advisors whom they met during Orientation. Students may elect to make an appointment with any advisor who is available or to see any advisor they prefer, but are encouraged to find one advisor with whom they can relate well and to see that advisor on a regular basis. General advisors keep regular appointment hours in the Academic Advising Center (1255 Angell Hall).

First- and second-year students most often see general advisors with questions about the transition to college, course elections, College requirements, opportunities for research, internships and study abroad, and with queries about how to choose a concentration or degree program.

Students in Bachelor of Arts (AB) or Bachelor of Science (BS) programs are expected to meet with a concentration advisor and formally declare their concentration by the end of their sophomore year. Students must also have their concentration advisors sign a *Concentration Release Form* when they are planning to graduate. Concentration advisors are, most often, faculty or staff members from LSA departments who help students shape and focus their academic goals. They review students' progress in a concentration program, discuss how to apply to graduate or professional school, or explore the job skills acquired in the study of a particular discipline. Students meet with concentration advisors in their departmental offices.

Students pursuing a Bachelor in General Studies (BGS) degree must consult with general advisors but are urged to make appointments with BGS advisors. BGS advisors are members of the Office of Academic Standards and Academic Opportunities and are housed in the Academic Advising Center. They are knowledgeable and experienced staff members familiar with the College rules, regulations, policies, and curriculum. BGS students must see a BGS advisor when they declare their degree program. It is strongly recommended that BGS students see a BGS advisor in the term in which they submit graduation materials. All BGS students are encouraged to see their advisors each term to discuss course elections and program planning.

Academic Standards and Academic Opportunities

1255 Angell Hall (734) 764-0332 e-mail: academic.standards@umich.edu www.lsa.umich.edu/students/opportunities www.lsa.umich.edu/students/standards

The Office of Academic Standards and Academic Opportunities provides guidance and support to LSA undergraduates in the pursuit of their degrees. Working within Student Academic Affairs (SAA) alongside the general academic advisors in the Advising Center and the College faculty, Academic Standards advisors guide both students who encounter or anticipate academic difficulty and students who require special programmatic assistance during the course of their college career. In their role as teachers and mentors, Academic Standards advisors help students master the art of succeeding in varied opportunities offered by the College.

The Office of Academic Standards and Academic Opportunities is responsible for developing and managing processes aimed at improving the academic performance of students. In addition, the office assists students with special advising needs, *e.g.*, students with disabilities, transfer students and returning adults, cross-college transfer students, and other special student groups. Coordination of the Individualized Concentration Program and the Bachelor of General Studies degree program are also the responsibility of this office.

A major function of the Office of Academic Standards and Academic Opportunities is the interpretation of academic policies, established by the faculty of the College, that govern LSA students. While students are responsible for familiarizing themselves with College and departmental requirements, Academic Standards advisors are available to help students interpret academic policies as they apply to them individually.

Petitions from LSA students for exceptions to the College's rules and regulations are reviewed by the Academic Standards Board in the Office of Academic Standards and Academic Opportunities. Exceptions may be granted if the student presents evidence of unusual circumstances or has an alternative proposal to meet a specific requirement that is consistent with the spirit of the requirement. Stu-

dents who are members of the Honors Program petition the Honors Academic Board; Residential College students petition the RC Board on Academic Standing.

Academic Standards Board advisors provide guidance and support to students who are applying for joint degrees with other U-M Schools and Colleges, who are returning after long absences, who are encountering difficulty in making progress toward degree requirements, or who are returning adults. Academic Standards advisors also act as consultants to faculty and staff on matters of College policy and interpret College rules for parents and other interested parties outside the College.

The Academic Standards Board manages the Grade Review process each term, including judgments of probation, suspension, dismissal, and reinstatement. At the end of each term, the Board reviews records of students who show evidence of academic difficulty and determines the academic status of those students based on the policies described in *Chapter IV*.

Advising Technology

G255 Angell Hall (734) 763-1050

Staff in the Advising Technology area support the conduct of academic advising both within the LSA Advising Center and across the College. The tools which advisors use to do their jobs include the M-Pathways degree audit, the on-line student advising file, the various pages in the "Students" section of the LSA web site including the *Course Guide*, the web pages clustered under "LSA Academic Advising Resources," and print publications such as the *LSA Bulletin*. All Advising Center and departmental advisors can turn to Advising Technology staff for training or for trouble-shooting problems.

Academic Auditors

G255-B Angell Hall (734) 763-3101 e-mail: Isa.auditors@umich.edu www.lsa.umich.edu/students/gradprocedures

The Academic Auditors are responsible for checking the progress toward completion of all LSA requirements for every mainstream LSA student, and informing students of their status. This official degree audit is automatically initiated once students have applied for graduation and had release forms for all of the concentrations and academic minors submitted. At the end of Winter, Summer, and Fall terms the auditors do final audits on every student who has applied for that graduation period and, if all of the requirements have been met, authorize graduation. They then prepare the final degree list of all LSA students, which is forwarded to the Board of Regents for approval. Mainstream LSA students who have questions regarding the auditing procedure should contact the LSA Academic Auditors. Residential College or Honors students who have auditing questions should contact those programs directly.

Peer Academic Advising Office (PAAO)

G150 Angell Hall (734) 763-1553 e-mail: peeracademicadvisors@umich.edu Isapeeradvising.wordpress.com

The LSA Peer Academic Advising Office, staffed completely by undergraduates, offers a unique, comfortable atmosphere in which to obtain relevant academic information. Providing peer counseling, the PAAO presents students with an opportunity to share and receive experiences in an informal fashion. The office maintains a file of old examinations. It disseminates information concerning the newest and most innovative classes. The PAAO stocks graduate catalogs from schools across the country as well as the latest in postgraduation materials. Peer advisors also host monthly study breaks and events.

Student Records

LSA students have an academic advising file containing admissions material, test scores, unofficial copies of academic records, memoranda, correspondence, and notes which academic advisors or members of the Academic Standards Board have made about their conversations with a student. Information of a sensitive nature may be removed from the academic advising file at the discretion of a member of the Academic Standards Board or at the request of the student and placed in a Dean's file, which is a confidential file. Dean's files are also created for those students charged with some form of academic misconduct, for recording grade grievances filed by students, and for other serious violations.

Students have the right to examine most materials in their own academic files. Students who wish to review their advising files may do so by scheduling an appointment with an academic advisor. Access to Dean's files may be obtained by an appointment with Assistant Dean Nurse or his designate. Students may request duplicate copies of most information in their academic files at cost. They may also add clarifying notes and other materials to their advising files during regular business hours. Requests for deletions and additions of material from an advising file or a Dean's file should be addressed in writing to the Office of the Assistant Dean. Students should not expect normally to be able to achieve a change in their student records after the fact, as with, for example, retroactive withdrawals either from a course or from a semester's enrollment.

The Family Educational Rights and Privacy Act of 1974 (FERPA) governs both the release of and access to student records in the College and University. Access to individual student LSA advising files is restricted to official college academic advisors, members of the Academic Standards Board, and clerical staff who assist in carrying out official advising or Academic Standards Board functions. Only the Assistant Dean for Student Academic Affairs and individuals directly involved in a judiciary case have direct access to individual confidential Dean's files. FERPA grants students the right to inspect and review their education records; to request amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA; and to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the College or University in an administrative, supervisory, academic or research, or support staff position; or a student serving on an official committee, such as a judicial committee or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

Dean's files are usually maintained by the Office of the Assistant Dean for Student Academic Affairs for two years after the student has been graduated.

Other Advising Programs

The Comprehensive Studies Program

G155/1159 Angell Hall (734) 764-9128 www.lsa.umich.edu/csp

The Comprehensive Studies Program is a Michigan Learning Community that provides highly personalized advising services and enhanced courses to students who can benefit from holistic advising and instructional support during their undergraduate years. CSP Advisors form an ongoing relationship and maintain communication with their students until graduation. CSP Instructors offer smaller, more focused versions of many of the gateway courses required in a variety of fields. The program also provides tutoring, career planning and assistance with preparation for graduate school. Each year, Comprehensive Studies hosts the Summer Bridge Program for incoming first year students which is a seven week introduction to the competitive and challenging environment of a top tier research institution. Some students are invited to join Comprehensive Studies or Summer Bridge with their initial admission, but any student may join the program. CSP students are one of the most diverse groups on campus and may be enrolled in any of the schools and colleges. CSP students are encouraged to take part in the full range of undergraduate opportunities and are frequently members of other learning communities some of which include Honors, Women in Science and Engineering, Michigan Community Scholars or the Undergraduate Research program.

The LSA Honors Program

1330 Mason Hall (734) 764-6274 www.lsa.umich.edu/honors

LSA Honors students receive academic advising from the Honors Program. First-year students are assigned to an Honors advisor during summer orientation. They return to Honors advising when registering for courses, adjusting their course schedules, submitting petitions to the Honors Academic Board, and applying to graduate. Honors students consult regularly with their advisors in the Honors Office and, after they are admitted to a concentration, with their Honors concentration advisors as well. Many of these conversations turn on students' academic direction and goals, their understanding of the value of a liberal arts education, and graduate plans.

Residential College Academic Advising

134 Tyler (East Quadrangle) (734) 763-0032 www.rc.lsa.umich.edu

The Residential College is a four-year undergraduate liberal arts program with about 900 students and 60 faculty, situated within LSA. All RC Advisors are RC faculty members and are available to meet with students to discuss RC and LSA requirements, possible concentrations, graduation requirements, *etc.* The Board on Academic Standing considers petitions submitted by RC students relating to requirements, deadlines, and academic circumstances. Appointments with academic advisors can be scheduled by calling the RC Academic Services Office at (734) 763-0032, or by stopping by the offices at 134 Tyler.

Chapter III: Degree Requirements and Graduation Procedures

The College awards three basic degrees, the Bachelor of Arts (A.B.), the Bachelor of Science (B.S.), and the Bachelor in General Studies (B.G.S.). The Bachelor of Science in Chemistry (B.S. Chem.) is also granted. The Bachelor of Arts and Bachelor of Science degrees require a general understanding of the humanities, natural sciences, and social sciences as well as in-depth study of at least one subject area. Students are also required to achieve competency in the use of the English language and to acquire proficiency in a language other than English. They must elect one or two courses designed to develop skills in quantitative reasoning and one course addressing issues involving race and ethnicity. Beyond these general requirements, students may choose elective courses to complete a minimum of 120 credits. The Bachelor of Science degree requires 60 credits in physical and natural science and mathematics. Students pursuing a secondary teaching certificate are required to earn additional credits through the School of Education.

The Bachelor in General Studies degree encourages students to take responsibility for structuring their own multidisciplinary academic programs. This degree requires a minimum 120 credits, and includes First-Year Writing, Upper-Level Writing, Race & Ethnicity, and Quantitative Reasoning requirements. At least 60 credits of courses numbered 300 or above must be completed with no more than 20 of these 60 credits from one SUBJECT.

The Bachelor of Science in Chemistry is described in Chapter VI under "Chemistry."

Honors students must consult the Honors Program about special degree requirements, courses, policies, and procedures.

Students are responsible for knowing and meeting degree requirements. A student may comply either with the degree requirements stated in the *Bulletin* effective during the first term of enrollment in the College or with those in the *Bulletin* effective at the time of graduation. Concentration and academic minor requirements are those applicable at the time the student *declares* the program.

Selection of a Degree Program

Students should declare their choice of degree program sometime before the beginning of the junior year. This is done in consultation with a concentration or BGS academic advisor.

Common Requirements for the A.B., B.S., and B.G.S. Degrees

Credits and Grade Point Average (GPA)

To qualify for a degree from the College, a student must complete a minimum 120 credits with a cumulative grade point average (GPA) of 2.0 (C). The overall GPA of courses included in the field of concentration (see *Concentration Policies* below) for an A.B. or B.S. degree or counted toward the 60 credits of upper-level courses required for a B.G.S. degree must be at least 2.0. (GPA is explained in *Chapter IV.*)

Writing Requirements

Administered by the Gayle Morris Sweetland Writing Center, LSA writing requirements consist of a First-Year Writing Requirement and an Upper-Level Writing Requirement. A minimum grade of C- in a Sweetland-approved course is necessary to satisfy each requirement.

The purpose of these writing requirements is to provide students with both introductory and advanced instruction in college-level writing. Courses from the 100 to the 400 level aim to enhance students' critical thinking and writing skills and to prepare them for writing both in their undergraduate years and in their future educational and professional work.

First-Year Writing Requirement (FYWR). The goal of the First-Year Writing Requirement is to prepare students for the type of writing most often assigned and valued in University classes.

The First-Year Writing Requirement should be completed in the first year with a minimum grade of C– and must be satisfied before electing a class to satisfy the Upper-Level Writing Requirement. Advanced Placement (AP) credit is not equivalent to the FYWR.

Overall learning goals for students are as follows:

- produce complex, analytic, well-supported arguments that matter in academic contexts;
- read, summarize, analyze, and synthesize complex texts purposefully in order to generate and support writing;
- demonstrate an awareness of the strategies that writers use in different rhetorical situations;
- develop flexible strategies for organizing, revising, editing, and proofreading writing of varying lengths to improve development of ideas and appropriateness of expression; and
- collaborate with peers and the instructor to define revision strategies for particular pieces of writing, to set goals for improving writing, and to devise effective plans for achieving those goals.

First-Year Writing Requirement courses offered for a particular term can be found by using the advanced search function in the *LSA Course Guide* and selecting "first-year writing" under the "Other Requirements/Groupings" feature.

Rather than placing students in the course Sweetland judges appropriate for them, students are asked to select their first college writing course in consultation with their advisor. Prior to attending Orientation, students complete an online reading and writing assignment and answer questions about that experience and their previous experiences with writing. Students receive a course recommendation based upon their responses to this assignment. When meeting with their advisor during Orientation, students look at themselves as writers, discuss their course recommendation, and choose a writing course that will enable them to become more proficient and confident in University-level academic writing.

Students who seek a more individualized and gradual introduction to college writing, may want to take *SWC 100: Transition to College Writing* offered by the Sweetland Writing Center before a First-Year Writing Requirement course. This course provides intensive one-on-one feedback on writing assignments, as well as the creation of an electronic portfolio, which enables students to integrate technology into their learning and reflect upon their development as writers.

International students who speak English as a second language may want to take *ELI 120: Academic Writing for International Under-graduates* offered by the English Language Institute before a First-Year Writing Requirement course. This course helps strengthen the writing skills of international undergraduates through critical reading and follow-up writing of text-types such as summary, critique and argument. ELI 120 can be taken at the same time as SWC 100 or prior to SWC 100.

Transfer students who have completed writing courses at another college or university may be able to use those courses to satisfy the First-Year Writing Requirement. The list of currently approved and non-approved courses is available at:

www.lsa.umich.edu/swc/requirements/first-year/transfer

This webpage also provides information on what steps to take if the transfer course is not on either list.

Upper-Level Writing Requirement (ULWR). The goal of the Upper-Level Writing Requirement is to teach students to recognize and master the writing conventions of their chosen discipline.

Students must satisfy the First-Year Writing Requirement before electing one of the courses approved to satisfy the ULWR. A minimum course grade of C- is required in order to satisfy the ULWR.

Overall learning goals for students are as follows:

- logically organize their thoughts into writing;
- use clear and concise language;
- analyze information masterfully;
- · incorporate appropriate evidence into their analyses; and
- · understand the central concepts, approaches, materials and written conventions in their chosen discipline.

Over the course of the term, students will complete several writing assignments that are related to course content and intended to help students practice the rhetoric of their specific discipline. Possible assignments may include journals, research papers, critical analyses, and/or lab reports. Students will receive a great deal of feedback on their writing from their ULWR instructor and are expected to revise much of their work throughout the term.

Upper-Level Writing Requirement courses offered for a particular term can be found by using the advanced search function in the LSA Course Guide and selecting "upper-level writing" under the "Other Requirements/Groupings" feature. A course approved to meet the requirement one term is not necessarily approved to meet the requirement in subsequent terms.

Quantitative Reasoning

The goal of the Quantitative Reasoning requirement is to ensure that every graduate of the College achieves a certain level of proficiency in using and analyzing quantitative information.

Quantitative Reasoning is the methodology used to analyze quantitative information to make decisions, judgments, and predictions. It involves defining a problem by means of numerical or geometrical representations of real-world phenomena, determining how to solve it, deducing consequences, formulating alternatives, and predicting outcomes. QR courses may come from a wide range of disciplines representing the natural and social sciences.

Students may fulfill this requirement by:

- · passing one course of three of more credits designated for full QR credit (QR/1); or
- · passing two courses (at least one of which must be of three or more credits) designated for half QR credit (QR/2).

Advanced Placement (AP) courses may not be used to meet the Quantitative Reasoning requirement.

Courses transferred from another college or university do not generally carry QR credit, except in the following circumstances:

- 1. QR is considered fulfilled for all science, math, and computer science concentrators who transfer in the required prerequisite courses:
- 2. Transfer credit of at least three credits for PHYSICS 125, 126, 140, 240, or a statistics course receive (QR/1) credit.

Courses used to satisfy the QR requirement also may satisfy other College requirements.

Race & Ethnicity

At some point before graduation, students must receive credit for one course of at least three credits from a list of Race & Ethnicity courses published each term on the LSA website:

www.lsa.umich.edu

These courses will address issues arising from racial or ethnic intolerance and will meet the following criteria:

- 1. Required content. All courses satisfying the requirement must provide discussion concerning:
 - (a). the meaning of race, ethnicity, and racism;
 - (b). racial and ethnic intolerance and resulting inequality as it occurs in the United States or elsewhere;
 - (c). comparisons of discrimination based on race, ethnicity, religion, social class, or gender.
- 2. Required focus. Every course satisfying the requirement must devote substantial, but not necessarily exclusive, attention to the required content. Although it is hoped that many of these courses will focus on the United States, it is not required that they do so. Courses that deal with these issues in other societies, or that study them comparatively, may also meet the requirement.

Credits transferred from another college or university do not meet the requirement except by successful petition to the Academic Standards Board.

Credits used to satisfy the R&E requirement also may be used to satisfy other college requirements.

Non-LSA Course Work

Students in the College of Literature, Science, and the Arts must complete a program of study consisting of courses primarily from LSA or equivalent transfer credit.

LSA courses are listed in this Bulletin. Courses offered by other academic units (e.g., Stephen M. Ross School of Business, Education, Engineering) of the University of Michigan (Ann Arbor) and not listed in this Bulletin are defined as non-LSA courses. Out-of-residence credit may transfer to the College as either LSA or non-LSA credit.

Non-LSA course work earns credit toward a degree and honor points according to the following policies:

- 1. Candidates for an A.B., B.S., or B.G.S. degree must complete a minimum 100 credits of LSA courses, allowing 20 credits of non-LSA course work in the minimum 120 required for the degree. Non-LSA credits in excess of 20 will be included in the calculation of a student's GPA, but will not be counted toward the 120 credits needed for a Bachelor's degree in LSA.
- 2. Courses cross-listed between LSA and another school or college of the University of Michigan (Ann Arbor) count toward the reguired number of LSA credits.
- School of Kinesiology courses are recorded as "not for credit" for 3. LSA students except for the following courses for which LSA students may receive non-LSA degree credits:

Athletic Training (AT) 310;

Kinesiology (KINESLGY) 421, 422, 424, 441, 442, 443, 444, 445, 471, 505, 513, 533, and 542;

Movement Science (MOVESCI) 110, 230, 241, 250, 280, 320, 330, 340, 421, 422, 424, 432, 433, 441, 442, 443, 445, and 471:

Physical Education (PHYSED) 310, 331, and 444;

Sport Management (SM) 101 (No credit for LSA students with junior or senior standing), 111, 217, 333, 342, 346, 431, 434, 437, and 446.

- 4. University of Michigan School of Music, Theatre & Dance ensemble courses yield non-LSA degree credit but no honor points.
- Transfer credit for Speech and Journalism courses are counted as non-LSA.
- 6. The College does not grant degree credit for any courses offered through the Military Officer Education Program except for those courses cross-listed in other academic units.

Requirements Particular to the B.G.S. Degree

Not open to Honors or Residential College students

The Bachelor in General Studies degree requires that at least 60 of the 120 credits must be upper-level (numbered 300 or above). Below are specific policies regarding the 60 upper-level credits.

- 1. No more than 20 credits of upper-level courses may be counted from one department unless a department has multiple SUBJECTs.
- 2. If a department has several SUBJECTs, a B.G.S. student may elect up to 20 credits of upper-level credits from each SUBJECT.
- 3. No more than 60 credits may be elected in *all* SUBJECTs of a department.
- 4. At least 40 of the required 60 upper-level credits must be in LSA courses.
- 5. There is no expectation that 20 credits must be elected in any one SUBJECT.
- 6. More than 20 upper-level credits from one SUBJECT may be incorporated in the degree total of 120 credits as long as no more than 20 of these are counted in the 60 upper-level total.
- 7. A student must earn an overall GPA of at least 2.0 in the courses used to meet the requirement of 60 upper-level credits.

Requirements Particular to the A.B. and B.S. Degrees

By the end of the sophomore year, students should have met the language requirement, made substantial progress toward completing an area distribution plan, and completed prerequisites for a concentration.

The Language Requirement

LSA's language requirement seeks to prepare students for a world that has been profoundly transformed by the forces of globalization. Language shapes both how we understand and how we negotiate our world; learning a second language provides both a deep awareness of differences (linguistic and cultural) and a means to bridge them. Informed respect for other cultures, tolerance, cosmopolitanism, self-awareness, and flexibility are the hallmarks of a liberal education, and the study of foreign languages fosters precisely these capacities.

Fourth-term proficiency in a language other than English is required and may be met by any one of:

- 1. Certified proficiency on a University of Michigan reading and/or listening test. Students with previous experience in the language they plan to use to meet the language requirement must take a language placement test. *A student may not elect for credit a language course below this placement level without departmental permission.*
- 2. Credit for a University of Michigan fourth-term language course listed below with a grade of C– or better.

African Languages (CAAS 226) American Sign Language (LING 251) Arabic Classical (AAPTIS 582) Modern Standard (one of: AAPTIS 202, 204, 205, 216, 218, 419, 420) Armenian Eastern (AAPTIS 282 or ARMENIAN 282) Western (AAPTIS 272 or 273, or ARMENIAN 272 or 273) Bengali (ASIANLAN 286) Bosnian, Croatian, and Serbian (BCS 232 or 225) Central Asian Languages (AAPTIS 250 or ASIANLAN 250)

Czech (CZECH 242) Dutch (DUTCH 232) Filipino (ASIANLAN 212) French (FRENCH 230 or 232, or RCLANG 290) German (GERMAN 230 or 232 or 291, or RCLANG 291) Greek Classical (GREEK 301 and 302, or 405) Biblical (GREEK 307 and 308, or ACABS 307 and 308) Modern (MODGREEK 202) Hebrew Classical (ACABS 202) Modern (HJCS 202) Hindi (ASIANLAN 216 or 217) Indonesian (ASIANLAN 222) Italian (ITALIAN 232 or 230) Japanese (ASIANLAN 226 or 227 or 229, or RCLANG 296) Korean (ASIANLAN 236 or 237 or 238) Latin (LATIN 232 or 233 or 295, or RCLANG 295) Ojibwe (AMCULT 323) Persian (AAPTIS 242 or 243) Polish (POLISH 222) Portuguese (PORTUG 232 or 230) Punjabi (ASIANLAN 246) Russian (RUSSIAN 202 or 203 or 223 or 225, or RCLANG 293) Sanskrit (ASIANLAN 252) Spanish (SPANISH 230 or 232, or RCLANG 294) Swahili (CAAS 216) Swedish (SCAND 234) Tamil (ASIANLAN 256 or 257) Telugu (ASIANLAN 282) Thai (ASIANLAN 262) Tibetan Classical (ASIANLAN 468) Modern (ASIANLAN 266) Turkish (AAPTIS 252 or 255) Ukrainian (UKRAINE 252 or 203) Urdu (ASIANLAN 272) Uzbek (AAPTIS 253) Vietnamese (ASIANLAN 276) Yiddish (YIDDISH 202 or JUDAIC 202)

3. Credit for a University of Michigan language course which presumes a fourth-term proficiency in a language (except for 305 and/or 306 in French, German, Italian, and Spanish, Spanish 290/American Culture 224, and Spanish 308).

Students must earn a grade of C- or better in the prerequisite language course to proceed to the subsequent course. Any exception to this rule must be granted by a designated faculty representative in the department.

The final course in an elementary language sequence used to satisfy the Language Requirement must be elected on a graded basis.

The language requirement cannot be satisfied by out-of-residence credit which is elected after the student has begun degree enrollment in LSA unless the appropriate language department has approved that plan in advance.

Students who wish to meet the requirement with proficiency in a language not listed in the table above should contact the Academic Standards Board.

A student whose first language is not English and who attended a high school where English was not the language of instruction is considered to have met the requirement.

Chinese (ASIANLAN 202, 203, or 204)

Area Distribution

By means of this requirement the College seeks to instill an understanding and an appreciation of the major areas of learning. Students are not expected to master all areas in detail, but should develop a coherent view of essential concepts, structures, and intellectual methods that typify these disciplines.

Courses offered by the academic departments and programs of the College are divided into five area categories:

- the *natural sciences*
- the social sciences
- the *humanities*
- mathematics and symbolic analysis, and
- creative expression

Each of these divisions represents a different perspective on human knowledge and learning; some departments and programs overlap these divisions while others may stand outside them.

Definitions

Natural Science

Natural Science courses focus on the understanding of our natural world through application of the scientific method, which emphasizes observation, experimentation, formation of testable hypotheses about natural phenomena, and testing of those hypotheses.

Social Science

Social science courses focus on the study of the social behavior of individuals, groups, societies, nations, and states. Social scientists often use qualitative methods, such as ethnography, oral history, and descriptive analysis of archival materials and artifacts. They also use quantitative tools grounded in the scientific method to collect and analyze data, and form testable hypotheses about social phenomena.

Humanities

Humanities courses focus on the human condition as expressed, for example, in literature, religion, philosophy, and the visual and performing arts. Its methods are analytical, critical, and speculative, and can often be contrasted with the quantitative and qualitative methods employed in the social sciences.

Interdisciplinary courses combine the approaches of two area category in order to examine the differences and similarities between disciplines and explore alternative ways of discovering and organizing knowledge.

Area Distribution Requirement

All candidates for the Bachelor of Arts and Bachelor of Science degrees from the College must fulfill the 30-credit Distribution Requirement.

This broad intellectual experience, which forms an essential part of a liberal arts education, is to be achieved in the following way:

- 1. Students must complete 7 credits in each of the following three areas: Natural Science (NS), Social Science (SS), and Humanities (HU), for a total of 21 credits.
- Students must also complete 3 additional credits in three of the following five areas: (NS), (SS), (HU), Mathematical and Symbolic Analysis (MSA), and Creative Expression (CE), for a total of 9 credits. Credits in courses designated Interdisciplinary (ID) may be used to satisfy up to 9 credits of this part of the requirement.

General Policies for Area Distribution Plans

An area distribution plan *may* include:

- 1. Prerequisites to a concentration elected outside the department of concentration
- 2. Courses elected pass/fail, credit/no credit, or by any other nongraded pattern

- Courses elected to satisfy *one* of two concentration plans by students who elect a double concentration (see "Double Concentration" below in this chapter).
- 4. Transfer credit from other schools and colleges of the University of Michigan and from other academic institutions
- A course elected outside the department of concentration or concentration requirements used to meet the Upper-Level Writing Requirement, the Race & Ethnicity Requirement, or the Quantitative Reasoning Requirement
- 6. Courses in non-LSA units offering courses with Creative Expression designation (Credits are counted as non-LSA):

Art & Design (ARTDES)

- 110. Digital Studio I
- 170. Drawing for Non-Majors
- 171. Printmaking for Non-Majors
- 172. Painting for Non-Majors
- 173. Digital Photography for Non-Majors
- 174. Watercolor for Non-Majors
- 175. Life Drawing for Non-Majors
- 176. Graphic Imaging for Non-Majors
- 177. Metals for Non-Majors
- 178. Animation for Non-Majors
- 179. Sculpture for Non-Majors
- 181. Clay for Non-Majors
- 182. Wood for Non-Majors
- 220. Tools, Materials & Processes Studio III: Time
- 230. Concept Form and Context Studio II
- 231. Concept Form and Context Studio III

Architecture (ARCH)

- 201. Basic Drawing
- 202. Graphic Communication
- 218. Visual Studies

Performance – Piano (PIANO)

110. Performance 111. Performance

Dance (DANCE)

100. Introduction to Dance 261. Congolese Dance 1 262. Congolese Dance 2

Ensemble (ENS): All Courses 100-399

Courses (100-399) in Music Performance SUBJECTS other than Piano Performance, may also be used for Creative Expression, but enrollment is restricted to students of advanced ability.

An area distribution plan may not include:

- 1. Any course from the department of concentration
- 2. Required cognates in a concentration plan
- 3. Courses at the 400-level and above.
- 4. Experiential courses, Independent Study, and University (UC) mini-courses
- 5. Advanced Placement credits.

Concentration

The concentration requirement provides the opportunity to acquire in-depth knowledge in one academic discipline while developing and refining skills that will serve students in a wide array of academic and non-academic endeavors.

All concentrations and minors are listed on the official transcript. However, concentrations and minors are not listed on the diploma unless a student receives Honors in a concentration through the Honors Program.

Students normally declare a concentration during the second term of the sophomore year. To declare a concentration, a student should

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contact the appropriate department and make an appointment with a concentration advisor. After developing a concentration plan with the student, the concentration advisor has the concentration entered on the student's record.

A student may change the concentration plan with the approval of the concentration advisor.

Students may change concentrations after meeting with a concentration advisor in a different department.

Concentration Policies

- 1. Each A.B. or B.S. student must develop a concentration plan in consultation with a concentration advisor, who must also approve it.
- 2. Course requirements for the various concentration programs range from 24 to 48 credits at the 200-level and above.
- 3. No more than 60 credits in a concentration (including courses in one department and the required cognates) may be counted toward the 120 for the degree. When an academic department has two or more SUBJECTs (*e.g.*, Anthropology, Romance Languages and Literatures), a student may count a total of 60 credits from that department, not from each SUBJECT.
- 4. No more than 60 credits in one language (other than English) may be counted in the 120 required for a degree. However, the 60 credit limit on courses elected in one concentration may be exceeded when the excess credits have been used to meet the language requirement.
- Students electing an area, interdepartmental, or special concentration may count no more than 60 credits in any one department.
- 6. Students may not elect courses in a concentration plan, including required cognates, using the Pass/Fail grading option.
- 7. A department or program may include Experiential or Directed Reading / Independent Study courses that are graded on a Credit / No Credit basis in its concentration program, but all other concentration courses must be taken for a grade.
- 8. No course from the department of concentration or a required course in a concentration plan may be part of a distribution plan (see, however, "Double Concentration" below).
- 9. A student must earn an overall GPA of at least 2.0 in courses taken in the field of concentration. This includes all courses taken in the department of concentration (prerequisites, required courses, and electives) and any required cognates. Exceptions for specific concentrations are in *Chapter VI*.
- 10. Courses that are part of the student's concentration plan may also meet the Upper-Level Writing Requirement, the Race & Ethnicity Requirement, or the Quantitative Reasoning Requirement.
- 11. Effective in Fall 2004, students graduating with an Honors concentration are required to earn an overall GPA of 3.4. Individual departments may have higher GPA requirements for concentration courses. Check Honors concentration guidelines in individual departments in *Chapter VI*.

Concentration Programs

Afroamerican and African Studies (CAAS) American Culture Ancient Civilizations and Biblical Studies (ACABS) Anthropology Arabic, Armenian, Persian, Turkish, and Islamic Studies (AAPTIS) Arts and Ideas in the Humanities* Asian Studies Astronomy and Astrophysics Biochemistry Biology Biophysics Brain, Behavior, and Cognitive Science (BBCS) Cell and Molecular Biology (CMB) Cell and Molecular Biology and Biomedical Engineering Chemistry Classical Archaeology **Classical Civilization** Classical Languages and Literatures **Communication Studies Comparative Literature** Computer Science Creative Writing and Literature* Drama* Earth Systems Science Ecology and Evolutionary Biology (EEB) Economics Enalish Environment **Evolutionary Anthropology** French and Francophone Studies General Biology **Geological Sciences** German Greek Hebrew and Jewish Cultural Studies (HJCS) History History of Art Individual Concentration Program (ICP) Informatics Interdisciplinary Physics International Studies Italian Judaic Studies Latin Latin American and Caribbean Studies (LACS) Latina/o or Hispanic-American Studies Linguistics Mathematics Medieval and Early Modern Studies (MEMS) Microbiology Middle Eastern and North African Studies (MENAS) Modern Greek Studies Music Near Eastern Civilizations (NEC) Neuroscience Organizational Studies (OS) Philosophy Physics Plant Biology Polish **Political Science** Psychology Romance Languages and Literatures Russian Russian, East European, and Eurasian Studies (REES) Screen Arts and Cultures Social Theory and Practice* Sociology Spanish Statistics Theatre & Drama Women's Studies

* open only to Residential College students

Individual Concentration Program

Students with academic interests outside existing concentration programs may propose their own field of concentration and, on approval, elect the Individual Concentration Program which is described in *Chapter VI*.

Honors Concentration

All departments and interdisciplinary programs offer Honors concentrations. At the beginning of the third year, students may apply to a departmental Honors Concentration Program. Students who meet departmental criteria are eligible to apply whether or not they have previously been in the Honors Program. Admission of upperclass students is determined by Honors concentration advisors in various LSA departments and programs.

Many departments require their Honors concentrators to register for special seminars and independent study research courses. During the senior year, Honors concentrators carry out research and write a thesis under the direction of a faculty mentor. With only a few exceptions, graduation with Honors requires the completion of a Senior Honors thesis.

After an evaluation of the thesis and the overall academic record, Honors concentration advisors recommend that students graduate with an Honors degree.

The department will then send one of four possible recommendations to the Honors Office: "No Honors," "Honors," "High Honors," or "Highest Honors." "No Honors" is given for work that does not meet departmental standards, and for students with GPAs under 3.4. The other three will be posted on the final transcript and diploma.

Honors concentration programs are described under the relevant departmental listings in this *Bulletin*.

Double Concentration

A student electing a double concentration must meet all requirements for both concentrations. Courses, including cognates, elected as part of one concentration plan may be used, when appropriate, to satisfy the requirements of the second concentration. Courses from one of the concentrations may be used toward distribution. Each concentration plan must be developed in consultation with and approved by a concentration advisor.

See "Graduation Procedures" below concerning double concentration graduation policies.

Academic Minors

Students in the College may elect one or more of the academic minors offered by units within the College of LSA. Electing to earn an academic minor is optional, and there is no limit on the number of academic minors a student may elect. Academic minors, along with their requirements and other pertinent information, are described in detail in *Chapter VI* of this *Bulletin* and on the LSA website at www.lsa.umich.edu

An academic minor will require no less than 15 credits of course work, will show structure and coherence, and will contain some upper-level courses. At least 10 out of the 15 credits must be taken in-residence. Students who declare and complete an approved academic minor will receive a notation on their student transcript but not on their diploma.

Policies for the Academic Minor

- 1. Each A.B. or B.S. student who wishes to complete an approved academic minor must develop a plan for the academic minor in consultation with a department or program advisor, who must also approve it.
- After developing a plan for an academic minor with the student, the program or department advisor has the academic minor entered on the student's record.

- 3. The academic minor is not an option available to students earning the B.G.S. degree.
- 4. An individually designed academic minor is not allowed.
- 5. Courses in the academic minor must be elected for a grade.
- 6. Students may not elect a concentration and an academic minor, or two academic minors, in the same department or program, unless a specific exemption to this policy is noted in the academic minor description in this *Bulletin*.
- 7. No course may be used to satisfy the requirements of more than one academic minor.
- Students may not use more than one course to meet both the requirements of an academic minor and the prerequisites or requirements of a concentration.
- 9. If the academic minor has prerequisites, courses used as prerequisites to a concentration may also count as prerequisites to the academic minor.
- 10. Advanced Placement credits may not be used to meet the *re-quirements* of an academic minor, but may be used to meet *pre-requisites*.
- 11. Courses elected to meet the requirements of an academic minor also may be part of the student's area distribution plan.
- 12. A student must earn an overall GPA of at least 2.0 in the academic minor, including any prerequisites.
- 13. Courses that are part of a student's academic minor may also meet the Language Requirement, the Upper-Level Writing Requirement, the Race & Ethnicity Requirement, or the Quantitative Reasoning Requirement.
- 14. Students may not complete an academic minor after graduation, and an academic minor may not be converted to a concentration after graduation.

Academic Minor Programs

Consult the individual department listing (as shown in parentheses) for a description of the academic minor.

African American Theatre (Theatre & Drama) Afroamerican and African Studies (Center for Afroamerican and African Studies) Anthropology (Anthropology) Applied Statistics (Statistics) Asian Languages and Cultures (Asian Languages and Cultures) Asian Studies (Asian Languages and Cultures) Asian/Pacific Islander American Studies (Program in American Culture) Astronomy and Astrophysics (Astronomy) Biochemistry (Chemistry) Biological Anthropology (Anthropology) Biology (Program in Biology) **Biophysics (Program in Biophysics)** Chemical Measurement Science (Chemistry) Chemical Physics (Chemistry) Chemistry (Chemistry) Classical Archaeology (Classical Studies) Classical Civilization (Classical Studies) Community Action and Social Change (School of Social Work) Complex Systems (Center for the Study of Complex Systems) Computer Science (Electrical Engineering and Computer Science) Crime and Justice (Residential College) Cultures & Literatures of Eastern Europe (Slavic Languages and Literatures) Czech Language, Literature, and Culture (Slavic Languages and Literatures) Drama: Text-to-Performance (Residential College)

Studies)

Studies)

Biology)

Science)

Literatures)

History (History)

Studies)

Studies)

Studies)

Early Christian Studies (Near Eastern Studies and Classical Mathematics (Mathematics) Earth Sciences – General (Geological Science) East European Studies (Center for Russian and East European Studies) Ecology and Evolutionary Biology (Ecology and Evolutionary Economics (Economics) Electrical Engineering (Electrical Engineering and Computer Environment (Program in the Environment) European Union Center) Environmental Geology (Geological Science) Epistemology and Philosophy of Science (Philosophy) French and Francophone Studies (Romance Languages and Gender and Health (Women's Studies Program) Gender, Race, and Ethnicity (Women's Studies Program) General Philosophy (Philosophy) Geochemistry (Geological Science) German Studies (Germanic Languages and Literatures) Physics (Physics) Global Change (Program in the Environment) Global Media Studies (Screen Arts and Cultures) Literatures) History of Art (History of Art) History of Philosophy (Philosophy) International Studies (Center for International and Comparative Literatures) Italian (Romance Languages and Literatures) Judaic Studies (Frankel Center for Judaic Studies) Language, Literature, and Culture of Ancient Greece (Classical Language, Literature, and Culture of Ancient Rome (Classical and Literatures) Statistics (Statistics) Latin American and Caribbean Studies (Latin American and Caribbean Studies Program)

- Latina/o Studies (Program in American Culture)
- Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) and Sexuality Studies (Women's Studies Program)

Linguistics (Linguistics) Medical Anthropology (Anthropology) Medieval and Early Modern Studies (Medieval and Early Modern Mind and Meaning (Philosophy) Modern Greek Studies (Classical Studies) Modern Middle Eastern and North African Studies (Center for Middle Eastern and North African Studies) Modern European Studies (Center for European Studies -Moral and Political Philosophy (Philosophy) Museum Studies (Museum Studies) Music (University of Michigan School of Music, Theatre & Dance) Native American Studies (Program in American Culture) Near Eastern Languages and Cultures (Near Eastern Studies) Oceanography (Geological Science) Paleontology (Geological Science) Peace and Social Justice (Residential College) Plant Biology (Program in Biology) Polish Language, Literature, and Culture (Slavic Languages and Political Science (Political Science) Polymer Chemistry (Chemistry) Russian Language, Literature, and Culture (Slavic Languages and Russian Studies (Center for Russian and East European Studies) Scandinavian Studies (Germanic Languages and Literatures) Science, Technology, and Society (Residential College) Spanish Language, Literature, and Culture (Romance Languages Ukrainian Language, Literature, and Culture (Slavic Languages and Literatures)

Urban Studies (Residential College)

Graduation Procedures

In order to be considered for graduation, every student must have an official academic degree audit. This audit informs students what degree requirements they have already fulfilled, and those that still need to be completed. Students should have their audit completed prior to registering for their last semester of classes in order to ensure they are registering for the appropriate courses. To receive an audit, students pursuing an A.B., B.S., or B.S.Chem. degree must complete the following steps:

- Apply for graduation by logging onto Wolverine Access. Go to Student Business, click on "Apply for Graduation," and follow the prompts. This is also where students verify their permanent address and specify how they want their name to appear on the diploma.
- 2. Have a release submitted for every concentration and academic minor the student has declared. A release is submitted after students meet with a concentration or academic minor advisor to discuss what requirements they have met and how they are going to fulfill the remaining requirements. The department then forwards this information to the appropriate auditor's office.

Students pursuing a Bachelor in General Studies (BGS) do not need to have a release submitted. They only need to apply for graduation on Wolverine Access.

Students enrolled in the Residential College receive their audits from the Residential College. Students who are writing an Honors Thesis in any of their concentrations receive their audits from the Honors Program (refer to their listings in *Chapter VI* for details on their programs). All other students receive their audits from LSA Academic Auditors' Office.

Generally, audits are completed and e-mailed to students' umich.edu e-mail account within two weeks after the student has applied for graduation and all of the releases have been submitted. It is important to read this audit carefully because the information within the audit will be used to clear students for graduation.

The auditors will do a final audit on every student after all grades have been posted to the student's transcript to verify that the requirements are complete. Students who have completed all requirements will be mailed a *Verification of Graduation Letter* from the Academic Auditors as evidence that a degree will be awarded. These students will receive their diploma approximately 8 weeks after commencement. Students who have not completed the degree requirements by the end of the term for which they applied will be sent an e-mail and letter that states their remaining requirements. To be considered for a future graduation date, they will need to apply again in Wolverine Access and/or contact their appropriate auditing office.

A Commencement Program is published for the May and December Commencement ceremonies. This program includes the names of all LSA degree *candidates* for that graduation period. Because there is no Commencement ceremony in August, August candidates are listed in a separate section in both the May and December programs. To have their name in the book, students need to apply for graduation no later than five weeks after classes begin in the term they plan to graduate.

The LSA diploma displays the degree conferred (Bachelor of Arts, Bachelor of Science, Bachelor of Science in Chemistry, or Bachelor in General Studies). Concentrations and minors are not listed on the diploma unless a student receives Honors in a concentration through the Honors Program. All concentrations and minors are listed on the official transcript. Students with multiple concentrations receive one degree and one diploma.

Students may complete a second concentration any time after graduation by registering as a non-degree candidate through the Admissions office. Once the concentration requirements are complete, their departmental advisor must submit an on-line Concentration Release form to the Academic Auditors so the second concentration can be added to the transcript. Students may not complete an academic minor after graduation, or change an academic minor into a concentration. They also may not change their degree *(e.g., A.B.* to B.S.) after graduation.

LSA Graduation Procedures: www.lsa.umich.edu/students/gradprocedures

Commencement website: www.umich.edu/~gradinfo

Chapter IV: Academic Policies and Procedures

The policies and procedures described in this chapter govern the conduct of academic matters affecting students enrolled in the College. Exceptions to these policies may be granted only upon written petition to the Academic Standards Board. *Honors students petition the Honors Academic Board; Residential College students petition the RC Board on Academic Standing (BOAS).*

General College Policies & Procedures

Academic Load and Normal Degree Progress

In defining a normal academic load, a distinction must be made between what load students are permitted to elect and what is recommended. The College does not require students to be enrolled full time, although this may be a requirement for financial aid or auto or health insurance. To be considered full-time, an undergraduate must be registered in at least 12 credits in a full term or 6 credits in a halfterm. Students may elect up to 18 credits in a full term and 9 credits in a half-term without special approval from an academic advisor. Generally, a program of four or five courses totaling 13 to 17 credits is considered typical, and first-year students are usually advised to elect four courses (14 to 16 credits). Since the considerations for determining academic loads are often complex and personal, the College encourages students to discuss each term's elections with an academic advisor.

Class Standing

Class standing is determined by the number of credits earned toward a degree:

First-Year:	fewer than 25 credits
Sophomore:	25 through 54 credits
Junior:	55 through 84 credits
Senior:	85 credits or more

Residence Policy

At least 60 of the 120 credits required for a degree must be earned in residence. Residence credit is granted for courses elected on the Ann Arbor campus or at off-campus sites directed by Ann Arbor faculty present on the site.

- At least 30 of the last 60 credits for the degree must be earned in residence.
- No more than 60 credits may be earned through Advanced Placement, credit by examination, correspondence courses, transfer credit from other institutions, and off-campus independent study.
- Cross-campus transfer students may receive credit for a maximum of 90 credits from a previous college or school on the Ann Arbor campus. No more than 60 of these 90 credits may have been completed at other institutions. LSA residency requires that a student earn 30 credits in the College of Literature, Science, and the Arts.

Transfer Credit

Students who transfer from a two-year college are permitted 60 transfer credits (62 if an Associate's degree requiring 62 credits has been completed). Students who have completed 60 credits toward an LSA degree cannot earn degree credit for courses elected at a two-year college.

Up to 60 credits may be transferred from the Flint and Dearborn campuses of the University of Michigan. Courses completed at these campuses are defined as *out-of-residence* credit (effective September 1, 1976), even though they carry Michigan Honor Points.

Even if a course is transferable, credit is not allowed if the final grade earned is "C-" or lower. This includes all transferable credit

earned outside the University of Michigan. (All credits and grades from the University of Michigan–Dearborn and –Flint campuses transfer.)

Students often elect a college course while in high school through a dual enrollment program. There are two situations where these courses will not transfer. Credit is not given when the course is taught with only high school students in the class or where the course is used to meet the minimum academic requirement that the College expects of all new students (*e.g.*, four years of English).

Credit cannot be transferred from another school if that credit is also being counted toward another baccalaureate or graduate or professional degree. The programs described in *Chapter V* under the heading "Special Joint Degree Programs" are exceptions to this policy.

Students interested in electing out-of-residence credit should consult *in advance* the Office of Undergraduate Admissions (where an information sheet is available) about transfer equivalencies and an academic advisor about the appropriateness of the intended elections. Tables of transfer equivalencies are available on the College website at www.lsa.umich.edu/transfer/.

Students who wish to take a course not listed on the equivalency tables may have that course evaluated by using an *Out-of-Residence form*. This form can be completed online at: www.admissions.umich.edu/oor/UM-OOR.php.

If credit elected out-of-residence is to be included in a concentration plan, approval should be obtained *in advance* from a concentration advisor.

The language requirement cannot be met by out-of-residence credit that is elected after the student has begun degree enrollment in LSA unless the appropriate language department has approved that plan in advance.

Seniors planning to elect the final portion of the senior year out of residence should contact the LSA Academic Auditors prior to leaving campus for information about procedures to avoid a delay of graduation.

LSA students who elect courses which duplicate Advanced Placement or transfer credit will receive degree credit and honor points (for graded courses) for the LSA election while credit for the duplicated Advanced Placement or transfer courses will be deducted. The only exceptions to this policy are courses transferred from another school or college on the Ann Arbor campus of the University of Michigan or from UM–Flint or UM–Dearborn. In these cases, courses elected in LSA which duplicate the transfer courses are posted on the academic record as "repetitions" or "not for credit" elections. The original course elections continue to appear on the academic record for degree credit, and grades earned in these courses continue to be computed in the grade point average.

Students electing courses in LSA which are prior to those in a course sequence for credits already awarded via transfer credit will have the transferred credits deducted, and the credits and honor points earned by the LSA elections will stand. This could mean losing credit for several courses while retaining credit for only one (for example, transfer credit for one or more terms of foreign language can be deducted because of subsequently completing the first term of that language at the University of Michigan).

An official transcript of the completed transfer work should be sent to:

The Office of Undergraduate Admissions 300 Student Activities Building University of Michigan Ann Arbor, MI 48109-1316.

Drop/Add Policy

The College expects students to finalize their academic schedules in the first three weeks of a term (first two weeks of a half-term). Later changes may be made according to the policies described below.

Courses dropped in the first three weeks of a term (first two weeks of a half-term) do not appear on the academic record. Thereafter, all courses officially dropped appear on the transcript with a "W" notation indicating withdrawal. For students in their first fall or winter term at the University of Michigan, the W(s) are expunged from the official transcript after the term is completed. The "W" means that the student dropped a course after the third week of a Fall or Winter Term (second week of a half-term) and that the College accepted the reason(s) for the drop and gave its approval.

Failure to complete a course or to secure approval for a late drop of the course results in the transcript notation *Unofficial Drop (ED)* which is averaged into the term and cumulative grade point averages as a failing grade (*E*). Courses elected on a non-graded pattern do not affect the term or cumulative grade point averages.

Weeks one through three of a term (weeks one through two of a half-term): Students may make drop/add changes without advisor approval when these changes result in an academic schedule of 18 credits or less during a term (9 credits in a half-term). Programs of more than 18 credits during a term (more than 9 credits during a half-term) require advisor approval as do all course changes made by Honors students. Adds of classes that are closed or require permission of instructor must be accompanied by an *electronic permission* from the department. Students are responsible for any work assigned in the course from its beginning, regardless of the date of election. Therefore, it is important to talk with the course instructor about work assigned to date *before* adding a course in the second or third week.

Since the fee assessment is not set until the end of this three-week period (two weeks in a half-term), a student dropping below 12 credits (six in a half-term) will be assessed a lower tuition charge.

Weeks four through nine of a term (three through four and a half of a half-term): Students requesting changes must:

- (1). obtain a *Request for Late Drop* or *Late Add* form and *Election Change Worksheet* from 1255 Angell Hall;
- (2). complete both forms, stating the reason(s) for the drop www.lsa.umich.edu/advising/forms;
- (3). obtain the instructor's recommendation and signature;
- (4). return the completed forms to 1255 Angell Hall.

All requests to add courses must be accompanied by an *electronic permission* entered by the department. Honors students follow the procedures established by the Honors Office; Residential College students follow RC procedures.

Students are encouraged to meet with an advisor to discuss the request and its impact on the student's program. In some instances, students may need an advisor's approval to drop the course.

Fees are not reduced even if a student drops below 12 credits (six in a half-term).

Week ten through the last day of classes of a term (after the end of week four and a half through the last day of classes for a half-term): Only the most serious circumstances warrant dropping a course after the ninth week of the term. Fear of failing the course or no longer needing the course in a degree program are not considered valid reasons for granting approval to drop a course in this period.

In order for the Academic Standards Board to grant a drop at this time, some non-academic, extraordinary event (like serious illness or a severe personal disruption) would have occurred **after** the ninth-week (four and a half week of a half-term) drop deadline and would

make completion of a course or courses very difficult if not impossible; the Board assumes that the student's academic performance up to the point of the disruptive event has been satisfactory. Students wishing to drop a class must obtain and complete an *Election Change Worksheet* and *Request for an Exception to the Late Drop Policy* form from the LSA Advising Center, 1255 Angell Hall. The course instructor or GSI must complete the pertinent sections of the form. In addition, the student must meet with an academic advisor to discuss the circumstances and possible consequences surrounding the student's request. The instructor's and advisor's signatures on the form indicate that the student has discussed the request for a drop with them, but does not indicate approval. That decision is made by the Academic Standards Board.

Students who want to add a course after the ninth week of the term must obtain and complete an *Election Change Worksheet* and *Request for an Exception to the Late Add Policy* form from the LSA Advising Center, 1255 Angell. They must also secure an *electronic permission* (override) to add the course from the course instructor. The Academic Standards Board reviews these add and drop requests and will respond to the student via e-mail.

Mini-Courses:

- 1. "W" and fee deadlines differ for mini-courses. Check the LSA Course Guide for specific deadlines for individual courses.
- All requests to drop or add mini-courses submitted after the applicable free drop/add period are decided by the Academic Standards Board. Any late drop or add request for mini-courses needs to be supported by significant extenuating circumstances.

Withdrawal from the College

The "withdrew" notation will appear on the transcripts of students who withdraw from all of their classes after the third week of a full term (or after the second week of a half-term), including those students in their first term at the University of Michigan.

Students who have early registered for a term or half-term but who subsequently decide not to return to the University should notify:

The Office of the Registrar 1207 LSA Building 500 South State Street Ann Arbor, MI 48109-1382 fax (734) 763-9053.

Include name, UMID, Term(s) to disenroll, signature.

To avoid a disenrollment fee, notification of intention to disenroll must be received **before** the first day of classes.

Students who wish to withdraw once classes have begun should contact the Academic Advising Center, 1255 Angell Hall, (734) 764-0332. Students who withdraw within the first three weeks of the term (two weeks for a half-term) are assessed a disenrollment fee plus a registration fee, but the registration will not appear on the student's record. Consult the Registrar's Office website for fee amounts.

Students who withdraw between the fourth and sixth week of a full term or in the third week of a half-term are assessed 50% tuition and the registration appears on the transcript with a "withdrew" notation. These dates are posted for each term on the following website: ro.umich.edu. **Full tuition is assessed after these dates.**

After the sixth week of classes in a full term (third week in a halfterm), students wishing to withdraw from the College must make an appointment with a member of the Academic Standards Board. After the late drop deadline (ninth week in a full term or four and a half in a half term), students who withdraw from the term will have a hold placed on their records. These students will be out of registration at least one full term (14 weeks) and must obtain permission from the Academic Standards Board to continue in the College.

Special Kinds of Academic Credit

Experiential and Directed Reading / Independent Study Courses

The College distinguishes "Experiential" and "Independent" courses from its other course offerings.

Experiential courses (denoted EXPERIENTIAL in *Chapter VI*) involve academic work that may take place in a setting other than a university classroom, laboratory, library, or studio and in which the experience is directly related to an academic discipline. Most Experiential Credit is awarded through programs administered by departments and is recorded as credit in one of the departmental Experiential course numbers.

Independent courses may be: (1) Directed Reading / Independent Study courses (denoted INDEPENDENT in *Chapter VI*) which are designated by title and not normally offered by classroom instruction; (2) courses normally offered through classroom instruction but occasionally taught on an independent study basis; (3) courses not

without honor points and is identified by the notation "Credit by Examination." Failure to pass a departmental examination is not noted on a student's transcript or in a student's academic advising file.

Retroactive Credits in French, German, Hebrew, Latin, Modern Greek, Spanish, and Yiddish

LSA students may earn up to a maximum of 8 retroactive credits for prior academic work completed in French, German, Hebrew, Latin, Modern Greek, Spanish, and Yiddish. To earn these credits students must complete an upper-level course into which they were placed with a grade of B or better.

Details and Restrictions

1. This policy is effective for all students whose first term of enrollment in LSA is Fall 1997 or after. Students who entered LSA before Fall 1997 are not eligible for retro-active language credit.

2. Students must suc-

cessfully complete a

designated course on

the UM-Ann Arbor

campus with a B or

3. The course taken to

must be the first col-

lege course in the

foreign language and must be designated

as appropriate for

this purpose by that

4. Although there is no

time limit on retro-

credit, students are

advised to complete coursework and ap-

ply for retro-credits

within their first year

of enrollment in LSA.

department.

retro-credits

better.

earn

specially designated as "Independent" and normally offered as classroom instruction but elected by special arrangement with the instructor.

The following limitations apply to Experiential and Directed Reading / Independent Study credit:

 A maximum of 15 credits of Experiential courses may be counted toward a degree; a maximum of 8 credits may be earned from one project, and only one Experiential project may be elected each term.
 A combined total of 30

credits of Experiential and

Directed Reading / Inde-

pendent Study courses

Result on Departmental Placement Test (the course placed into)	Students must receive a B or better in the following course:	Number of credits granted
Met LSA language requirement	An upper-level language course taught in the target language: 235, and 250 or higher for French 300, and 325 or higher for German 301 or higher for Latin 250, and 270 or higher for Spanish 301 or higher for Hebrew 301 or higher for Hebrew 301 or higher for Modern Greek. (Translation courses and one-credit conversation courses are not allowed. See specific departmental regulations for more information.)	8 (6 for Yiddish)
232 (202 for Hebrew and Modern Greek) 231, 221, 103, 102, or 101 (201, 102, or 101 for Hebrew, Yiddish and Modern Greek)	232 (202 for Hebrew and Modern Greek)	4 No retro-credit

may be counted in the 120 credits required for a degree.

3. Experiential and Independent Study courses are excluded from area distribution plans.

Credit by Examination (CBE)

Recognizing that students may have background in particular academic areas, the faculty has left it to each department to decide if it is possible for students to earn credit by examination. While the opportunities are quite limited, the amount and type of credit in any area is determined by the academic department(s) in which a student feels qualified to seek credit by examination. Some departments recognize certain subject area College Entrance Examination Board *College Level Examination Program (CLEP)* examinations and grant credit on the basis of specified performance on such examinations. All CLEP credit is evaluated as incoming transfer credit, and questions regarding CLEP credit should be addressed to the Office of Undergraduate Admissions. Only those CLEP examinations specifically accepted by academic departments at the University of Michigan may be used to certify credit by examination toward a degree.

In addition to, or in place of, CLEP examinations, some academic departments have prepared examinations that are administered on campus. Questions regarding such departmental examinations should be directed to the respective department.

Credit earned by examination is out-of-residence credit. It is posted on a student's transcript as credit earned toward the degree but

- 5. Taking a designated course Pass/Fail disqualifies students from receiving the retroactive credit.
- 6. Transfer students are not allowed to earn double credit for the same work. That is, transfer students may either receive transfer credits for the foreign language or retroactive credits given through successful completion of the designated course, but not both.
- 7. Students may receive a maximum of 8 credits through AP/IB examination and/or retroactive credits. For guidelines on AP/IB credit, consult an LSA academic advisor or the relevant language department.
- 8. Retroactive language credits are available only to students who began learning French, German, Hebrew, Latin, Modern Greek, Spanish, or Yiddish as a second/non-native foreign language, primarily in a school setting. Students with native language fluency (*i.e.*, students who learned the target foreign language in ways other than formal schooling / instruction) are **not** eligible to earn retro-credits in that foreign language. Unusual cases will be addressed by the individual departmental undergraduate advisors.

How to Apply for Retroactive Credits in French, German, Hebrew, Latin, Modern Greek, Spanish, and Yiddish

1. If your placement is 232 (202 for Hebrew, Modern Greek), enroll in 232 (202 for Hebrew, Modern Greek). If you have placed out

of the language requirement, enroll in a designated upper-level language course in that language.

- 2. Fill out the *Application for Retroactive Credits*. Return this form to your instructor as early as possible during the term.
- 3. Complete the course with a grade of B or better.
- 4. The department will forward it to the LSA Academic Advising Center or the Honors Program Office for authorization.

Grade Notations and Grading Policies

Academic Record

The Academic Record is the official record of a student's course elections, grades, and credits earned toward a degree. Since the academic record is a permanent record of a student's academic performance, it must be correct. Students who believe an error has been made on their academic records should contact the Assistant to the Academic Standards Board (1255 Angell Hall).

LSA academic records are maintained by the Records and Enrollment Department in the Registrar's Office (1210 LSA Building).

A student wishing to have a transcript of the academic record sent to another college or university or to an employer can place an order online from wolverineaccess.umich.edu. You will need a Uniqname and university password and should receive a confirmation number. Requests with attachments or needing special services should be brought to a Student Services site, 1207 LSA Building or B430 Pierpont Commons.

Mail requests can be sent to:

Transcript and Certification Office 1210 LSA Building 500 South State Street University of Michigan Ann Arbor 48109-1382. All requests should include dates of attendance and a student identification number. A transcript of the academic record bearing the official seal of the University of Michigan and the signature of the Registrar is forwarded *directly* to the institution or person specified by the student, assuming there is no outstanding financial commitment from the student to the University. There is no fee for official transcripts. A student may request and receive on demand an unofficial transcript of the academic record. The unofficial transcript contains additional information not included in the official transcript. It should not be used in lieu of an official transcript for the purposes of admission or employment. A copy of your unofficial transcript can be obtained from: wolverineaccess.umich.edu.

A student may pay a fee set by the Registrar's Office and request a special transcript including an appendix listing the original grades submitted for all courses elected "Pass/ Fail."

A specially prepared transcript indicates that this option has been chosen. A request for a special transcript does not permanently revise the original academic record.

nmary of Tran	script Notations	Pass/Fail		Official Audit (VI)	
, or man		P (passed)	credit, no honor points	VI (Audit)	no credit, no honor points
Letter Grade	Honor Points	F (failed)	no credit, no honor points	Miscellaneous Notations	(NR, ##)
A+	4.0	Credit/No Credit		NR (no report)	no credit, no honor points
А	4.0	CR (credit) NC (no credit)	credit, no honor points no credit, no honor points	NG (no grade reported)	no credit, no honor points
A-	3.7	Satisfactory/Unsatisfact	, ,	A notation of P E CR NC	S, U does not affect a stude
B+	3.3	S (satisfactory)	credit, no honor points		oint average. A notation of 1
В	3.0	U (unsatisfactory)	no credit, no honor points	NG or NR, if not replaced by a passing grade, eventue lapses to E or ED and, for graded elections, is computed in the term and cumulative grade point averages.	
В-	2.7	(The S/U symbols are used I	by the School of Education.)		
C+	2.3	Withdrawal/Drop		5	, 5
С	2.0	W (official withdrawal)	no credit, no honor points		e approval is required to use wo-Term Course (Y)", below
C-	1.7	ED (dropped unofficially)	no credit, no honor points	5	
D+	1.3	(A notation of ED for a grad on the grade point average	ed election has the same effect		course in another Ann Arbor rn not indicated here (for ex
D	1.0	Incomplete/Work in Pro	,		the Stephen M. Ross Schoo
D-	0.7	I (incomplete)	no credit, no honor points	Business), the grade will be with LSA's letter grading sca	translated by the Registrar to
E	0.0	Y* (work in progress for pro ject approved to extend for two successive terms	- no credit, no honor points	man Lorro letter grading set	

Official Withdrawal (W) / Unofficial Withdrawal (ED)

If a student withdraws officially from a course after the first three weeks of a full term (first two weeks of a half-term), the course is recorded on the transcript with a W notation; neither credits toward a degree program nor honor points are earned. The W notation is posted regardless of a student's reasons for requesting the official withdrawal. If a student unofficially withdraws from a course (*i.e.*, stops attending the course but does not obtain permission for an official withdrawal), the notation ED (Unofficial Withdrawal) is posted on the transcript. An ED is computed into the term and cumulative grade point averages as an E if the course was elected for a regular letter grade; neither credit toward a degree program nor honor points are earned.

Grading for a Two-Term Course (Y)

A few courses (*e.g.*, senior Honors thesis courses or some Biological Sciences research courses) are approved as "two-term" sequences

(approval has to be granted by the LSA Curriculum Committee). In these *specially approved cases only*, an instructor can report a Y grade at the end of the first-term course to indicate work in progress. When a final grade is reported at the end of the second term, that final grade is posted for both terms' elections. In cases where a Y grade is reported for a course which is not approved to extend for two successive terms, an I (Incomplete) is posted on the transcript and the course is subject to the regular deadline for incompletes. Students needing more time to complete this work must petition the Academic Standards Board for an official extension of the deadline (see below).

Incomplete Courses (I)

An "Incomplete" (denoted on the transcript by the symbol I) may be reported only if the amount of unfinished work is small, the work is unfinished for reasons acceptable to the instructor, and the student's standing in the course is at least C-. The I grade is not included in the computation of the term or cumulative grade point averages dur-

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ing the period when a student has the privilege of making up the work. Incomplete grades may be made up while a student is not in residence even if a student has been suspended from the College for reasons of unsatisfactory academic performance. An incomplete grade must be made up by the fourth week of a student's next fall or winter term in residence or by an extended deadline approved by the Office of Academic Standards.

An instructor has ten days following the four-week deadline or ten days following an approved extended deadline in which to report a final grade. The final grade is posted on the transcript, and credits and honor points are posted accordingly. The I is not removed when the course is completed but remains on the transcript. An I grade not finished by the incomplete deadline or an approved extended deadline lapses to E. In such cases, no degree credit is earned and the course is then computed as an E in the term and cumulative grade point averages. Unfinished courses elected on a non-graded pattern ("Pass/Fail," "Credit/No Credit," *etc.*) lapse to "Fail" or "No Credit" but do not affect the term or cumulative grade point averages.

No Report (NR), No Grade (NG)

The instructor should report an NR if a student stops attending before the end of the term, but has not dropped the class or requested an Incomplete. If the NR is not resolved by the fourth week of the next fall or winter term in residence, the NR grade in a graded election is lapsed to an ED.*

The NG is recorded when a student has been registered into a class after the web grade rosters have been sent to the instructor. The NG will convert to an ED* if unresolved after the first four weeks of the next fall or winter registration.

*An ED carries no degree credit, and the course is computed as an E in the term and cumulative grade point averages.

Non-Graded Courses (P/F, CR/NC, S/U)

Students may count a maximum 30 non-graded credits toward the 120 credits required for a degree. Non-graded credits are earned in courses for which no letter grade (A+ through E) is recorded on the transcript. Only those non-graded credits actually earned are counted as part of the total number of non-graded credits applicable toward a degree.

- 1. Non-graded courses may be included in a distribution plan.
- 2. Pass/Fail courses *may not* be included in a concentration plan or in an academic minor.
- 3. Experiential and Directed Reading / Independent Study courses that are graded on a Credit / No Credit or Satisfactory / Unsatisfactory basis *may be* included in a concentration program.
- 4. The final course in a sequence used to satisfy the Language Requirement *may not* be elected on a Pass/Fail basis. (Effective for all students admitted to the College in Fall Term, 1995 and thereafter.)
- 5. A change in grading pattern for a course is not permitted after the first three weeks of a full term (first two weeks of a halfterm). Grading pattern choices must be modified through the registration system. Courses elected after the third week of a term may not be elected on a non-graded basis unless the course is offered as a "mandatory non-graded" course. The only exceptions to this policy are *short courses (e.g.,* GEOSCI 101-115) which have started after the beginning of the term. In these cases, the grading pattern may not be changed after the second week of class. **The Academic Standards Board does not grant exceptions to this policy.**
- 6. The College holds students responsible for ensuring the accuracy and completeness of their class schedule.
- Non-graded courses earn credit toward a degree but not honor points. Therefore, "Pass" (or Credit) grades do not enter into the computation of the term or cumulative grade point averages.

- 8. Instructor approval is not required for a choice in the elected grading pattern nor should the instructor be informed of such a choice. Instructors report letter grades (A+ through E) for all students in their courses, except in mandatory CR/NC courses. In the case of a student who has chosen to elect a course "Pass/Fail," the Office of the Registrar converts the letter grades according to the following policies:
 - a. Grades of A+ through C– are posted on a transcript as "P" (Pass); credit toward a degree is earned.
 - b. Grades of D+ through E are posted on a transcript as F (Fail); no degree credit is earned.
- 9. In the case of an incomplete course elected "Pass/Fail," credit is posted only when the work has actually been completed and a grade of at least C- has been reported. "Pass/Fail" courses which are not finished lapse to "Fail," although the term and cumulative grade point averages remain unaffected.
- 10. If the instructor of a mandatory Credit/No Credit course believes that the amount and quality of a student's work is such that it deserves credit, CR (Credit) is posted on the transcript. If the instructor believes that a student's work does not justify the awarding of credit, NC (No Credit) is posted on the transcript. Courses offered *mandatory Credit/No Credit* are designated in the course listings in *Chapter VI*.
- 11. In computing the grade point average for honorary societies, the *reported letter grades* for "non-graded" elections are computed into the cumulative grade point average.
- 12. No course elected "Pass/Fail" will receive the Honors notation on the transcript or be counted as an "Honors" course for the Sophomore Honors Award.
- 13. A student may pay a special fee set by the Registrar's Office and request a specially prepared appendix to the transcript on which the original grades submitted for all courses elected "Pass/Fail" are listed.
- 14. Students who have transferred "non-graded" credit to the College must count that credit as part of the maximum 30 hours of "non-graded" credit which may be counted toward an LSA degree. Advanced Placement credits as well as transfer courses for which students earned grades at another institution do not count against the 30-credit limit.
- 15. A student cannot choose to elect a course by the CR/NC and S/U grading patterns; the *optional* non-graded pattern is P/F.

Auditing Courses

Students are expected to elect courses for credit. Occasionally, however, a student may wish to attend a course but not elect it for credit. This arrangement can take the form of an *official audit* (sometimes called *Visitor* status).

An official audit obligates a student to attend classes regularly and complete course requirements (*e.g.*, papers, laboratory assignments, tests, and the final examination). Regular tuition fees apply, and the course appears on the transcript with the grade *VI* (Audit); and no degree credit is earned. To arrange an official audit, a student must submit a *Request for Audit Status* form to the Academic Standards Board, 1255 Angell Hall. A request to officially audit a course must be approved by the end of the third week of a full term or second week of a half-term. Students who do not fulfill course requirements earn the grade ED to indicate that the course was unofficially dropped. In these cases, the term and cumulative grade point averages remain unaffected.

Repetition of Courses

If a course was taken in residence and a grade of A+ through C-, P, CR, or S was earned, then repetition of this course results in no additional credit or honor points. The course and grade appear on the transcript with the notation "Not for Credit." A student repeating a course in which D+ through D- was previously earned will receive honor points but no additional credit toward a degree. The course appears on the transcript with the notation "Repetition." Repetition of a course in which an E, F, or U grade was originally earned pro-

duces both credits toward a degree and honor points for courses elected on the graded pattern; there is no special transcript notation. In all such cases, the first election and grade earned remain on the transcript. The grades earned by repetition of courses are not averaged and posted as a single entry; but are posted as separate elections.

Out of Sequence Courses

Students should assume that once they take an in-residence course in a sequence (chemistry, mathematics, language, and others), they cannot receive credit for taking a prior course in the sequence. For example, a student who took SPANISH 231 after taking and passing

Term and Cumulative Grade Point Averages

The Term Grade Point Average is determined by dividing the total number of Michigan Semester Hours (MSH) elected during a term into the total number of Michigan Honor Points (MHP) earned during the same term. The Cumulative Grade Point Average is determined by dividing the total number of Michigan Semester Hours (MSH) into the total number of Michigan Honor Points (MHP) earned. Notations of Y, I, NR, and NG are not initially calculated into the term or cumulative grade point averages. Notations of I, NR, and NG, if unresolved by the end of the fourth week of the next fall or winter term in residence or by an approved extension deadline, lapse to E or ED and are computed into both the term and cumulative grade point averages, if the course was a graded election.

SPANISH 232 on the Ann Arbor campus would not receive credit for the SPANISH 231 course.

Students who transfer in credit for a course in a sequence should assume they will lose credit for that course if they take a prior course in the sequence in residence at Ann Arbor. For example, a student taking MATH 115 in Ann Arbor after transferring credit for MATH 116 from another institution would lose the credit for the MATH 116 course.

Students should contact a LSA academic advisor if they have questions about whether or not a course is part of a sequence.

Grade Point Average

Minimum Term and Cumulative Grade Point Averages Required

To be in good academic standing, a student must earn at least a 2.0 term grade point average and a 2.0 cumulative grade point average. If a student fails to accomplish this, the "honor point deficit" can be determined by multiplying the Michigan Semester Hours (MSH) elected by 2.0 and subtracting the total number of Michigan Honor Points (MHP) earned. Only honor points earned in courses elected at the University of Michigan (Ann Arbor, Dearborn, or Flint campus) may affect the grade point average.

Honors and Awards for Superior Academic Achievement

The College acknowledges the superior academic achievement of its students in a variety of ways. These include the awarding of university honors, special awards, honors at graduation, election to

Departmental Awards

Awards that recognize superior academic performance in the area of concentration are described in the departmental/program information in *Chapter VI*.

University Honors

Honors Convocation

Honors Convocation is an annual celebration where undergraduate students are recognized for their distinguished academic achievements. It is one of the University's most important academic traditions.

The convocation is held in March of each year in Hill Auditorium; seating is available on a first-come, first-served basis. While there is no set dress code for Honors Convocation, business casual attire is recommended for both students and guests.

Immediately following the ceremony, students and guests are invited to attend a reception in the historic Michigan League, where they will have the opportunity to meet President Coleman, the Provost, and the deans of the schools and colleges.

Students who earn one or more of the following award designations will be recognized at this event:

- James B. Angell Scholar
- University Honors
- William J. Branstrom Freshman Prize

A notation for each honor is posted on the student's transcript by the Office of the Registrar.

Students endorsed for Rhodes, Marshall, and Mitchell Scholarships by

national honor societies, the LSA Scholarship Program, and departmental academic awards. Transfer credit does not count for honors.

the University of Michigan also are recognized at the Honors convocation, along with winners of the Thurnau Professorships.

Thurnau Professorships were established in 1988 by a bequest from Arthur F. Thurnau to recognize and reward faculty for outstanding contributions to undergraduate education. The professorships honor tenured faculty members who, through their commitment and investment in undergraduate teaching, have had a positive impact on the intellectual development and lives of students.

Contact

Website: honors.umich.edu

For additional information about Honors Convocation, please contact the Office of University and Development Events at 734-647-7900 or e-mail HonorsInfo@umich.edu.

For information about award eligibility, please contact the Registrar's Office at 734-764-6280 or e-mail ro.grades.questions@umich.edu.

James B. Angell Scholars

James B. Angell Scholars are students who earn all A+, A, or Agrades for two or more consecutive terms in a calendar year based on a minimum of 14 credits in courses which include 12 credits elected on a graded (A-E basis elected each term); all other grades must be P, S, or CR. Terms of fewer than 14 credits completed with grades of A+, A, A–, P, S, or CR enable a student to maintain standing as an Angell Scholar, however, these terms are not included in

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the term count for the award. Any other grades earned during a full or half-term make a student ineligible for this honor. Angell Scholar Honors are posted on a student's transcript by the Office of the Registrar, and recipients of this honor are invited to attend the annual Honors Convocation. Angell Scholars are selected and honored annually.

University Honors

Students who earn a minimum of 14 credits in courses which includes 12 credits elected on a graded basis (A-E) and who earn a 3.5 grade point average are eligible for University Honors. This honor will be awarded each Fall and Winter academic term. This distinction is posted on a student's transcript by the Registrar's Office. Students

Honors at Graduation

Highest Distinction / High Distinction / Distinction

Degrees with distinction are awarded on the basis of rank in class. Students who have completed at least 58 credits in residence, at least 45 of which are "graded" (A+ to D-), and rank in the top 3% of their class are recommended for a degree "with Highest Distinction." Those students who rank in the top 10% of their class but not in the top 3% are recommended for a degree "with High Distinction." Those students who rank in the top 25% of their class but not in the top 10% are recommended for a degree "with Distinction." A notation is made on the diploma and the transcript. The GPA ranges for the distinction notations are determined each May, based on the cumulative GPAs of LSA graduates of the May degree period. Those same numbers are used for the August and December degree periods of that calendar year.

National Honor Societies

A notation is posted on a student's transcript by the Registrar's Office for induction to Phi Beta Kappa, Phi Kappa Phi, and Tau Beta Pi. Induction into other National Honor Societies on the UM-Ann Arbor campus is not noted on the student's transcript.

Phi Beta Kappa

Phi Beta Kappa is the oldest and most widely recognized scholarly honorary society in America. Founded in 1776, it celebrates excellence in the liberal arts and sciences. The UM chapter, Alpha of Michigan, was founded in 1907 and has inducted almost 7000 exceptional students into its ranks.

Fewer than ten percent of each year's graduating seniors and a very few juniors may be invited to join Phi Beta Kappa from the College of Literature, Science, and the Arts. Seniors with outstanding achievements in the liberal arts in other schools and colleges of the University of Michigan may be invited to join if they have earned a substantial number of liberal arts credits. Transfer students with superior academic records in the liberal arts may also receive invitations to ioin.

Invitations to membership in the national Phi Beta Kappa Society are issued by the local chapter, taking into account achievement in the liberal arts as indicated by a student's cumulative grade point average, strength of curriculum, demonstrated proficiency in foreign language and mathematics, and other factors. The selection committee looks for evidence of both breadth and depth of interest in the liberal arts and sciences. A very high GPA alone is not a guarantee of election to Phi Beta Kappa. Fourth-term proficiency in a language other than English (the equivalent of the LSA language requirement) is required, as is graded work in a sufficiently advanced quantitative area (MATH 115 or higher, STATS 250 or higher, most, but not all, QR/1 courses). A combination of two QR/2 courses is not acceptable. Elements that can mitigate against an invitation include a large amount of pass/fail work, an entire distribution area taken pass/fail, more than one or two academic terms of fewer than four academic courses of at least three credits each, and repeated semesters with light course loads.

who receive this honor two consecutive terms will be invited to attend the annual Honors Convocation.

William J. Branstrom Freshman Prize

Freshmen students in the top 5% of their school/college class are eligible for this honor if they have earned at least 14 graded credits at Michigan. Advanced placement credit does not disqualify a student for consideration of this award. Students who have previously earned credit at another institution of higher education are ineligible. A book with an inscribed nameplate is presented to each student; a notation is made on the student's transcript by the Office of the Registrar, and recipients of this award are invited to attend the annual Honors Convocation.

The ranges for May 2009 were:

Highest Distinction:	3.927 – 4.000
High Distinction:	3.809 – 3.926
Distinction:	3.644 – 3.808

Highest Honors / High Honors / Honors

Students who have completed at least 58 credits in residence and have demonstrated high academic achievement and capacity for independent work in a department or degree program may be recommended for a degree "with Highest Honors," "with High Honors," or "with Honors" in the field of concentration. Capacity for independent work must be demonstrated in part by superior performance in an honors program or some achievement of equivalent character. A minimum overall grade point average of 3.4 is required. A notation is made on the diploma and the transcript.

Membership in Phi Beta Kappa lasts a lifetime and shows commitment to the liberal arts and sciences and to freedom of inquiry and expression. It also provides a competitive edge in the marketplace. Potential employers regularly contact local chapters or the national office to confirm the membership of job seekers who have listed Phi Beta Kappa among their credentials.

For information, e-mail phibetakappa@umich.edu.

Phi Kappa Phi

www.umphikappaphi.umich.edu

The Honor Society of Phi Kappa Phi is the nation's oldest, largest, and most selective all-discipline honor society. Founded in 1897 at the University of Maine, the distinguishing characteristic of Phi Kappa Phi is its belief that all branches of higher education merit recognition. It extends its interest and eligibility across the entire range of academic inquiry and calls attention to the fact that today's world needs a breadth of understanding far beyond that of a specialist who restricts his or her outlook to a specific specialty.

Membership is by invitation only to the top 10 percent of seniors and graduate students and 7.5 percent of juniors. Faculty, professional staff, and alumni who have achieved scholarly distinction also qualify. The Society's mission is "to recognize and promote academic excellence in all fields of higher education and to engage the community of scholars in service to others."

Phi Kappa Phi annually inducts approximately 30,000 students, faculty, professional staff, and alumni. Once inducted, Phi Kappa Phi members gain a lifelong passport to a global network of academic and professional opportunities. Since its founding, more than 1 million members have been initiated.

The University of Michigan chapter of the Phi Kappa Phi Honor Society was formed in 1926. Since its founding, more than 8,000 students who have met the high academic standards of the organization have been initiated into the University of Michigan chapter.

Please contact the chapter via e-mail at umphikappaphi@umich.edu

or via regular mail at:

U-M Chapter of Phi Kappa Phi Office of the Provost and Executive Vice President for Academic Affairs 3074 Fleming Administration Building 503 Thompson Street Ann Arbor, MI 48109-1340

Tau Beta Pi

Tau Beta Pi is the oldest engineering honor society and also the second oldest collegiate honor society in the United States. Founded at Lehigh University in Bethlehem, PA, on June 15, 1885, the organization has since initiated a total of 500,000 members, making it the world's largest engineering society. Each year, 8,000 new members are initiated through 234 collegiate chapters spread across the country. *Tau Beta Pi* was founded "to mark in a fitting manner those who

LSA Scholarships

Scholarships to continuing undergraduates in the College of Literature, Science, and the Arts (LSA) are funded by gifts to the College of LSA. These gifts include donations to the LSA Annual Fund for Student Support, scholarship endowments, bequests and annual gifts from donors. Each year nearly 400 students receive a College of Literature, Science, and the Arts Undergraduate Scholarship, funded from one or more of our scholarship accounts.

College Eligibility. Applicants must be continuing students (completed two academic terms in LSA) pursuing a degree program in LSA and enrolled for at least 12 credit hours during the fall and winter academic year.

Monetary Award. The LSA Undergraduate Scholarship monetary award is determined based on your scholarship application and information in your financial aid package from the University of Michi-

Rhodes, Marshall, and Mitchell Scholarships

Rhodes Scholarships and Marshall Scholarships are among the world's most prestigious academic awards for graduate students. Since the estate of British philanthropist Cecil J. Rhodes established **Rhodes Scholarships** in 1904, twenty-five University of Michigan alumni have studied as Rhodes Scholars at Oxford University. Thirty-two Americans are named Rhodes Scholars each year. International students may apply to or be nominated by eighteen other jurisdictions designated by the Rhodes Trust. Students are nominated and appointed based on literary and scholastic attainments, integrity of character, leadership, interest in and respect for other human beings, energy to use talents to the fullest, and a fondness for and success in sports.

Marshall Scholarships, founded by an Act of Parliament in 1953, finance opportunities for young American scholars of high ability to study in the United Kingdom. The scholarship commemorates the humane ideals of the European Recovery Program (Marshall Plan) and funds two years of study. At least forty Marshall Scholarships are awarded annually to American students who demonstrate maturity, self-reliance, and self-discipline. Fourteen University of Michigan students have been named Marshall Scholars.

have conferred honor upon their alma mater by distinguished scholarship and exemplary character as undergraduates in the field of engineering, or by their attainments as alumni in the field of engineering, and to foster a spirit of liberal culture in the engineering colleges." Invitations to membership are extended to students of exemplary character in the upper 1/5 of the senior engineering class and top 1/8 of the junior engineering class.

The University of Michigan chapter of *Tau Beta Pi* (*Michigan Gamma*) was founded in 1906 and continues to honor distinguished scholarship and exemplary character of both eminent and aspiring engineers. Through service to both the college and our community, *Tau Beta Pi* members maintain both ethical integrity and liberal spirit.

For information, e-mail tbp.officers@umich.edu

LSA students who are pursuing a the dual degree program with the College of Engineering are eligible for membership.

gan, Office of Financial Aid. The LSA Scholarship Office has access to each applicant's financial aid package to establish eligibility and the scholarship amount. Please note that these scholarships are not awarded or administered by the Office of Financial Aid. Monetary awards have ranged from \$500 to \$10,000 for the fall and winter terms. An award in one year does not guarantee continuation of the LSA Undergraduate Scholarship in subsequent years.

To be Considered. Complete and submit the LSA Scholarship Application by the deadline posted on the LSA website:

www.lsa.umich.edu/students/scholarships

Complete and submit the Free Application for Federal Student Aid (FAFSA) by the University of Michigan, Office of Financial Aid deadline posted on their website:

www.finaid.umich.edu/Apply_and_Receive_Aid/Applying_for_Aid/current.asp

In 1999, the **George J. Mitchell Scholarships** were established for American university students. This third competitive national scholarship program, supported by the Irish and British governments and other benefactors, honors former Senator George J. Mitchell for his contributions to the Northern Ireland peace process. The prestigious award allows Americans to pursue one year of post-graduate study in Ireland and Northern Ireland. Up to twelve George J. Mitchell Scholarships are awarded annually to students who have shown both academic distinction and the potential for leadership.

Eligibility: To be eligible for the Rhodes, Marshall, or Mitchell Scholarships, students must hold an undergraduate degree by the fall in which the scholarship begins. Successful candidates usually have a GPA of 3.7 or better and a record of participation in activities that demonstrate leadership and commitment. All Rhodes, Marshall, and Mitchell applicants need an institutional endorsement.

Consult the Provost's Council on Student Honors Scholarships website to become familiar with the application process and deadlines.

www.provost.umich.edu/scholars/students/students.html

The competition for these prestigious scholarships is fierce, but that does not deter Michigan's deeply motivated and widely accomplished students.

Grade Review

At the end of each term and half-term, the Academic Standards Board reviews the academic records of all LSA students showing evidence of academic difficulty. The College uses four basic types of actions: *Action Pending, Probation, Suspension,* and *Dismissal.*

Action Pending

Action Pending is assigned when a student's academic record for a term is incomplete and the student is in danger of completing the term with less than a 2.0 grade point average. The transcript is reviewed again when final grades have been reported or after incomplete grades have lapsed. This review normally takes place during the fifth week of a student's next fall or winter term in residence. If all incomplete work has not been finished, or if it has been finished with grades that result in a grade point average below a 2.0, a student will be placed on *Probation*.

Special Action Pending is assigned when a student has an unusual number of incomplete grades. These students are required to meet with an Academic Standards Board member within the deadline specified in the notification letter to discuss their plans to complete the work. A student who fails to make this appointment could be disenrolled from the term.

Probation Actions

Probation is assigned to all students in the College whose *term* grade point average falls below 2.0 but whose deficit is not severe enough to justify suspension. Students are placed on probation whenever the term grade point average falls below a 2.0 during a term or half-term, regardless of the number of courses or credits elected or whether the cumulative grade point average remains above a 2.0.

Probation Continued is assigned when a student on probation has earned a term grade point average above a 2.0 but the cumulative grade point average of 2.0 has not yet been achieved. *Probation Continued* might also be assigned if a probationary student has a term average of exactly 2.0 or slightly below 2.0, so long as members of the Academic Standards Board feel that the student is making minimum progress toward fulfilling degree and program requirements.

Special Probation is assigned to students whose record leaves some question about whether immediate continuation in the College is advisable. These students are required to meet with an Academic Standards Board member within the deadline specified in the notification letter to plan appropriate course electives. A student who fails to make this appointment will be disenrolled from the term.

The conditions for a student on *Probation* or *Probation Continued* are that all courses in the ensuing term will be completed by the end of the term with a *term* grade point average greater than 2.0. Specific conditions of probation are stated in a letter notifying the student of the action taken by the College.

All students placed on probation are required to discuss their academic situation with an academic advisor or a member of the Academic Standards Board and to take advantage of College and University resources to assist them in improving their level of academic performance.

Raised Probation officially confirms that a student has completed a probationary term with better than a 2.0 grade point average and that a student's cumulative grade point average is at least a 2.0

Suspension

Students may be suspended from the College:

- 1. for incurring a significant honor point deficit in a single term or half-term,
- 2. for failure to make satisfactory progress toward a degree, or
- 3. for any other reason deemed sufficient under the policies of the LSA Academic Standards Board.

Since first-year students often experience problems adjusting to college, the Academic Standards Board maintains more liberal policies for them than for other students. As a general rule, unless there is a significant honor point deficit the first term, freshmen are placed on probation and are permitted a second term of enrollment to improve their level of academic performance. Similarly, transfer students are given special consideration unless the first term's work in residence shows marked inability to meet the academic standards of the College. *However, there is no automatic, one-term probation period before a student may be suspended from the College.*

Reinstatement

Suspended students are expected to be out of registration for at least one full fall or winter term following their suspension. Reinstatement is not automatic after that time; students must petition to be readmitted. When they feel they're ready to return, students should make an appointment with a member of the Academic Standards Board by calling (734) 764-0332. This meeting or phone appointment should take place at least eight weeks before the start of the desired return term. The purpose of this appointment is to discuss the factors that led to the suspension, talk about what the student has been doing while away, and consider academic plans. During this conversation the Board member will provide guidance about writing the reinstatement petition. Petitions are due at least six weeks before the start of the desired return term and should include the following:

- · a thoughtful analysis of what went wrong before,
- evidence that past problems have been resolved or eliminated (or a strategy for managing ongoing issues),
- · a description of how the student has used the time away, and
- a viable academic plan for the student's remaining terms.

Students are strongly encouraged to complete academic work elsewhere during the suspension period; strong grades in such classes will greatly strengthen one's case for readmission. Consult with an LSA academic advisor or Board member *before* taking classes elsewhere, to make sure the courses are appropriate and transferable.

Relevant supporting documentation should be attached to all reinstatement petitions. Some examples of appropriate documentation are: statements from health care providers if academics were impacted by physical or mental health issues, transcript and/or instructor statements if taking classes elsewhere, letter from employer if working during suspension period, *etc.*

After reviewing the reinstatement petition, the Academic Standards Board will make a decision and will notify the student by e-mail.

Dismissal

Students may be permanently dismissed from the College if the Academic Standards Board determines that continuation in the College is unlikely to lead to a degree.

Academic Integrity in the College of Literature, Science, and the Arts

LSA Community Standards of Academic Integrity

The undergraduate academic community, like all communities, functions best when its members treat one another with honesty, fairness, respect, and trust. The College holds all members of its community to high standards of scholarship and integrity. To accomplish its mission of providing an optimal educational environment and developing leaders of society, the College promotes the assumption of personal responsibility and integrity and prohibits all forms of academic dishonesty. Conduct that violates the academic integrity and ethical standards of the College community cannot be tolerated and will result in serious consequences and disciplinary action.

Just as students rightly expect to learn in an atmosphere of integrity and mutual trust, so too faculty members are right to expect that all students who seek instruction and evaluation from them will do so honestly. All members of the College community must take an active role in helping create and maintain a culture of integrity in LSA.

An instructor has the responsibility to make clear what academic dishonesty is and to help her or his students understand what uses may be made of the work of others and under what conditions. A student is responsible for becoming familiar with the LSA Community Standards of Integrity and for discovering the sort of conduct which will be viewed as an attack upon the community's values.

Questions regarding alleged academic misconduct should be addressed to the LSA Assistant Dean for Student Academic Affairs, 1213 Angell Hall. Frequently asked questions and answers, as well as procedures to be followed for resolving academic misconduct in LSA can be found at www.lsa.umich.edu/academicintegrity.

Examples of Academic Misconduct

Academic misconduct includes but is not limited to the following:

Cheating

Cheating is committing fraud and/or deception on a record, report, paper, computer assignment, examination or any other course requirement. Examples of cheating are:

- Obtaining work or information from someone else and submitting it under one's own name.
- Using unauthorized notes, or study aids, or information from another student or student's paper on an examination.
- Communicating answers with another person during an exam.
- Altering graded work after it has been returned, and then submitting the work for re-grading.
- Allowing another person to do one's work and submitting it under one's own name.
- Preprogramming a calculator to contain answers or other unauthorized information for exams.
- Submitting substantially the same paper for two or more classes in the same or different terms without the expressed approval of each instructor.
- Taking an exam for another person or having someone take an exam for you.
- Fabricating data which were not gathered in accordance with the appropriate methods for collecting or generating data and failing to include a substantially accurate account of the method by which the data were gathered or collected.

Plagiarism

Plagiarism is representing someone else's ideas, words, statements or other works as one's own without proper acknowledgment or citation. Examples of plagiarism include:

- Copying word for word or lifting phrases or a special term from a source or reference whether oral, printed, or on the Internet without proper attribution.
- Paraphrasing, that is, using another person's written words or ideas, albeit in one's own words, as if they were one's own thought.
- Borrowing facts, statistics, or other illustrative material without proper reference, unless the information is common knowledge, in common public use.

Unacceptable Collaboration

Collaboration is unacceptable when a student works with another or others on a project, then submits a written report which is represented explicitly or implicitly as the student's own work. Using answers, solutions, or ideas that are the result of collaboration without citing the fact of collaboration is improper. Students also engage in unacceptable collaboration when they expressly have been instructed to do their own work and have not been given prior approval by the instructor to collaborate.

Falsification of Data, Records, and Official Documents

- Fabrication of data
- · Altering documents affecting academic records
- Misrepresentation of academic status
- Forging a signature of authorization or falsifying information on an official academic document, grade report, letter of recommendation/reference, letter of permission, petition, or any document (*e.g.*, a Doctor's excuse) designed to meet or exempt a student from an established class, College or University academic regulation.

Aiding and Abetting Dishonesty

Providing material or information to another person with knowledge that these materials or information will be used improperly. This includes both deliberate and inadvertent actions.

Unauthorized or Malicious Interference/Tampering with Computer Property

Unauthorized or malicious interference or tampering with computers is considered an academic offense and, as such, is subject to College judicial sanction.

Classroom Disturbances

Classroom disturbances can also serve to create an unfair academic advantage for oneself or disadvantage for another member of the academic community. Some examples of actions that may violate the LSA Community Standards of Academic Integrity include:

- Interference with the course of instruction or an exam to the detriment of other students.
- Disruption of classes or other academic activities in an attempt to stifle academic freedom of speech
- Failure to comply with the instructions or directives.

Chapter V: Special Degrees and Pre-Professional Studies

Several special degree programs are offered by the joint cooperation of LSA and other colleges or schools within the University. Admission to some of these programs is highly competitive. Because many of these programs require specific courses for admission, it is important for students to identify program interests early in their undergraduate careers. Although the basic requirements are summarized in this chapter, students should consult academic advisors associated with the various programs. Many LSA students are interested in applying for admission to a professional school either after some liberal arts studies or after completing an LSA degree. The second half of this chapter describes several pre-professional courses of study. Pre-professional advising is available at both the Academic Advising Center and the Career Center.

Special Joint Degree Programs

Joint Undergraduate Degree Programs

Architecture (Joint Program in Liberal Arts and B.S. in Architecture)

Students enrolled in the College of Literature, Science, and the Arts wishing to consider joint degree programs, in which the B.S. degree is awarded by the Taubman College of Architecture and Urban Planning (TCAUP) and a second degree is awarded by the College of Literature, Science, and the Arts, are advised to contact the prearchitecture advisor in TCAUP and the concentration advisor in LSA. (This program is distinct from the *Pre-Professional Program in Architecture* described later in this chapter.)

Art & Design (Joint Degree Program in Liberal Arts and Art & Design)

The School of Art & Design offers dual admission to entering students who wish to pursue two degree programs. Dual admission allows students the freedom and ease to explore the educational opportunities of more than one discipline beginning in their first year of enrollment.

Program

The School of Art & Design offers a Bachelor of Arts in Art & Design, a Bachelor of Fine Arts in Art & Design, and a Bachelor of Fine Arts in Interarts Performance.

The LSA/Art & Design joint degree programs are intended for students whose educational goals include earning undergraduate degrees from both the School of Art & Design and LSA. Students interested in these degree programs typically seek concurrent admission, as freshmen, to both units, and, if successful, their programs of study will lead to bachelor's degrees from both colleges. Students must meet all the requirements of both degree programs. Of the minimum credits elected to satisfy the dual degree program, at least 100 credits must be LSA courses.

Bachelor of Arts in Art & Design

At least 151 credits are required to earn both an LSA degree and the Bachelor of Arts in Art & Design. Of the minimum 151 credits elected, at least 100 credits must be LSA courses.

The B.A. in Art & Design is the appropriate degree for students who want a rigorous education in art and design with the flexibility of a liberal arts education. Students who are interested in pursuing a substantive portion of their education through academic studies, athletes, pre-health, and pre-law students are excellent candidates for a B.A.

Bachelor of Fine Arts in Art & Design or Bachelor of Arts in Interarts Performance

At least 171 credits (and ten semesters of work) are required to earn both an LSA degree and either of the Bachelor of Fine Arts degrees. Of the minimum 171 credits elected, at least 100 credits must be LSA courses. The BFA in Art & Design prepares graduates for a broad range of eventualities, integrates art and design methodologies, interweaves traditional techniques with contemporary technologies, bridges the personal to the social, and engages the rich resources of the University and the community.

The interdisciplinary BFA in Interarts Performance will be attractive to students who have interests in both the visual arts and theater as well as a desire to create original performance pieces. For more information about the LSA/Art & Design joint degree programs, contact the School of Art & Design, (734) 764-0397 or email a&d@umich.edu.

Engineering (Joint Program in Liberal Arts and B.S. in Engineering)

This program is designed to enable students to develop a course of study that offers broader academic opportunities than those offered by either college. The program is intended for students who wish to develop a depth of understanding in the technical studies associated with the College of Engineering and in the physical and natural sciences, humanities, and social sciences in the College of Literature, Science, and the Arts. This integration of technical studies with the liberal arts is the primary strength of the program. It is open to students enrolled in Engineering or LSA and leads to concurrent bachelor's degrees from both colleges. It is intended primarily for students who enroll as first-year students in one of the two colleges.

The variety of courses that students may elect in the joint program makes it impractical to list specific requirements. Instead, each student should consult faculty members and academic advisors in each college to develop the best plan of study. Primary responsibility for planning the academic program and continuing contact with academic advisors in the two fields is assumed by the student, who also is responsible for becoming familiar with the academic policies and procedures of both colleges and the academic requirements and courses in both fields of concentration as described in the *Bulletins* of the two colleges.

It is usually possible for students carrying 16 credits a term to meet all requirements in 10 or 11 terms.

Administrative Regulations

- 1. Students may initially enroll either in the College of Engineering or the College of Literature, Science, and the Arts.
- 2. To be qualified for admission to the joint degree program, students are usually expected to have completed 30 credits of courses with an overall grade point average of at least 2.7. Entry of LSA students to some programs in Engineering may require a substantially higher grade point average.
- 3. Students considering this program should discuss their plans with the program advisor associated with the college in which they are enrolled. Usually this contact should be made early in the sophomore year.
- Students must complete an application form indicating their program in each college. Applications are available from Chalmers Knight or John Stratman (Academic Advising Center, 1255 Angell Hall, 764-0332), or Professor James Holloway, Associate Dean

for Undergraduate Education, College of Engineering (Engineering Advising Center, 1261 Lurie Engineering Center, 647-7150).

- 5. Once admitted to the program, each student continues to register in the college of initial enrollment. That college maintains the primary academic record.
- 6. Students must consult the academic advisor for each concentration and secure approval for their class schedule according to the academic policies and procedures of each college.
- 7. Students must maintain good academic standing in both colleges to continue in the joint degree program.
- 8. Students in good academic standing who wish to withdraw from the program may complete a degree in the college in which they originally enrolled. Students not in good academic standing are subject to the academic discipline policies of that college.
- 9. Upon completion of the requirements of both colleges, students are granted concurrent degrees. By the beginning of the term in which graduation is anticipated, a *Diploma Application* must be filed with each college, and the academic advisor for each concentration (specialization) must provide appropriate notification that departmental requirements are satisfied.

Joint Degree Program Structure

Candidates for the combined Bachelor of Science in Engineering (B.S.E.) and liberal arts degree (A.B., B.S., or B.G.S.) must:

- 1. complete one of the degree programs in the College of Engineering,
- 2. complete a minimum of 90 credits of LSA courses,
- 3. have a cumulative grade point average of at least 2.0.

In addition, candidates for the joint Bachelor of Science in Engineering (B.S.E.) and Bachelor of Science (B.S.) or Bachelor of Arts (A.B.) degree must complete the LSA degree requirements (LSA First-Year Writing requirement, the Upper-Level Writing requirement, the Race & Ethnicity requirement, the Quantitative Reasoning requirement, the language requirement, an approved area distribution plan), and an approved LSA concentration plan. Candidates for the joint Bachelor of Science in Engineering (B.S.E.) and Bachelor in General Studies (B.G.S.) degree must complete the LSA First-Year Writing requirement, the Upper-Level Writing requirement, the Race & Ethnicity requirement, the Quantitative Reasoning requirement, and a minimum 40 credits of LSA courses 300-level or above with a GPA of at least 2.0. No more than 15 of these credits may be elected from any one subject.

Music (Joint Degree Program in Liberal Arts & Music)

The LSA/Music joint degree programs are intended for students who seek the academic studies associated with the College of LSA in combination with the professional training in performance-based or academic music studies associated with the School of Music, Theatre, & Dance (MT&D). Students interested in these degree programs typically seek concurrent admission, as freshmen, to both units, and, if successful, their programs of study will lead to bachelor's degrees from both. At least 150 credits are required to earn these joint degrees, and 100 of these must count as LSA credits. It is impractical to list specific requirements because of the variety of courses that may be elected by students, but it is usually possible for students electing 16-18 credits per term to meet all requirements in eight to ten terms.

For more information about the LSA/Music joint degree programs, contact the School of Music, Theatre & Dance Admissions Office at 734/764-0593 or

www.music.umich.edu/departments/dual_degrees.htm

Individualized Joint Degree Programs

A student may be interested in a joint degree program with another school or college even if a joint degree program has not been officially established by the College. Such joint degree programs are planned through the Academic Standards Board. At least 150 credits are required for an individualized joint degree, including at least 100 credits of LSA courses.

A minimum of 30 credits must have been completed on the Ann Arbor campus before a student may apply for an individualized joint degree program, and the cumulative grade point average for work completed on the Ann Arbor campus must be 3.0 or better. Any exception to these requirements must be approved by the Academic Standards Board.

Students who have been admitted to the BBA program in the Stephen M. Ross School of Business may discuss an individualized joint degree program with the Stephen M. Ross School of Business.

Joint Undergraduate-Graduate Degree Programs

Architecture (Joint Program in Liberal Arts and M.Arch. in Architecture)

Students enrolled in the College of Literature, Science, and the Arts wishing to consider joint degree programs, in which the M.Arch. degree is awarded by the Taubman College of Architecture and Urban Planning (TCAUP) and a second degree is awarded by the College of Literature, Science, and the Arts, are advised to contact the prearchitecture advisor in TCAUP and the concentration advisor in LSA. (This program is distinct from the *Pre-Professional Program in Architecture* described later in this chapter.)

The Concurrent Undergraduate-Graduate Studies (CUGS) Program

The Concurrent Undergraduate-Graduate Studies (CUGS) Program enables a few students each year to enroll simultaneously in LSA and the Rackham Graduate School and to apply a maximum of 15 credits toward both an undergraduate degree and a graduate degree. To be considered, a student must have earned at least 90 credits toward an undergraduate degree, must have satisfied the distribution requirements, and must have an overall grade point average of at least 3.7. Admission to CUGS is limited and depends heavily on the student having exhausted the undergraduate resources of his or her department so that graduate study is the appropriate and logical next step in the student's program. The admissions process begins with encouragement from the graduate admissions committee of the department in which the student wishes to do graduate work. The student must then receive the recommendation of the chair of the undergraduate department / program, as well as the Assistant Dean for Student Academic Affairs for regular LSA students, or one of the Directors of the Honors Program for Honors students, or the Director (Director's representative) in the Residential College for RC students. An admission application is completed and submitted to the Graduate School for approval of both the graduate admission committee and Rackham Associate Dean of Admissions.

Engineering (Bachelor of Science in Cell and Molecular Biology and Master of Science in Biomedical Engineering)

The Department of Molecular, Cellular, and Developmental Biology in the College of LSA and the Department of Biomedical Engineering in the College of Engineering administer a five-year program awarding a concurrent BS degree in Cell and Molecular Biology from the College of LSA and an MS in Biomedical Engineering from the Rackham Graduate School upon completion of all program requirements. A student will apply to both the Molecular, Cellular, and Developmental Biology and Biomedical Engineering Departments for entrance. A student will be admitted into the program only after completing the first year of the concentration prerequisites (BIOLOGY 172, CHEM 210/211, PHYSICS 140/141, MATH 115 and 116) with a GPA of 3.2 or higher.

Upon acceptance into the program, each student will be assigned two advisors, one in MCDB and one in Biomedical Engineering. Student course selections must be approved by both advisors each term. Specific requirements are listed under the Molecular, Cellular and Developmental Biology Department in *Chapter VI*.

A student is typically admitted into the MS phase at the end of the third year when the student achieves senior standing. The student must have completed all concentration prerequisites and be judged by both academic advisors as making adequate progress toward the B.S. At this time, the student must formally apply to the Rackham Graduate School for the MS program in Biomedical Engineering. All students with a 3.2 GPA or higher in the BS concentration phase will automatically be admitted into the MS phase. Other CMB students who have reached senior standing with a 3.2 GPA or higher and have fulfilled all concentration prerequisites, but did not previously apply or were not admitted in the BS phase, can also apply for admittance into the MS phase. Students with senior standing will have two years to mix undergraduate and graduate courses, simultaneously fulfilling requirements for both the BS and MS degrees. Students will be charged graduate tuition for only one academic year.

Information (Bachelor of Arts / Bachelor of Science in Linguistics and Master of Science in Information)

The School of Information offers an accelerated program for exceptional undergraduates at the University of Michigan. The program enables students in the Department of Linguistics to complete both a bachelor's degree and the two-year Master of Science in Information (MSI) degree in five years of study. The School of Information will select candidates for this program during their junior year. The A.B./B.S. degree is normally awarded at the end of the senior year (the first year of study in the School of Information) and the MSI degree after completion of its requirements (normally after a second year of graduate study).

In addition, applicants for the joint degree program must show an academic record that is consistent with the demands of completing six years of course work in five years. This means that accelerated degree applicants must be at or above the norm for the regular entering class at the School of Information, in terms of maturity, GPA, and GRE scores.

Further information can be found under the departmental program statement of Linguistics, or by visiting the School of Information, 304 West Hall, or SI's website: www.si.umich.edu. Interested undergraduates should begin consultation in the sophomore year at the time when they declare their Linguistics concentration. A separate application to the School of Information is made in the fall academic term of the junior year and is reviewed as part of the regular admission process by the School of Information. Applicants will be notified of the School of Information's decision before the registration dead-line in the winter academic term.

Students must satisfy the normal requirements for both the Bachelors and the MSI programs; but any course they take that satisfies a requirement for the Bachelors and also satisfies a requirement for the MSI can be used to satisfy both requirements simultaneously. By taking 24 credit hours of courses that are "double-counted" in this fashion, it is possible to eliminate a year from the normal course of study. In particular, several designated courses taught in the School of Information and the Department of Linguistics satisfy requirements for both degrees. See the official list of courses for details.

To qualify for admission to the School of Information under the Accelerated Program, students need to show that, given the double counting provision, they will be able to complete the LSA and Linguistics requirements for the Bachelors by the end of the fourth year, while also completing the usual first-year coursework for the $\ensuremath{\mathsf{MSI}}$.

Public Health (Bachelor's Degree and Master of Public Health)

Eligibility: Students should be advanced enough to complete their concentration as well as all general college requirements by the end of their junior year. Minimum eligibility requirements are:

- Must have completed a minimum of 100 credits by the end of their junior year, thus enabling them to graduate in the fall term of their senior year.
- Must have a 3.5 GPA at the time of application.

Admission Process: Students who show enough progress toward completing their undergraduate degree are eligible to apply to the graduate program in the second term of their junior year. Students must first get a recommendation letter of support to the program from:

- LSA students from the Assistant Dean for Student Academic Affairs
- o Dean's Recommendation/Certification Form from their Advisor
- LSA Honors students from the Director of the Honors Program
- RC students from the Director of the Residential College

This recommendation should be sent directly to the Admissions Officer at the School of Public Health. The student will complete all required admissions materials for the School of Public Health (application, statement of purpose, letters of recommendation, GRE or MCAT scores) and will apply through the normal school-wide mechanism. He/she should also submit an *Election Form* and plan for completing the undergraduate requirements and enrolling in the initial set of required graduate courses in the first term of his/her senior year.

Admitted 4+1 students will matriculate into the School of Public Health at the beginning of the Winter term of their senior year.

Academic Advising: Once admitted to the SPH graduate program, the student will be assigned a faculty advisor from that department. However, LSA Academic Advising will retain primary responsibility for academic advising until the student has completed the undergraduate degree.

Credits: Undergraduates who have been admitted to the SUGS program will be given permission by the graduate program to enroll in the required graduate coursework. However students must be registered a minimum of two terms of the masters program in the graduate career only, with no other U-M registration. No dual enrollment is required. Approved graduate credits taken in the final undergraduate term – typically the Fall of their senior year – will be double counted in the graduate program upon matriculation.

Note: Students can double-count up to 15 credits from their undergraduate coursework towards their graduate coursework if the credits are 400 or higher level.

Participating departments and degree programs:

Health Behavior and Health Education MPH, Epidemiology MPH, & Environmental Health Sciences MPH

www.sph.umich.edu (734) 764-5425 sph.inquiries@umich.edu

Liberal Arts Study for Professional Undergraduate Programs

Several schools, colleges, and programs *(e.g.,* Taubman College of Architecture and Urban Planning, Gerald R. Ford School of Public Policy, Stephen M. Ross School of Business, Dental Hygiene, Education, and Pharmacy) within the University admit only students who have completed prior liberal arts study. The following information is for students interested in applying to one of the schools below.

Architecture (Pre-Professional Program in Architecture)

www.arch.umich.edu

Because architecture is truly interdisciplinary, it is important that prospective students acquire a liberal arts background. Students are not admitted to the Taubman College of Architecture and Urban Planning (TCAUP) until they have completed at least 60 credits. A number of introductory architecture courses are open to all freshmen and sophomores. The Taubman College of Architecture and Urban Planning looks for evidence of interest and strong commitment demonstrated in any number of ways: coursework, attending Taubman College lectures, familiarity with architectural literature, travels, visiting our changing exhibits, or work experience. For additional information, contact Anne Schoen, an advisor at TCAUP, 734/615-0431.

The pre-professional program consists of a minimum 60 credits. Students are urged to make an appointment at the Academic Advising Center (1255 Angell Hall) or TCAUP with Anne Schoen. A tour of the College is encouraged.

Since admission to Bachelor of Science program is competitive, students are urged to develop program alternatives within LSA.

Business

www.bus.umich.edu/bba

3-Year BBA Program. The 3-year program is the standard program under which a University of Michigan student studies business. Students who wish to earn a Bachelor of Business Administration may apply to the Stephen M. Ross School of Business after completion of their freshman year. Sophomore standing with at least 27 transferable credits earned in college courses is a requirement for admission. Applications for admission are due in March of the student's freshman year. Please see the online application (www.bus.umich.edu/bba) for specific instructions.

Students may enter in Fall Term only. The Admissions Committee begins to consider applications in mid-May for the Fall Term entering class. The deadline for applications is March 31. Applications are considered only after completed applications have been received. Final admission decisions will be made after second term grades have been reported. The Ross School of Business Admissions Committee will access second term grades from the Office of the Registrar. Applications are only available online (www.bus.umich.edu/bba).

If a student wishes to apply to the 3-year program at the Ross School of Business, the following prerequisite courses are required: Calculus, the First-Year Writing Requirement, and ECON 101. These courses must be completed by a student's second term at UM–Ann Arbor.

Admission is highly competitive. The average GPA of the incoming BBA class is 3.6. The application is reviewed as a whole. Strength of the overall academic schedule, activities after high school and required essays (a part of the application) play an important role in choosing among applicants with similar academic credentials.

Consideration for admission requires evidence that a minimum of 27 transferable credits earned in college courses from the University of Michigan–Ann Arbor will be completed by the second academic term in college. The requirement in Calculus may be completed by MATH 115 or its equivalent and the requirement in microeconomics may be

completed by ECON 101 or its equivalent. The requirement in composition may be completed by ENGLISH 124, 125, or any other course specified by the Sweetland Writing Center as satisfying the First-Year Writing Requirement. Honors students may substitute GTBOOKS 191 or 192.

A thoughtfully planned, balanced liberal arts program in addition to the required courses in Calculus, ECON 101 and the freshman writing requirement is acceptable preparation for admission.

Students currently attending the University of Michigan–Ann Arbor who are accepted to the BBA program may transfer a maximum of 45 credits. Guidelines for course work that will transfer to the BBA program can be found in the *BBA Bulletin* on the Business School's website. Transfer of credits are granted only for courses where the student earns a grade of C or better. Any course in which the final grade earned is a C– or lower will not be acceptable for transfer.

Preferred Admissions BBA Program. The Preferred Admissions program is a small, highly selective program that allows students to apply to the BBA program at the Ross School of Business during their senior year of high school. Students who are accepted by the Ross School of Business out of high school are not directly admitted into the Ross School of Business. They become a "preferred admit." This means the student is an LSA student, a student in the College of Engineering, a student in the School of Art & Design, or a student in the School of Music, Theatre & Dance but is given a set of requirements to meet during his or her freshman year. When these requirements are successfully met, the student will automatically become a Ross School of Business student at the end of the freshman year when he or she notifies the Ross School of his or her continued interest.

If a student does not apply or is not accepted into the Preferred Admissions Program, this does not hurt his or her chances of being accepted into the 3-year program. If a student is not admitted into the Ross School of Business for the Preferred Admissions program, he or she is encouraged to apply again at the end of his or her freshman year on March 31 for admission into the 3-year program.

Distribution and Foreign Language Requirements

Ross distribution and foreign language requirements are similar to the College of Literature, Science and the Arts (LSA), with some exceptions which are noted below. You should refer to the LSA online Course Guide (which can be found at www.lsa.umich.edu/cg) to see if a course meets the requirements for a distribution area. Courses have the following designation: natural science (NS), social science (SS), humanities (HU), mathematical and symbolic analysis (MSA) or excluded from distribution (Excl). In selecting courses, note the Ross restrictions which follow.

Complete three of the following four requirements:

- 1. Foreign Language (fourth-term proficiency in a language other than English). Fourth-term proficiency in a foreign language is determined by successful completion of a proficiency examination administered by U-M Advising or completion of a fourth-semester college-level foreign language course. AP course work which meets fourth-term proficiency satisfies this requirement. See the *LSA Bulletin* for further language details. (www.lsa.umich.edu) 0-20 crs
- 2. Humanities (HU) 9 crs
- 3. Natural Sciences (NS) and/or Mathematical & Symbolic Analysis (MSA) 9 crs
- 4. Social Sciences (SS) (excludes ECON 101 & 102) 9 crs

Dental Hygiene

www.dent.umich.edu/depts/hygiene

The School of Dentistry grants a B.S. degree in Dental Hygiene. This baccalaureate program consists of a year of prescribed college courses followed by three years enrollment in the School of Dentistry. The equivalent of 30 (semester) credits of college level work in liberal arts is a prerequisite to the three-year curriculum in dental hygiene. Prerequisites include:

- 1. Chemistry;
- 2. First-Year Writing;
- 3. Speech;
- 4. Introductory Psychology;
- 5. Introductory Sociology;
- 6. Additional electives to total 30 credits (biology recommended).

The School of Dentistry also offers two B.S. Degree Completion Programs for students with a certificate or associate degree in Dental Hygiene. The two options are on-campus and E-Learning (online).

Interested students should contact Lisa Dodge in the School of Dentistry [3066 Dentistry, (734) 763-3392] for more information and application deadlines. Additional information can also be found on the web at www.dent.umich.edu/depts/pom/hygiene or in the School of Dentistry *Bulletin.*

Education

www.soe.umich.edu

Several paths are open to students who wish to obtain certification in elementary school teaching (kindergarten through eighth grade) or secondary school teaching (grades six through twelve).

Elementary Program. Students interested in earning an elementary school teaching certificate transfer to the School of Education, usually at the beginning of the junior year, for both a bachelor's degree and certification.

Secondary Program. Students interested in secondary education can choose to remain in their unit *(i.e.,* LSA) for their BA/BS degree and simultaneously complete certification requirements. Alternatively, secondary students can transfer to the School of Education, usually at the beginning of the junior year, and complete requirements for an education degree with a teaching certificate.

Interested students should study the *Teacher Education Program* in *Chapter VI* of this *Bulletin* and contact the School of Education Teacher Education office [1228 SEB, (734) 615-1528] for more information and application procedures.

Kinesiology

www.kines.umich.edu

Kinesiology is a professional school with a strong liberal arts background offering Bachelor of Science (Movement Science, Physical Education, and Athletic Training) and Bachelor of Arts (Sport Management) degrees. Movement Science and Sport Management require 120 credits. However, Sport Management program requires students to apply for advancement to Level 2 during their sophomore year. Athletic Training requires 120 credits plus 1500 hours of practical experience under the supervision of a certified athletic trainer. Students must apply to and be accepted by the Athletic Training Program. Physical Education requires 130 credits and dual enrollment with the School of Education.

A complete description of each program is available from the Office of Student Services, Observatory Lodge main floor, 1402 Washington Heights, and on the Kinesiology website, www.kines.umich.edu.

General requirements: Students in Movement Science, Sport Management, and Athletic Training degree programs must satisfy a distribution plan of 36 credits — 12 credits in each of the following three disciplines: humanities (HU), social science (SS), and natural science (NS). Students in the Physical Education degree program must complete a distribution plan of 30 credits — 9 credits in HU and

SS, 12 credits in NS. Students in Sport Management, Athletic Training and Physical Education are required to take SM 111. Students in Athletic Training, Physical Education, and Movement Science are required to take ENGLISH 225. All Kinesiology students are required to take ENGLISH 124/125, PSYCH 111, SM 101 and MOVESCI 110.

General information for cross campus transfers: Students can transfer to Kinesiology after their freshman year. Admission is competitive. Interested students are advised to make an appointment with one of the advisors in the Office of Student Services at (734) 764-4472.

Nursing

www.nursing.umich.edu/admissions

The University of Michigan School of Nursing offers a direct-entry nursing program; students immediately begin a Bachelor of Science in Nursing (BSN) curriculum that balances humanities, social and biological science courses. School of Nursing graduates are eligible to apply for Registered Nurse (RN) licensure and are prepared to integrate the principles learned in the classroom to the practice of nursing. Graduates also possess the educational foundation to pursue an advanced-practice nursing degree – creating career opportunities including nurse practitioner, midwife, clinical nurse specialist, high-level nursing administrator, research scientist, or nurse educator.

There are two options for students enrolled in LSA who wish to earn a BSN degree at the School of Nursing: Sophomore Transfer or the Accelerated Second Career program. The Sophomore Transfer option allows undergraduate students to apply for entry to the sophomorelevel of the four-year BSN curriculum. The Accelerated Second Career in Nursing (SCN) program is designed for individuals who have earned an undergraduate degree in a field other than nursing; students in the SCN program complete 12 full-time months of intensive study and are awarded a BSN degree. Additional information about all School of Nursing undergraduate programs is available at: www.nursing.umich.edu/admissions/.

General information for cross campus transfers: Students interested in learning more may visit the School of Nursing admissions website. If you would like to speak with an admission representative, Nursing Information Sessions are hosted regularly. Check the School of Nursing website for upcoming session dates and to RSVP. LSA students must submit a complete application for cross campus transfer consideration to the Office of Undergraduate Admissions by February 1.

Pharmacy

pharmacy.umich.edu/pharmacy/home

Students accepted to the Doctor of Pharmacy (Pharm.D.) degree program transfer to the College of Pharmacy upon completion of pre-professional work as outlined below. The PCAT is required for admission, with a minimum score of 70 percentile in all areas. In addition, at least one year of health care experience is required. The College accepts students only for the Fall Term, and the Pharm.D. curriculum requires four years of study. Deadline for submission of applications is December 1. All enrolled students are required to submit Fall Term grades.

The pre-pharmacy courses include:

- 1. BIOLCHEM 415 or 515;
- 2. BIOLOGY 171, 172, 173 and 305;
- 3. MEDADM 403 (Anatomy);
- 4. MICRBIOL 301 and 350;
- CHEM 125/126 and 130 (or exemption per LSA policy), CHEM 210/211, 215/216, and 260;
- 6. MATH 115, 116, 156, 175 or 185 (AP credit not accepted);
- 7. PHYSICS 125/127 and 126/128 or 140/141 and 240/241;
- 8. STATS 250 (or 350);
- 9. Satisfaction of the LSA First-Year Writing Requirement;
- 10. Electives, including two social science courses and two courses in foreign language or the humanities (AP credit not accepted)

Honors alternatives to these courses are acceptable.

Students interested in transferring to the College of Pharmacy should discuss their plans and curriculum with a pharmacy advisor available in the College of Pharmacy.

Since spaces in the College of Pharmacy are limited and admission is competitive, students are encouraged to develop program alternatives in LSA and to inform themselves of LSA degree requirements. Application to the University of Michigan College of Pharmacy is made through PharmCAS, the Pharmacy College Application Service for applicants applying to Colleges and Schools of Pharmacy.

In addition to the Pharm.D. program, the College of Pharmacy offers Bachelor of Science in Pharmaceutical Sciences. The baccalaureate program does not lead to a professional degree or pharmacy licensure. Students interested in this program should consult a Pharmacy advisor.

Public Policy

www.fordschool.umich.edu

The Gerald R. Ford School of Public Policy offers a Bachelor of Arts (BA) program in public policy. The BA in Public Policy emphasizes multidisciplinary training in the social sciences organized around understanding the public policy process at both the domestic and international levels.

The undergraduate program builds on two traditional strengths of the University of Michigan: its strong, interdisciplinary social sciences and its students' focus on issues involving politics and public affairs. Students apply to the program during their sophomore year and are admitted to the Ford School for their final two years. The program size is limited to approximately 50 students per year.

Admissions deadlines: Applications due February 1. Students will be notified about admissions decisions in April.

Prerequisites for admission:

- ECON 101 and 102
- One other introductory social science course, such as PUBPOL 201 (Systematic Thinking About Problems of the Day), POLSCI 111 (American Politics), POLSCI 160 (World Politics), HISTORY 261 (U.S. History, 1865 to the Present), SOC 100 (Principles of Sociology) or SOC 102 (Contemporary Social Issues), COMM 101 (The Mass Media)
- MATH 115 (not required) is strongly recommended.

The program consists of required courses (19 credits, which includes STATS 250 [or 350]) and elective coursework (18 credits). Coursework combines classes in economics, political science and other social sciences disciplines with integrative policy seminars that provide opportunities for students to work together in teams to apply their skills in the analysis of contemporary policy problems. This experience, grounded in the liberal arts, provides an excellent foundation for later professional training in a broad range of professions.

A complete description of the program is available from the Ford School of Public Policy's website, www.fordschool.umich.edu

Pre-Medicine and Pre-Legal Studies

Pre-Medicine

www.lsa.umich.edu/advising/advisor/prehealth

Not a concentration program

LSA students who wish to prepare for a career in medicine should elect courses that lead to completion of degree requirements and simultaneously fulfill the pre-medical requirements of the medical schools of their choice. Pre-medicine is *not* a concentration. A balanced and challenging liberal arts education is strongly recommended as an ideal way to prepare for the professional study of medicine.

Interested students should view the website and schedule an appointment with a pre-professional advisor in the Academic Advising Center and visit the Career Center for information about the medical profession.

Pre-medical course requirements are:

- Chemistry. Four terms: CHEM 130/125/126, 210/211, 215/216, followed by either CHEM 230 or 260, is the recommended course sequence.
- Biochemistry. The majority of medical schools either recommend or require biochemistry (the University of Michigan Medical School requires it). Students may select from MCDB 310, BIOLCHEM 415 or 515, or CHEM 351.
- Biology. Two terms of introductory biology lecture: BIOLOGY 171 and 172, and one term of introductory biology lab: BIOLOGY 173. Students also will want to complete at least one advanced course in biology (with lab).

Note: Just over 50% of medical schools "recommend" that genetics (BIOLOGY 305) also be completed. Five require it.

- Physics. Two terms, including lab work. Students may select PHYSICS 125/141 and 126/236, PHYSICS 135/136 and 235/236, PHYSICS 140/141 and 240/241, or PHYSICS 160/161 and 260/261, or a combination of algebra- and calculus-based courses.
- English. Two terms of English are generally required. A course that satisfies the First-Year Writing Requirement usually satisfies one term of this requirement. "English" courses may be selected

from English, Great Books, or Comparative Literature departments or programs.

6. Mathematics. Some medical schools require at least one mathematics course (college-level calculus in 21 cases). STATS 250 (or 350) may be used to satisfy part or all of the math requirement, depending on the medical school. Currently, six allopathic schools require a math-based statistics course.

The above courses account for just under one half of the course work for an A.B., B.S., or B.G.S. degree (assuming no AP credits). Medical schools require demonstrated proficiency in the sciences, but it is not necessary to concentrate in the sciences.

Pre-Law Studies

www.lsa.umich.edu/advising/advisor/prelaw

Not a concentration program

A strong liberal arts education is an ideal way to prepare for the professional study of law. LSA students should acquire the skills that enable critical thinking, logical reasoning, and effective writing by pursuing a balanced and challenging undergraduate program.

Successful study of the law requires the ability to speak clearly and correctly. Plan to continue sharpening these skills throughout your undergraduate education. Participate in extracurricular activities, student organizations, and enroll in courses stressing group interaction and leadership responsibilities. It is important to challenge yourself to think independently, attaining exactness of thought, and making valid analytical comparisons and differentiations. Spend time investigating courses which demand precise thinking and close reading. There are no prerequisite courses and there is no required concentration for entering law school. A prospective law student, above all, should take courses in any subject that will be personally interesting while providing intellectual challenges and that will help develop an understanding of the nature and aspirations of American society.

Interested students should view the pre-law website and schedule an appointment with a pre-professional advisor in the Newnan Academic Advising Center.

Chapter VI: Departments, Programs, and Courses

This chapter lists and describes LSA departments, programs, and courses, reflecting additions, deletions, and modifications to the College curriculum approved through March 24, 2010. Subsequent changes in academic policy and procedures, new academic opportunities, *etc.*, are available on the LSA website.

Key to Course Listings

Catalog numbers are part of a University-wide numbering system. Generally, courses numbered 100 to 199 are introductory, 200-299 are intermediate, and 300-499 are advanced (upper-level).

Cross-listed courses are sponsored by more than one department or program and may be elected in any of the participating units. Cross-listings appear in boldface and are denoted by a slash between the participating units.

Course titles appear in boldface after the catalog number.

Prerequisites appear in italics after the course title. Some prerequisites are advisory. They suggest the assumed background or level of academic experience, and students should be guided by these statements. Some prerequisites are mandatory and are enforced at the point of registration. The *Course Guide* and the *LSA Bulletin* indicate the cases when prerequisites are enforced.

Prerequisites are of three types:

- Courses. Unless otherwise stated, the phrase "or equivalent" may be considered an implicit part of the prerequisite for any course. When a student has satisfactorily completed a course(s) at the required level of competency and when that course is believed to be substantially equivalent to one listed as a prerequisite, the student must consult the instructor or department. If equivalency is determined to have been satisfied, election may be approved by issuance of electronic permission.
- Class standing (first year, sophomore, junior, senior). A course might be appropriate for "first and second year students only," or for "juniors and seniors."
- Permission of instructor. The phrase "or permission of instructor" may be considered an implicit part of the statement of prerequisites for any course. When permission is a stated requirement, or when a student does not have the stated prerequisite for a course but can give evidence of sufficient background, the student should obtain approval from the instructor or department concerned and request an electronic permission.

The Credit Symbol, an Arabic numeral in parentheses, denotes the credits earned for the course. Credit is granted in semester hours. Except for small seminars where the reading and/or writing requirements are intensive, one credit represents no less than one hour of

class meeting time each week of the term, and usually represents two hours of work outside of class for each class hour.

Area distribution designation is approved by the LSA Curriculum Committee on a yearly basis. A course may be approved with the designation natural science *(NS)*, social science *(SS)*, humanities *(HU)*, mathematical and symbolic analysis *(MSA)*, creative expression *(CE)*, interdisciplinary *(ID)*. Courses without one of these designations may not be used toward Area Distribution.

Courses meeting certain college requirements are so listed. Language other than English (*Lang Req*) courses may be used toward meeting the Language Requirement. The First-Year Writing Requirement may be met by courses designated (FYWR). Courses approved with the designation "Lang Req" or "FYWR" may not be used as part of an area distribution plan. (*BS*) means that the course may be used toward the 60 approved credits required for the B.S. degree. Courses meeting or partially meeting the Quantitative Reasoning requirement are designated (*QR*/1) or (*QR*/2). Courses with standard approval for meeting the Race & Ethnicity (*R&E*) requirement are so indicated. Other courses may meet the R&E or QR requirements on a term-by-term basis and are listed on the LSA website (www.lsa.umich.edu).

Experiential, Independent Study, and Tutorial courses are so designated. (*See* Experiential and Directed Reading / Independent Study Courses in *Chapter IV.*)

Repetition of a course that varies in content from term to term is permitted only under certain conditions. When a department or program has a policy about the repetition of a course for credit, that policy is included in the course listing. In all other instances, a student must get permission from both the department or program and the Academic Standards Board to repeat a course for credit. Generally, a course may be elected for credit once only.

Excluded combinations of course elections are designated in the listing of affected courses.

Special Grading pattern for a course is indicated in the course listing. Some LSA courses are offered *mandatory credit/no credit.* (See Non-Graded Courses in *Chapter IV.*)

LSA Course Guide. The online LSA Course Guide (www.lsa.umich.edu/cg) contains course descriptions written by instructors of classes to be offered in a specific term.

University Online Schedule of Classes. The online Schedule of Classes (ro.umich.edu/schedule) is refreshed nightly. Wolverine Access has real time course and class information. All students, faculty, and staff are encouraged to use either Wolverine Access to obtain the most accurate, up-to-date class meeting information.

Department Name

Classical Studies

Law

Linguistics

Latin American & Caribbean Studies

Law, History, & Communication Lloyd Hall Scholars Program

SUBJECT Guide

SUBJECT	UNIT
AAPTIS	LSA
ACABS	LSA
ACC	Business
AERO AEROSP AMCULT ANAT ANTHRARC ANTHRBIO ANTHRCUL AOSS	Military Officer Education Programs Engineering LSA Medicine LSA LSA LSA Engineering
APPPHYS	LSA
ARCH	Architecture & Urbar
ARMENIAN ARTDES ASIAN ASIANLAN ASTRO AT AUTO BA BCS BE	Planning LSA Art & Design LSA LSA LSA Kinesiology Engineering Business LSA Business
BIOINF BIOLCHEM BIOLOGY BIOMEDE BIOPHYS BIOSTAT BIT BUDDHST CAAS CCS CCB CCB CEE	Medicine Medicine LSA Engineering LSA Public Health Business LSA LSA LSA Medicine Engineering
CHE CHEMBO CHEMBIO CIC CIS CLARCH CLCIV CLIVINST CLININST CLINING CMBIOL CMPLXSYS COMM COMPLT CSP CZECH DANCE DESCI DUTCH ECON EDBEHAVR	Engineering LSA Rackham LSA LSA LSA Medicine LSA Medicine LSA LSA LSA LSA LSA LSA Social Work LSA LSA Social Work LSA LSA Social Work LSA LSA Education
EDCURINS	Education
EDUC	Education
EEB	LSA
EECS	Engineering
EHS	Public Health
ELI	LSA
EMBA	Business
ENGLISH	LSA
ENGR	Engineering
ENS	Music
ENSCEN	Engineering
ENVIRON	LSA
EPID	Public Health
ES	Business
FIN	Business
FINENG	Engineering
FRENCH	LSA
GEOG	LSA
GEOSCI	LSA
GERMAN	LSA
GREEK	LSA
GTBOOKS	LSA
HB	Social Work
HBEHED	Public Health
HHCR	Medicine
HISTART	LSA
HISTORY	LSA
HJCS	LSA
HMP	Public Health
HONORS	LSA
HUMGEN	Medicine
IMMUNO	Medicine
INSTHUM	LSA
IOE	Engineering
ITALIAN	LSA
JAZZ	Music
JUDAIC	LSA
KINESLGY	Kinesiology

Subject Name Arabic, Armenian, Persian, Turkish, & Islamic Studies Ancient Civilizations & Biblical Studies Accounting & Information
Analysis Air Force
Aerospace Engineering American Culture Anatomy Anthropological Archaeology Biological Anthropology Cultural Anthropology Atmospheric, Oceanic & Space Sciences Applied Physics Architecture
Armenian Studies
Art & Design Asian Studies Asian Languages Astronomy Athletic Training Automotive Engineering Program Business Administration Bosnian, Croatian, and Serbian Business Economics and Public
Business Economics and Public Policy Bioinformatics
Biological Chemistry Biology
Biomedical Engineering Biophysics Biostatistics
Business Information Technology Buddhist Studies
Afroamerican & African Studies Chinese Studies Cell & Developmental Biology
Civil & Environmental Engineering
Chemical Engineering Chemistry Chemical Biology
CIC Traveling Scholars Japanese Studies Classical Archaeology
Classical Civilization Clinical Instruction
Classical Linguistics Cellular & Molecular Biology Complex Systems
Communication Studies Music Composition Comparative Literature
Comprehensive Studies Program Czech
Dance Design Science SW Doctoral Dutch
Economics Education C – Behavior Sciences In Education
Education D – Curriculum & Instruction
Education Ecology & Evolutionary Biology Electrical Engineering &
Computer Science Environmental Health Sciences English Language Institute Executive MBA
English Engineering
Ensemble Environmental Sciences & Engineering
Environment Epidemiology Entrepreneurial Studies
Finance Financial Engineering
French Geography
Geological Sciences German Greek
Great Books Human Behavior
Health Behavior & Health Education Health and Health Care Research
History of Art History Hebrew & Jewish Cultural Studies Health Management & Policy
College Honors Human Genetics
Immunology Institute for the Humanities Industrial & Operations Engineering
Italian Jazz & Improvisational Studies Judaic Studies
Kinesiology

Department Name Near Eastern Studies
Near Eastern Studies
Accounting & Information Analysis
Military Officer Education Programs
Aerospace Engineering American Culture Anatomy Anthropology Anthropology Anthropology Atmospheric, Oceanic & Space Sciences Applied Physics Architecture
Armenian Studies Art & Design Art & Design Asian Languages & Cultures Asian Languages & Cultures Astronomy Kinesiology Automotive Engineering Program Business Administration Slavic Languages and Literatures Business Economics and Public Policy Bioingical Chemistry Biological Chemistry Biology Biomedical Engineering Biostatistics Business Information Technology Asian Languages & Cultures Afroamerican & African Studies Center for Chinese Studies Center for Chinese Studies
Chemical Engineering Chemistry Chemical Biology
Center for Japanese Studies Classical Studies Classical Studies
Classical Studies Cellular & Molecular Biology Complex Systems Communication Studies Music Comparative Literature Comprehensive Studies Program Slavic Languages & Literatures Dance Design Science Program Social Work Germanic Languages & Literatures Economics Education
Education
Education Ecology & Evolutionary Biology Electrical Engineering & Computer Science Environmental Health Sciences English Language Institute Business English Language & Literature Engineering Music Environmental Sciences & Engineering Program in the Environment Epidemiology Entrepreneurial Studies Finance Interdisciplinary and Professional Engineering Romance Languages & Literatures Geography Geological Sciences Geography Geological Sciences Geraet Books Social Work Health Behavior & Health Education Health and Health Care Research History of Art History Near Eastern Studies Health Management & Policy Hounors Program Human Genetics
Immunology Institute for the Humanities Industrial & Operations Engineering Romance Languages & Literatures Music Judaic Studies
Kinesiology

Cura	U	
SUBJECT		Subject Name
LACS	LSA	Latin American & Caribbean Studies
LATIN	LSA	Latin
LAW	Law	Law
LHC LHSP	Business LSA	Law, History, & Communication Lloyd Hall Scholars
LING	LSA	Linguistics
MACROMOL	LSA LSA	Macromolecular Science
MATH MATSCIE		Mathematics Materials Science Engineering
MCDB	LSA	Molecular, Cellular, &
MECHENG	Engineering	Developmental Biology Mechanical Engineering
MEDCHEM	Pharmacy	Medicinal Chemistry Division
MEDEDUC	Medicine Art & Design	Medical Education
	LSA Design	Medical & Biological Illustration Medieval & Early Modern Stud
	LSA	Middle Eastern & North Africa
MFG	Engineering	Studies Manufacturing
MICRBIOL		Microbiology and Immunology
	Military Officer	Military Science
МКТ	Education Programs Business	Marketing
MO	Business	Management and Organizatio
MODGREEK		Modern Greek Movement Science
MOVESCI MSP	Rackham	Museum Studies Program
MUSEUMS	LSA	Museum Studies
MUSICOL MUSMETH	Music	Music History & Musicology Museum Methods
MUSPERF	Music	Music Performance
MUSPRACT		Museum Practice
NAVARCH	Engineering	Naval Architecture & Marine Engineering
NAVSCI	Military Officer	Naval Science
	Education Programs	
NERS	Engineering	Nuclear Engineering & Radiological Science
NEUROSCI		Neuroscience
NEURSURG NRE		Neurosurgery
	Environment	Natural Resources & Environn
NURS	Nursing	Nursing
OMS	Business	Operations and Management Science
ORGSTUDY	LSA	Organizational Studies
ORTHSURG PAT	Medicine Music	Orthopedic Surgery Performing Arts Technology
	Medicine	Pathology
PHIL	LSA	Philosophy
PHRMACOL PHYSED	Medicine	Pharmacology Physical Education
PHYSICS	LSA	Physics
		Physiology
	Music Medicine	Piano Biomedical Sciences
POLISH	LSA	Polish
	LSA	Political Science
PORTUG PSYCH	LSA LSA	Portuguese Psychology
	Public Policy	Public Policy
РАСКНАМ	Rackham	Rackham Graduate School
RACKHAM RCARTS RCCORE	LSA	RC Fine Arts
RCCORE	LSA	RC Core RC Humanities
RCHUMS	LSA LSA	RC Humanities RC Interdivisional
RCISCI	LSA	RC Interdivisional Science
	LSA	RC Language
RCMATH RCNSCI	LSA LSA	RC Math RC Natural Science
RCSSCI	LSA	RC Social Science
REES	LSA	Russian, East European &
RELIGION	LSA	Eurasian Studies Religion
	LSA	Romance Languages and
ROMI ING	ISA	Literatures Romance Linguistics
ROMLING RUSSIAN	LSA	Russian
	LSA	Screen Arts & Cultures
	LSA LSA	South Asian Studies Scandinavian
SEAS	LSA	Southeast Asian Studies
	Information	Information Slavic Linguistics, Literary
SLAVIC	LSA	Theory, Film, & Surveys
	Kinesiology	Sports Management
	LSA LSA	Sociology Spanish
STATS	LSA	Statistics
STDABRD STRATEGY	LSA	Study Abroad
STRATEGY SURVMETH		Strategy Survey Methodology
	Social Work	Social Work
SWC	LSA	Sweetland Writing Center
TCHNCLCM THEORY	Engineering Music	Technical Communication Music Theory
THTREMUS	Music	Theatre & Drama
	LSA Art & Design	University Courses
	Art & Design Architecture & Urban	University Arts Urban Design
	Planning	-
UKRAINE UMOVE	LSA Kinesiology	Ukrainian UMove
UMOVE	Architecture & Urban	Urban and Regional Planning
	Planning	
	Medicine	Urology
WOMENSTD		Women's Studies
YIDDISH	LSA	Yiddish

Subject Name Latin American & Caribbean Studies Latin Law Law, History, & Communication Lloyd Hall Scholars Linguistics Macromolecular Science Macromolecular Science Mathematics Materials Science Engineering Molecular, Cellular, & Developmental Biology Mechanical Engineering Medicine Chamither Division Medicinal Chemistry Division Medical Education Medical & Biological Illustration Medieval & Early Modern Studies Middle Eastern & North African Studies Manufacturing Microbiology and Immunology Military Science Marketing Management and Organizations Modern Greek Movement Science Museum Studies Program Museum Studies Music History & Musicology Museum Methods Music Performance Museum Practice Naval Architecture & Marine Engineering Naval Science Nuclear Engineering & Radiological Science Neuroscience Neurosurgery Natural Resources & Environment Nursing Operations and Management Science Organizational Studies Orthopedic Surgery Performing Arts Technoloav Pathology Philosophy Pharmacology Physical Education Physics Physiology Piano Biomedical Sciences Polish Political Science Portuguese Psychology Public Policy Rackham Graduate School RC Fine Arts RC Core RC Humanities RC Humanities RC Interdivisional RC Interdivisional Science RC Language RC Math RC Natural Science

Macromolecular Science Matronolecular Science Mathematics Materials Science Engineering Molecular, Cellular, & Developmental Biology Mechanical Engineering Pharmacy Medical Education Medical & Biological Illustration History Middle Eastern & North African Studies Manufacturing Microbiology & Immunology Military Officer Education Programs Marketing Management and Organizations Classical Studies Kinesiology Museum Studies Program Museum Studies Program Music Museum Methods Music Museum Practice Navel Architecture & Marine Engineering Military Officer Education Programs Nuclear Engineering & Radiological Science Neuroscience Neurosurgery Natural Resources & Environment Nursing Operations and Management Science Interdisciplinary Program on Organizational Studies Orthopedic Surgery Music Pathology Philosophy Pharmacology Kinesiology Physics Physiology Music Program in Biomedical Sciences Slavic Languages & Literatures Political Science Romance Languages & Literatures Psychology Gerald R. Ford School of Public Policy Rackham Graduate School Residential College Russian, East European & Eurasian Studies Religion, Studies in Romance Languages & Literatures Romance Languages & Literatures Slavic Languages & Literatures Screen Arts & Cultures Center for South Asian Studies Germanic Languages & Literatures Center for Southeast Asian Studies School of Information Slavic Languages & Literatures Kinesiology Sociology Romance Languages & Literatures Statistics International Programs Strategy Survey Methodology Social Work Sweetland Writing Center Technical Communication Music Theatre & Drama

University Courses Art & Design Urban Design

Slavic Languages & Literatures Kinesiology Urban and Regional Planning

Urology Women's Studies Germanic Languages & Literatures

Courses in Other Units

This list shows courses offered by other academic units of the University of Michigan, but which count as LSA credit toward graduation. You may find further information about a course under the name of the offering unit, under the department, or under the cross-listed LSA department.

AERO, AEROSPACE STUDIES – MILITARY OFFICER EDUCATION PROGRAMS

AERO 201 / UC 201. U.S. Aviation History & Its Development into Air Power. (1).

AERO 202 / UC 202. U.S. Aviation History & Its Development into Air Power. (1).

AERO 310 / UC 309. Air Force Leadership and Management. (3).

ANAT, ANATOMY AND CELL BIOLOGY – MEDICAL SCHOOL

ANAT 425 / BIOLOGY 425. Systems Neurobiology. (3). (BS). ANAT 541 / BIOLOGY 541 / PHYSIOL 541 / PSYCH 532. Mammalian Reproductive Endocrinology. (4). (BS).

ANAT 660 / BIOLOGY 536. Molecular and Cellular Aspects of Development. (4). (BS).

ANAT 715 / BIOLOGY 533. Regeneration in Vertebrates. (2). (BS).

AOSS, ATMOSPHERIC, OCEANIC AND SPACE SCIENCES - COLLEGE OF ENGINEERING

- AOSS 101 / ASTRO 103. Rocket Science. (3 in the half-term). (NS). (BS).
- AOSS 102 / ENVIRON 102 / GEOSCI 122. Extreme Weather. (3). (NS). (BS).
- AOSS 105 / CHEM 105 / ENSCEN 105 / ENVIRON 105. Our Changing Atmosphere. (3). (NS). (BS).
- AOSS 135 / ASTRO 135. Exploration of the Solar System. (3). (NS). (BS), (OR/2),
- AOSS 171 / BIOLOGY 110 / ENSCEN 171 / ENVIRON 110 / GEOSCI 171. Introduction of Global Change: Physical Processes. (4). (NS). (BS).
- AOSS 172 / ENSCEN 172 / ENVIRON 111 / GEOG 111 / GEOSCI 172 / SOC 111. Introduction to Global Change: Human Impacts. (4). (SS). AOSS 202. The Atmosphere. (3). (NS). (BS).
- AOSS 204 / ASTRO 204 / GEOSCI 204. The Planets: Their Geology and Climates. (3). (NS). (BS).
- AOSS 320 / GEOSCI 320. Earth Systems Evolution. (4). (BS).
- AOSS 321 / GEOSCI 321. Earth Systems Dynamics. (4). (BS).

AOSS 323 / GEOSCI 323. Earth System Analysis. (4). (BS). AOSS 350 / GEOSCI 350. Atmospheric Thermodynamics. (4). (BS). AOSS 370 / GEOSCI 370. Solar-Terrestrial Relations. (4). (BS). AOSS 380 / GEOSCI 381. Introduction to Atmospheric Radiation. (4). (BS). AOSS 401 / GEOSCI 401. Geophysical Fluid Dynamics. (4). (BS). AOSS 410 / GEOSCI 409. Earth System Modeling. (4). (BS). AOSS 411 / GEOSCI 411. Cloud and Precipitation Processes. (3). (BS). AOSS 414 / GEOSCI 414. Weather Systems. (3). (BS). AOSS 422 / GEOSCI 423. Boundary Layer Meteorology. (4). (BS). AOSS 440 / GEOSCI 454. Meteorological Analysis Laboratory. (4). (BS). AOSS 451 / ENSCEN 451 / GEOSCI 457. Atmospheric Dynamics I. (4). (BS). AOSS 467 / CHEM 467 / ENSCEN 467 / ENVIRON 467 / GEOSCI 465. Biogeochemical Cycles. (3). (BS).

AOSS 475 / ENSCEN 475 / GEOSCI 475. Earth System Interactions. (4). (BS).

ARCH, ARCHITECTURE – A. ALFRED TAUBMAN COLLEGE OF ARCHITECTURE + URBAN PLANNING

ARCH 212 / HISTART 212. Understanding Architecture. (3). ARCH 213 / HISTART 213. Architecture and Modernity. (4). (HU). ARCH 423 / ENVIRON 370 / UP 423. Introduction to Urban and Environmental Planning. (3).

ARTDES, ART & DESIGN – SCHOOL OF ART & DESIGN

ARTDES 120. Tools, Materials and Processes I. (3). (CE). ARTDES 121. Tools, Materials, and Processes II. (3). (CE). ARTDES 130. Concept, Form and Context I. (3). (CE).

ARTDES 150. Art-Design Perspective I: Creators. (3). (HU). ARTDES 151. Art-Design Perspectives II. (3). (HU). ARTDES 250. Art-Design Perspectives III: Tech/Environment. (3). (ID).

BA, BUSINESS ADMINISTRATION – STEPHEN M. ROSS SCHOOL OF BUSINESS

BA 499 / GERMAN 430. Doing Business in German. (3).

BE, BUSINESS ECONOMICS AND PUBLIC POLICY – STEPHEN M. ROSS SCHOOL OF BUSINESS

BE 440 / MATH 422. Risk Management and Insurance. (3). (BS).

BIOINF, BIOINFORMATICS AND COMPUTATIONAL BIOLOGY – MEDICAL SCHOOL

BIOINF 463 / BIOPHYS 463 / MATH 463. Mathematical Modeling in Biology. (3). (BS).

BIOLCHEM, BIOLOGICAL CHEMISTRY – MEDICAL SCHOOL

BIOLCHEM 398. Undergraduate Research in Biochemistry. (1 - 4). (BS).

- BIOLCHEM 415. Introductory Biochemistry. (3). (BS).
- BIOLCHEM 416. Introductory Biochemistry Laboratory. (3). (BS).

BIOLCHEM 451 / CHEM 451. Advanced Biochemistry: Macromolecular Structure and Function. (4). (BS).

- BIOLCHEM 452 / CHEM 452. Advanced Biochemistry: Cellular Processes. (4). (BS).
- BIOLCHEM 499. Biochemical Research for Undergraduates: Laboratory. (1 - 6; 1 - 4 in the half-term). (BS).

BIOLCHEM 673 / CHEM 673. Kinetics and Mechanism. (2). (BS).

BIOLCHEM 675 / CDB 675 / MICRBIOL 675. Advanced Topics in the Secretory-Endocytic Pathway: Current Issues in Protein and Membrane Assembly and Trafficking. (2). (BS).

BIOMEDE, BIOMEDICAL ENGINEERING – COLLEGE OF ENGINEERING

BIOMEDE 410 / MACROMOL 410 / MATSCIE 410. Design and Applications of Biomaterials. (3). (BS). BIOMEDE 464 / MATH 464. Inverse Problems. (3). (BS).

BIOSTAT, BIOSTATISTICS – SCHOOL OF PUBLIC HEALTH

BIOSTAT 449 / STATS 449. Topics in Biostatistics. (3). (BS).

CDB, CELL AND DEVELOPMENTAL BIOLOGY - MEDICAL SCHOOL

CDB 264 / PHYSICS 264 / PSYCH 241 / UC 264. Introduction to Sensory Systems: Sound, Hearing, and Deafness. (4). (NS). (BS).

CHE, CHEMICAL ENGINEERING – COLLEGE OF ENGINEERING

CHE 412 / MACROMOL 412 / MATSCIE 412. Polymeric Materials. (3). (BS).

- CHE 414 / MACROMOL 414 / MATSCIE 414 / MFG 414. Applied Polymer Processing. (3). (BS).
- CHE 511 / MACROMOL 511 / MATSCIE 511. Rheology of Polymeric Materials. (3). (BS).

COMP, MUSIC COMPOSITION - SCHOOL OF MUSIC, THEATRE & DANCE

COMP 139. Intro Basic Craft. (3; 2 in the half-term). COMP 140. Intro Basic Craft. (2 - 3). COMP 221. Intro Elem Comp. (3; 2 in the half-term). (CE). COMP 222. Composition. (3; 2 in the half-term). (CE). COMP 239. Contd Basic Craft. (2 - 3). COMP 240. Contd Basic Craft. (2 - 3). COMP 339. Adv Composition. (2 - 4). COMP 340. Adv Composition. (2 - 4). COMP 415. Intro Electron Mus. (2). COMP 416. Sem Electron Mus. (2). COMP 421. Creative Comp. (3; 2 in the half-term). COMP 422. Creative Comp. (3; 2 in the half-term). COMP 423. Adv Composition. (2 - 4).

CDB 675 / BIOLCHEM 675 / MICRBIOL 675. Advanced Topics in the Secretory-Endocytic Pathway: Current Issues in Protein and Membrane Assembly and Trafficking. (2). (BS).

BIOMEDE 500 / UC 500. Biomedical Engineering Seminar. (1). (BS).

CHE 512 / MACROMOL 512 / MATSCIE 512. Polymer Physics. (3). (BS).

CHE 558 / MACROMOL 558 / MATSCIE 558. Foundations of Nanotechnology. (3). (BS).

CHE 559 / MACROMOL 559 / MATSCIE 559. Foundations of Nanotechnology II. (3). (BS).

EDCURINS 382 / ENVIRON 382. Introduction to Environmental Education for Sustainable Development. (4). EDCURINS 421 / LATIN 421. Teaching of Latin. (3; 2 in the half-term). EDCURINS 422 / LATIN 422. Oral Methods in the Teaching of Latin. (3; 2 in the half-term).

EDCURINS 431 / GERMAN 531. Teaching Methods. (3). EDCURINS 437 / RUSSIAN 410. Teaching of Russian. (2). COMP 425. Adv Composition. (2 - 4). COMP 426. Adv Composition. (2 - 4). COMP 439. Adv Composition. (2 - 4). COMP 440. Adv Composition. (2 - 4). COMP 450. Undergrad Seminar. (1). COMP 504. Words & Music. (3). COMP 506. Special Courses. (1 - 3). COMP 515. Intro Electron Mus. (2). COMP 516. Sem Electron Mus. (2). COMP 526. Adv Stdy Elec Mus. (2 - 4). COMP 601. Independent Study. (2 - 4).

COMP 424. Adv Composition. (2 - 4).

EDCURINS, EDUCATION D - CURRICULUM AND INSTRUCTION - SCHOOL OF EDUCATION

EDCURINS 455 / ROMLING 413 / SPANISH 413. Teaching Spanish/Applications of Linguistics. (3). EDCURINS 456 / FRENCH 438 / ROMLING 456. Topics in Learning and

- Teaching French. (3).
- EDCURINS 491 / ENGLISH 491. Teaching of English: Methods and Practicum. (5).
- EDCURINS 500 / GERMAN 503. Teaching German/Applied Linguistics. (3; 2 in the half-term).

EDSPCHR, EDUCATION S – SPEECH AND HEARING SCIENCES – SCHOOL OF EDUCATION

EDSPCHR 253. Int Path & Audiol. (2).

EDUC, EDUCATION – SCHOOL OF EDUCATION

EDUC 390 / ELI 390 / LING 386 / RCSSCI 390. Community Service and Language, Education, and Culture. (1 - 3).

EECS, ELECTRICAL ENGINEERING AND COMPUTER SCIENCE – COLLEGE OF ENGINEERING

- EECS 182 / SI 182. Building Applications for Information Environments. (4). (MSA). (BS).
- EECS 183. Elementary Programming Concepts. (4). (MSA). (BS).
- EECS 203. Discrete Math. (4). (MSA). (BS).
- EECS 270. Introduction to Logic Design. (4). (MSA). (BS).
- EECS 280. Programming and Introductory Data Structures. (4). (MSA). (BS).
- EECS 281. Data Structures and Algorithms. (4). (NS). (BS).
- EECS 282. Information Systems Design and Programming. (4). (MSA). (BS).

EECS 283. Programming for Science and Engineering. (4). (BS).

EECS 285. A Programming Language or Computer System. (2). (BS).

EECS 370. Introduction to Computer Organization. (4). (BS).

- EECS 373, Design of Microprocessor Based Systems, (4), (BS),
- EECS 376. Foundations of Computer Science. (4). (BS).
- EECS 381. Object Oriented and Advanced Programming. (4). (BS). EECS 382. Internet-Scale Computing. (4). (BS).
- EECS 398. Special Topics. (1 4). (BS).
- EECS 427. Very Large Scale Integrated Design I. (4). (BS).
- EECS 442. Computer Vision. (4). (BS).

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EECS 470. Computer Architecture. (4). (BS). EECS 475. Introduction to Cryptography. (4). (BS). EECS 477. Introduction to Algorithms. (4). (BS). EECS 478. Logic Circuit Synthesis and Optimization. (4). (BS). EECS 480. Logic and Formal Verification. (4). (BS). EECS 481. Software Engineering. (4). (BS). EECS 482. Introduction to Operating Systems. (4). (BS). EECS 483. Compiler Construction. (4). (BS). EECS 484. Database Management Systems. (4). (BS). EECS 485. Web Database and Information Systems. (4). (BS). EECS 487. Interactive Computer Graphics. (4). (BS). EECS 489. Computer Networks. (4). (BS). EECS 490. Programming Languages. (4). (BS). EECS 492. Introduction to Artificial Intelligence. (4). (BS). EECS 493. User Interface Development. (4). (BS). EECS 494. Computer Game Design and Development. (4). (BS). EECS 496. Major Design Experience-Professionalism. (2). (BS). EECS 497. Major Design Projects. (4). (BS). EECS 498. Special Topics. (1 - 4). (BS). EECS 499. Directed Study. (1 - 4). (BS). EECS 530 / APPPHYS 530. Electromagnetic Theory I. (3). (BS). EECS 540 / APPPHYS 540. Applied Quantum Mechanics. (3). (BS). EECS 541 / APPPHYS 541. Applied Quantum Mechanics II. (3). (BS). EECS 542. Vision Processing. (3). (BS). EECS 543. Knowledge-Based Systems. (3). (BS). EECS 545. Machine Learning. (3). (BS). EECS 567 / MECHENG 567 / MFG 567. Introduction to Robotics. (3). (BS). EECS 570. Parallel Computer Architecture. (4). (BS). EECS 574. Computational Complexity. (4). (BS). EECS 575. Advanced Cryptography. (4). (BS). EECS 579. Digital Systems Testing. (4). (BS). EECS 580. Advanced Computer Graphics. (4). (BS). EECS 582. Advanced Operating Systems. (4). (BS). EECS 583. Advanced Compilers. (4). (BS). EECS 584. Advanced Database Systems. (4). (BS). EECS 586. Design and Analysis of Algorithms. (4). (BS). EECS 587. Parallel Computing, (4), (BS), EECS 588. Computer and Network Security. (4). (BS). EECS 589. Advanced Computer Networks. (4). (BS). EECS 590. Advanced Programming Languages. (4). (BS). EECS 592. Advanced Artificial Intelligence. (4). (BS). EECS 594. Introduction to Adaptive Systems. (3). (BS). EECS 595 / LING 541 / SI 561. Natural Language Processing. (3). (BS). EECS 598. Special Topics. (1 - 4). (BS).

EHS, ENVIRONMENTAL HEALTH SCIENCES - SCHOOL OF PUBLIC HEALTH

EHS 588 / ENVIRON 475 / NRE 475. Environmental Law. (3).

ENGR, ENGINEERING – COLLEGE OF ENGINEERING

ENGR 371 / MATH 371. Numerical Methods for Engineers and Scientists. (3). (BS).

ENSCEN, ENVIRONMENTAL SCIENCES AND ENGINEERING – COLLEGE OF ENGINEERING

ENSCEN 105 / AOSS 105 / CHEM 105 / ENVIRON 105. Our Changing Atmosphere. (3). (NS). (BS).

ENSCEN 171 / AOSS 171 / BIOLOGY 110 / ENVIRON 110 / GEOSCI 171. Introduction of Global Change: Physical Processes. (4). (NS). (BS).

ENSCEN 172 / AOSS 172 / ENVIRON 111 / GEOG 111 / GEOSCI 172 / SOC 111. Introduction to Global Change: Human Impacts. (4). (SS).

HB, HUMAN BEHAVIOR – SCHOOL OF SOCIAL WORK

HB 607 / HISTORY 474. History of Aging. (3).

HBEHED, HEALTH BEHAVIOR AND HEALTH EDUCATION – SCHOOL OF PUBLIC HEALTH

HBEHED 516 / ANTHRCUL 416. Global Health: Anthropological Perspectives. (3).

HMP, HEALTH MANAGEMENT AND POLICY - SCHOOL OF PUBLIC HEALTH

HMP 200 / PUBHLTH 200 / PUBPOL 210. Health and Society: Introduction to Public Health. (4). (SS).

HUMGEN, HUMAN GENETICS – MEDICAL SCHOOL

HUMGEN 324. Hum Heredity. (BS).

IMMUNO, IMMUNOLOGY - MEDICAL SCHOOL

IMMUNO 440 / MICRBIOL 440. Immunology. (3). (BS).

INTMED, INTERNAL MEDICINE – MEDICAL SCHOOL

INTMED 460 / MICRBIOL 460. Eukaryotic Microbiology. (3). (BS).

IOE, INDUSTRIAL AND OPERATIONS ENGINEERING – COLLEGE OF ENGINEERING

IOE 265 / STATS 265. Probability and Statistics for Engineers. (4). (BS).

IOE 466 / MFG 466 / STATS 466. Statistical Quality Control. (3). (BS).

ENSCEN 451 / AOSS 451 / GEOSCI 457. Atmospheric Dynamics I. (4). (BS).

ENSCEN 467 / AOSS 467 / CHEM 467 / ENVIRON 467 / GEOSCI 465. Biogeochemical Cycles. (3). (BS).

ENSCEN 475 / AOSS 475 / GEOSCI 475. Earth System Interactions. (4). (BS).

HMP 661 / ECON 438. Economics of Health Services. (3).

IOE 510 / MATH 561 / OMS 518. Linear Programming I. (3). (BS). IOE 511 / MATH 562. Continuous Optimization Methods. (3). (BS).

JAZZ, JAZZ & IMPROVISATIONAL STUDIES - SCHOOL OF MUSIC, THEATRE & DANCE

JAZZ 466. Jazz Improvistn I. (3).

JAZZ 467. Jazz Improvistn II. (3).

(BS).

(BS).

eric Materials. (3). (BS).

nology. (3). (BS).

nology II. (3). (BS).

LHC, LAW, HISTORY, AND COMMUNICATION - STEPHEN M. ROSS SCHOOL OF BUSINESS

LHC 412 / HISTORY 476. American Business History. (3).

MACROMOL, MACROMOLECULAR SCIENCE AND ENGINEERING - COLLEGE OF ENGINEERING

MACROMOL 410 / BIOMEDE 410 / MATSCIE 410. Design and Applications of Biomaterials. (3). (BS).

- MACROMOL 412 / CHE 412 / MATSCIE 412. Polymeric Materials. (3). (BS).
- MACROMOL 414 / CHE 414 / MATSCIE 414 / MFG 414. Applied Polymer Processing. (3). (BS).
- MACROMOL 511 / CHE 511 / MATSCIE 511. Rheology of Polymeric Materials. (3). (BS).
- MACROMOL 512 / CHE 512 / MATSCIE 512. Polymer Physics. (3). (BS).
- MACROMOL 514 / MATSCIE 514 / MFG 514. Composite Materials. (3). (BS).
- MACROMOL 515 / MATSCIE 515. Mechanical Behavior of Solid Polymeric Materials. (3). (BS).MACROMOL 535 / CHEM 535. Physical Chemistry of Macromolecules.
- (3). (BS). MACROMOL 538 / CHEM 538. Organic Chemistry of Macromolecules.
- (3). (BS).MACROMOL 558 / CHE 558 / MATSCIE 558. Foundations of Nanotechnology. (3). (BS).
- MACROMOL 559 / CHE 559 / MATSCIE 559. Foundations of Nanotechnology II. (3). (BS).

MATSCIE 512 / CHE 512 / MACROMOL 512. Polymer Physics. (3).

MATSCIE 514 / MACROMOL 514 / MFG 514. Composite Materials. (3).

MATSCIE 515 / MACROMOL 515. Mechanical Behavior of Solid Polym-

MATSCIE 558 / CHE 558 / MACROMOL 558. Foundations of Nanotech-

MATSCIE 559 / CHE 559 / MACROMOL 559. Foundations of Nanotech-

MATSCIE, MATERIALS SCIENCE AND ENGINEERING - COLLEGE OF ENGINEERING

- MATSCIE 410 / BIOMEDE 410 / MACROMOL 410. Design and Applications of Biomaterials. (3). (BS).
- MATSCIE 412 / CHE 412 / MACROMOL 412. Polymeric Materials. (3). (BS).
- MATSCIE 414 / CHE 414 / MACROMOL 414 / MFG 414. Applied Polymer Processing. (3). (BS).
- MATSCIE 510 / CHEM 511. Materials Chemistry. (3). (BS).
- MATSCIE 511 / CHE 511 / MACROMOL 511. Rheology of Polymeric Materials. (3). (BS).

MECHENG, MECHANICAL ENGINEERING – COLLEGE OF ENGINEERING

MECHENG 567 / EECS 567 / MFG 567. Introduction to Robotics. (3). (BS).

MFG, MANUFACTURING - COLLEGE OF ENGINEERING

MFG 414 / CHE 414 / MACROMOL 414 / MATSCIE 414. Applied Polymer Processing. (3). (BS).
 MFG 466 / IOE 466 / STATS 466. Statistical Quality Control. (3). (BS).

MFG 514 / MACROMOL 514 / MATSCIE 514. Composite Materials. (3). (BS).

MFG 567 / EECS 567 / MECHENG 567. Introduction to Robotics. (3). (BS).

MICRBIOL, MICROBIOLOGY AND IMMUNOLOGY - MEDICAL SCHOOL

MICRBIOL 291 / BIOLOGY 206. Microbiology Laboratory. (4). (BS).
MICRBIOL 399. Independent Research for Undergraduates. (1 - 8).
MICRBIOL 401 / BIOLOGY 408. General Microbiology. (3). (BS).
MICRBIOL 405. Medical Microbiology & Infectious Diseases. (3). (BS).
MICRBIOL 415. Virology. (3). (BS).
MICRBIOL 440 / IMMUNO 440. Immunology. (3). (BS).

MICRBIOL 460 / INTMED 460. Eukaryotic Microbiology. (3). (BS). MICRBIOL 620. Microbiology and Immunology. (7). (BS).

MICRBIOL 675 / BIOLCHEM 675 / CDB 675. Advanced Topics in the Secretory-Endocytic Pathway: Current Issues in Protein and Membrane Assembly and Trafficking. (2). (BS).

MILSCI, MILITARY SCIENCE – MILITARY OFFICER EDUCATION PROGRAMS

MILSCI 201 / UC 203. Innovative Tactical Leadership. (1). MILSCI 202 / UC 204. Leadership in Changing Environments. (1). MILSCI 301 / UC 301. Leading Small Organizations I. (2). MILSCI 302 / UC 302. Leading Small Organizations II. (2). MILSCI 401 / UC 401. Leadership and Management. (2).
MILSCI 402 / UC 402. Military Professionalism and Professional Ethics.
(2).

MUSICOL, MUSIC HISTORY AND MUSICOLOGY - SCHOOL OF MUSIC, THEATRE & DANCE

MUSICOL 111 / THEORY 111. The Foundations of Rock. (3). (HU). MUSICOL 121. Introduction to the Art of Music. (3). (HU). MUSICOL 122. Intro World Music. (3). (HU). MUSICOL 123. Introduction to Popular Music. (3). (HU). MUSICOL 130. Special Course. (2 - 3). MUSICOL 131. Special Course. (2 - 3). MUSICOL 139. Intro to Mus. (2). (HU). MUSICOL 140. History of Music. (2). (HU). MUSICOL 239. History of Music. (2). (HU). MUSICOL 240. History of Music. (2). (HU). MUSICOL 305. Special Course. (3). MUSICOL 306. Special Course. (3). MUSICOL 307. Special Course. (3). MUSICOL 308. Special Course. (3).

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MUSICOL 343. Music and Islam. (3). (ID). MUSICOL 344. Trad-Infl-West Arts. (2). MUSICOL 345. History of Music. (3). (HU). MUSICOL 346. History of Music. (3). (HU). MUSICOL 347. Opera Past&Present. (3). (HU). MUSICOL 351. Hist of Jazz. (3). MUSICOL 355. Intro Chamber Music. (3). MUSICOL 369. Hawaiian Music. (3). MUSICOL 405. Special Course. (1 - 3; 1 - 2 in the half-term). MUSICOL 406. Special Course. (2 - 4; 1 - 2 in the half-term). MUSICOL 407. Special Course. (1 - 3; 1 - 2 in the half-term). MUSICOL 408. Special Course. (1 - 3; 1 - 2 in the half-term). MUSICOL 411. Hist of Symphony. (3). MUSICOL 412. Sym Lit 19-20 C. (2). MUSICOL 413. History of Opera. (3; 2 in the half-term). MUSICOL 414. 19-20th Cent Opera. (3). MUSICOL 416. Hist Musical Instru. (3; 2 in the half-term). MUSICOL 417. History of Jazz. (3). MUSICOL 420. Mus of the Baroque. (3; 2 in the half-term). MUSICOL 421. Mus Classic Era. (3; 2 in the half-term). MUSICOL 422. 19th C Music. (3; 2 in the half-term). MUSICOL 423. 20th C Music. (3; 2 in the half-term). MUSICOL 424. The Art Song. (3). MUSICOL 425. Joseph Haydn Music. (2). MUSICOL 426. Music and Language. (3). MUSICOL 436. Mus Explor Iss Gend. (3). MUSICOL 437 / PHIL 437. Philosophy of Music. (3). MUSICOL 446. Perf Prac 17&18 Cen. (3).

MUSICOL 450, Music in U S. (3), MUSICOL 456 / AMCULT 436. Music of Asian Americans. (3). MUSICOL 457 / CAAS 400. The Musics of African Americans. (3; 2 in the half-term). MUSICOL 458. Mus in Culture. (3). MUSICOL 459. Cul Afr&S Amer. (3). MUSICOL 460. Eur-Am Folk&Pop Mus. (3). MUSICOL 462. Japanese Music. (2). MUSICOL 463 / ASIAN 463. Music of Southeast Asia. (2). MUSICOL 464 / CAAS 464. Music of Latin America and the Caribbean. (3). MUSICOL 465. Music of Africa. (3). MUSICOL 466. Music of Asia I. (3). MUSICOL 467. Music of Asia II. (3). MUSICOL 468. Jazz Scene Hst Pers. (3). MUSICOL 469. Pacific Island Mus. (3). MUSICOL 470. Music & Dance. (3). MUSICOL 477. Medieval Music. (3). MUSICOL 478. Renaissance Music. (3). MUSICOL 481. Special Projects. (1 - 4). MUSICOL 484. Mensural Notatn&Tab. (3). MUSICOL 509. Teaching an Introduction to Music. (2). MUSICOL 510. Teach Music Hist. (2). MUSICOL 631. Hist-Appl Perf Prac. (3; 2 in the half-term). MUSICOL 705. Special Course. (3; 2 in the half-term). MUSICOL 706. Special Course. (2 - 3). MUSICOL 707. Special Seminars. (2 - 3). MUSICOL 708. Special Seminars. (2 - 3).

MUSTHTRE, MUSICAL THEATRE - SCHOOL OF MUSIC, THEATRE & DANCE

MUSTHTRE 133. Intro Mus Thtre I. (2). MUSTHTRE 134. Intro Mus Thtre I I. (2). MUSTHTRE 441. Hist Musical Theatr. (3). MUSTHTRE 442. Hist Musical Theatr. (3).

NAVSCI, NAVAL SCIENCE - MILITARY OFFICER EDUCATION PROGRAMS

NAVSCI 102 / UC 101. Seapower and Maritime Affairs. (2). NAVSCI 203 / UC 205. Leadership and Management. (3). NAVSCI 301 / ASTRO 261. Navigation. (3). (BS). NAVSCI 310 / UC 310. Evolution of Warfare. (3). NAVSCI 402 / UC 403. Leadership and Ethics. (2). NAVSCI 410 / UC 410. Amphibious Warfare. (3).

NERS, NUCLEAR AND RADIOLOGICAL ENGINEERING - COLLEGE OF ENGINEERING

NERS 572 / APPPHYS 672. Plasma and Controlled Fusion II. (3). (BS).

NEUROSCI, NEUROSCIENCE – MEDICAL SCHOOL

NEUROSCI 520 / PSYCH 533. Sleep: Neurobiology, Medicine, and Society. (3). (BS).

NRE, SCHOOL OF NATURAL RESOURCES AND ENVIRONMENT

- NRE 336 / CAAS 332 / ENVIRON 336. Environment and Inequality. (4). (SS). (R&E).
- NRE 409 / EEB 487 / ENVIRON 409. Ecology of Fishes. (3 4). (BS).
- NRE 415 / EEB 424 / ENVIRON 415. Behavioral Ecology and Conservation Biology. (4). (BS).
- NRE 416 / EEB 425 / ENVIRON 416. Field Skills in Wildlife Behavior. (2). (BS).
- NRE 418 / ENVIRON 418. Biology and Management of Insects. (2 4). (BS).
- NRE 419 / ENVIRON 419. Agricultural/Forest Pest Management. (1 4).
- NRE 422 / EEB 440 / ENVIRON 422. Biology of Fishes. (3). (BS).
- NRE 423 / EEB 441 / ENVIRON 423. The Biology of Fishes Laboratory. (1). (BS).
- NRE 425 / EEB 496 / ENVIRON 425. Applied Population Ecology. (4). (BS).
- NRE 427 / ENVIRON 427. Aquaculture. (3 4).
- NRE 430 / EEB 489 / ENVIRON 430. Soil Ecology. (3). (BS).

NRE 433 / EEB 433 / ENVIRON 433. Ornithology. (4). (BS).

- NRE 435 / ENVIRON 435. Forest Ecology. (4). (BS).
- NRE 436 / EEB 436 / ENVIRON 436. Woody Plants: Biology and Identification. (4). (BS).
- NRE 441 / ENVIRON 441. Remote Sensing of the Environment. (4). (BS).
- NRE 449 / ENVIRON 449. Organizational Theory and Change. (3).
- NRE 451 / EEB 451 / ENVIRON 451. Biology of Mammals. (4). (BS).
- NRE 453 / ENVIRON 453. Tropical Conservation & Resource Management. (4).
- NRE 460 / ENVIRON 460. Fishery Science. (4).
- NRE 475 / EHS 588 / ENVIRON 475. Environmental Law. (3).
- NRE 476 / EEB 476 / ENVIRON 476. Ecosystem Ecology. (3). (BS).
- NRE 495 / ENVIRON 495. Small Group, Organization, and Advocacy Planning. (3).
- NRE 499 / ENVIRON 499. Senior Honors Thesis. (1 6).
- NRE 571 / ECON 471. Environmental Economics. (3).

NRE 574 / PUBPOL 519 / RCNSCI 419. Sustainable Energy Systems. (3).

NURS - SCHOOL OF NURSING

NURS 220 / WOMENSTD 220. Perspectives in Women's Health. (3). (SS). (R&E).

OMS, OPERATIONS AND MANAGEMENT SCIENCE – STEPHEN M. ROSS SCHOOL OF BUSINESS

OMS 518 / IOE 510 / MATH 561. Linear Programming I. (3). (BS).

PAT, PERFORMING ARTS TECHNOLOGY - SCHOOL OF MUSIC, THEATRE & DANCE

PAT 201. Introduction to Computer Music. (3).

PHYSIOL, MOLECULAR AND INTEGRATIVE PHYSIOLOGY – MEDICAL SCHOOL

PHYSIOL 201. Introduction to Human Physiology. (4). (NS). (BS). PHYSIOL 306. Problems. (1 - 4). (BS). PHYSIOL 405. Research Problems. (1 - 4; 1 - 2 in the half-term). PHYSIOL 502. Human Physiology. (4). (BS).

PUBHLTH, PUBLIC HEALTH – SCHOOL OF PUBLIC HEALTH

PUBHLTH 200 / HMP 200 / PUBPOL 210. Health and Society: Introduction to Public Health. (4). (SS).

PUBPOL, PUBLIC POLICY – GERALD R. FORD SCHOOL OF PUBLIC POLICY

- PUBPOL 201. Systematic Thinking About the Problems of the Day. (4). (SS).
- PUBPOL 210 / HMP 200 / PUBHLTH 200. Health and Society: Introduction to Public Health. (4). (SS).
- PUBPOL 224 / HISTORY 224. Global Nuclear Proliferation. (4; 3 in the half-term). (SS).

SI, SCHOOL OF INFORMATION

- SI 110 / SOC 110. Introduction to Information Studies. (4). (SS). SI 182 / EECS 182. Building Applications for Information Environments. (4). (MSA). (BS).
- SI 301. Models of Social Information Processing. (3).
- SI 379 / HISTORY 379 / RCSSCI 379. History of Computers and the Internet. (4). (SS).

PUBPOL 481 / PHYSICS 481. Science, Technology and Public Policy. (3).

PHYSIOL 541 / ANAT 541 / BIOLOGY 541 / PSYCH 532. Mammalian

- PUBPOL 519 / NRE 574 / RCNSCI 419. Sustainable Energy Systems. (3).
- PUBPOL 573 / ECON 573. Benefit-Cost Analysis. (4). PUBPOL 586 / POLSCI 586. Organizational Design. (3).
- SI 410. Ethics and Information Technology. (4).

PHYSIOL 503. Use&Care Lab Animal. (1). (BS).

PHYSIOL 540. Cell&Molecular Phys. (4). (BS).

Reproductive Endocrinology. (4). (BS).

- SI 422. Evaluation of Systems and Services. (3).
- SI 429. eCommunities: Analysis and Design of Online Interaction. (3).
- SI 446. Personal Privacy: Policy, Practice and Technology Issues. (3).
- SI 561 / EECS 595 / LING 541. Natural Language Processing. (3). (BS).

SW, SOCIAL WORK - SCHOOL OF SOCIAL WORK

SW 305. Theories and Practices for Community Action and Social Change. (3). (SS).

THEORY, MUSIC THEORY - SCHOOL OF MUSIC, THEATRE & DANCE

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THEORY 111 / MUSICOL 111. The Foundations of Rock. (3). (HU).	THEORY 332. Frshm Thry-Writ Skl. (2).
THEORY 129. Intro Aural Skills. (1).	THEORY 333. Frshm Thr-Aural Skl. (1).
THEORY 135. Intro Music Theory Music Theory Major. (3).	THEORY 334. Soph Thry-Writn Skl. (2).
THEORY 137. Intro Mus Theory. (3). (HU).	THEORY 335. Soph Thry-Aural Skl. (1).
THEORY 138. Intro Basic Mus. (3).	THEORY 351. Analysis-Tonal Mus. (2).
THEORY 139. Bmus Aural Sk I. (1).	THEORY 405. Special Courses. (3; 2 in the half-term).
THEORY 140. Bmus Aural Sk I I. (1).	THEORY 407. Directed Indiv Stdy. (2 - 4).
THEORY 149. Bmus Wrtg Sk I. (2).	THEORY 408. Senior Project. (2).
THEORY 150. Bmus Wrtg Sk I I. (2).	THEORY 430. Advanced Anl Tonal Music. (3).
THEORY 160. Accel Wrtg Sk I I. (3).	THEORY 433. Analysis of 20th-Century Modernist Music. (3).
THEORY 211. Basic Th at Keybd. (2).	THEORY 435. Pop-Rock Music Theory. (3).
THEORY 212. Basic Th at Keybd. (2).	THEORY 436. Analytical History of Jazz. (3).
THEORY 236. Intro Music Analysis Music Theatre Major. (3).	THEORY 440. Species Cntrpt I. (3).
THEORY 238. Introduction Music Analysis. (3; 2 in the half-term).	THEORY 441. Species Cntrpt II. (3).
(HU).	THEORY 442. 18th C Counterpoint. (3).
THEORY 239. Bmus Aural Sk I I I. (1).	THEORY 443. 18th C Counterpoint. (3).
THEORY 240. Bmus Aural Sk I V. (1).	THEORY 444. Practical Ornamentation and Elaboration. (3).
THEORY 249. Bmus Wrtg Sk I I I. (2).	THEORY 454. Orchestration I. (3).
THEORY 250. Bmus Wrtg Sk I V. (2).	THEORY 455. Orchestration II. (3).
THEORY 259. Accel Wrtg Sk III. (3).	THEORY 458. Pract in Arranging. (2).

NRE 583 / ECON 472. Intermediate Natural Resource Economics. (3).

38 / COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS

THEORY 460. Special Courses. (3). THEORY 552. Project in Tonal Composition. (2). THEORY 475. Specie Counterpoint. (3; 2 in the half-term). THEORY 560. Special Studies. (2 - 3). THEORY 476. Appld Ren Cntrpt. (3; 2 in the half-term). THEORY 570. Directed Individual Study. (1 - 4). THEORY 481. Prac Ornamen&Elabor. (3). THEORY 590. Teaching Tonal Theory. (3). THEORY 531. Schenkerian Theory and Analysis I. (3; 2 in the half-THEORY 631. Canon and Fugue. (3; 2 in the half-term). term). THEORY 651. Topics in Analysis. (3; 2 in the half-term). THEORY 532. Schenkerian Theory and Analysis II. (3). THEORY 721. 20c Thry Tonal Mus. (3). THEORY 534. Twentieth Century Music: Theory and Analysis I. (3). THEORY 805. Seminar in Theory. (3; 2 in the half-term). THEORY 535. Pop-Rock Music Theory. (3). THEORY 807. Research Project. (2 - 4). THEORY 537. Proseminar in the Analysis of Music. (3; 2 in the halfterm).

THTREMUS, THEATRE AND DRAMA – SCHOOL OF MUSIC, THEATRE & DANCE

THTREMUS 101. Introduction to Acting I. (3). (CE). THTREMUS 102. Intro to Acting II. (3). (CE). THTREMUS 110. Introduction to Acting for the Camera. (3). (CE). THTREMUS 172. Movement I. (2). THTREMUS 181. Acting I. (3). (CE). THTREMUS 182. Acting II. (3). THTREMUS 192. Voice I. (3). THTREMUS 211 / ENGLISH 245 / RCHUMS 280. Introduction to Drama and Theatre. (3; 2 in the half-term). (HU). THTREMUS 212. Introduction to World Performance. (4). THTREMUS 222 / CAAS 341. Introduction to Black Theatre. (3; 2 in the half-term). (HU). THTREMUS 227 / ENGLISH 227. Introductory Playwriting. (3; 2 in the half-term). (CE). THTREMUS 230. Autobiogr&Perform. (3). THTREMUS 231. Act Radio TV & Thea. (3; 2 in the half-term). THTREMUS 233 / CAAS 342. Acting and the Black Experience. (3). (HU). THTREMUS 240. Introduction to Design. (3). (CE). THTREMUS 241. Directing I. (3). THTREMUS 242. Directing II. (3). (CE). THTREMUS 245. Introduction to Stage Management. (2 - 3). (CE). THTREMUS 250. Introduction to Technical Theatre Practices. (3; 2 in the half-term). THTREMUS 251. Prod Practicum I. (1). THTREMUS 252, Prod Practicum II, (1), THTREMUS 256. Lighting Design I. (3). THTREMUS 260. Scene Design I. (3). THTREMUS 261. Prod Practicum III. (1). THTREMUS 262. Prod Practicum IV. (1). THTREMUS 270. Costume Design I. (3). THTREMUS 271. Movement II. (2). THTREMUS 272. Movement III. (2). THTREMUS 274. Stage Combat I. (2). THTREMUS 277. History of Dress. (3). THTREMUS 281. Acting III. (3). THTREMUS 282. Acting IV. (3). THTREMUS 291. Voice II. (3). THTREMUS 292. Voice III. (3). THTREMUS 321 / ENGLISH 443. History of Theatre I. (3). THTREMUS 322 / ENGLISH 444. History of Theatre II. (3). THTREMUS 323 / ENGLISH 349. American Theatre and Drama. (3). (HU). THTREMUS 324. Contemporary Black Theatre. (3). THTREMUS 325. Contemporary American Theatre and Drama. (3). THTREMUS 326. Script Analysis for Black Writers and Directors. (3 in the half-term). THTREMUS 327 / ENGLISH 327. Intermediate Playwriting. (3; 2 in the half-term). THTREMUS 330. Amer Women Playwrts. (3). (HU). THTREMUS 332. Performing Gender: Drama from Oral Sources. (3 in the half-term).

THTREMUS 333. Cross-Cul Collab I. (3). THTREMUS 334. Cross-Cul Collab II. (3). THTREMUS 340. Black Theatre Workshop. (3 in the half-term). THTREMUS 341. Directing III. (3). THTREMUS 342. Directing IV. (3). THTREMUS 345. Stage Mgmt Pract. (2 - 6). THTREMUS 350. Scenic Constructn I. (3). THTREMUS 351. Prod Practicum V. (1 - 3). THTREMUS 352. Prod Practicum VI. (1 - 3). THTREMUS 353. Sound for Theatre. (2). THTREMUS 356. Lighting Design II. (3). THTREMUS 360. Scene Design II. (3). THTREMUS 362. Draft&Model Making. (2). THTREMUS 370. Costume Design II. (3). THTREMUS 374. Stage Combat II. (2). THTREMUS 381. Acting V: Acting with Style I: Shakespeare, Restoration, Comedy of Manners, Mask. (3). THTREMUS 385. Performing Arts Management. (2). THTREMUS 386. Prac Perfor Art Mgt. (3). THTREMUS 387. Studio I. (2). THTREMUS 388. Studio II. (2). THTREMUS 390. Honors Tutorial. (1). THTREMUS 391. Honors Tutorial. (1). THTREMUS 392. Honors Tutorial. (1). THTREMUS 393. Honors Tutorial. (1). THTREMUS 395. Stage Dialects. (3). THTREMUS 399. Topics in Drama. (1 - 4). THTREMUS 400. Directed Reading. (1 - 3). THTREMUS 401. Independent Study. (1 - 3). THTREMUS 402. Ideas of Theatre. (3). THTREMUS 403. Des&Prod Forum I. (2). THTREMUS 404. Des&Prod Forum II. (2). THTREMUS 427 / ENGLISH 427. Advanced Playwriting. (3; 2 in the half-term). THTREMUS 429. Playwr Production. (3). THTREMUS 430. Playwriting Thesis. (3). THTREMUS 439. Acting Practicum. (1). THTREMUS 440. Special Topics in African American Theatre and Drama. (3 in the half-term). THTREMUS 441. Directing Project I. (4). THTREMUS 442. Directing Project. (3). THTREMUS 445. Stage Mgmt Pract. (2 - 6). THTREMUS 451. Productn Pract VII. (2 - 3). THTREMUS 452. Costume Construction. (3). THTREMUS 453. Adv Sound for Thtr. (2). THTREMUS 456. Lighting Design III. (3). THTREMUS 457. Lighting Design IV. (3). THTREMUS 460. Scene Design III. (3; 2 in the half-term). THTREMUS 461. Productn Pract VIII. (2 - 3). THTREMUS 462. Drafting. (3). THTREMUS 463. Design Rendering. (3).

THTREMUS 464. Sc Paint for Theatr. (3). THTREMUS 466. History of Decor. (3). THTREMUS 468. Hist-Arch&Stage Des. (3). THTREMUS 470. Costume Design III. (3). THTREMUS 471. Womens Pattern Drafting. (3). THTREMUS 472. Stage Makeup. (2). THTREMUS 473. Mask Making. (3). THTREMUS 473. Mask Making. (3). THTREMUS 474. New Textile Tech. (3). THTREMUS 475. Millinery. (3). THTREMUS 475. Millinery. (3). THTREMUS 476. Costume Crafts. (3). THTREMUS 477. History of Dress. (3). THTREMUS 483. Acting VIII: Acting with Style II. (3). THTREMUS 484. Acting IX: Acting for the Camera. (3). THTREMUS 490. Honors Tutorial. (2). THTREMUS 495. Uber-Practicum. (1 - 6). THTREMUS 505. Sp Wk Th Prod&Perf. (1 - 6; 1 - 3 in the half-term). THTREMUS 556. Lighting Design V. (3). THTREMUS 560. Scene Design IV. (3). THTREMUS 570. Costume Design IV. (3). THTREMUS 571. Mens Patttern Draft. (3). THTREMUS 572. Adv Make-Up Des. (3). THTREMUS 572. Adv Make-Up Des. (3). THTREMUS 577. History of Dress. (3). THTREMUS 578. Histrcl Garm Const. (4). THTREMUS 580. Design Lab. (1). THTREMUS 581. Scenic Design Lab. (1). THTREMUS 582. Costume Des Lab. (1). THTREMUS 585. Perform Arts Mgt I. (3).

UARTS, UNIVERSITY ARTS - SCHOOL OF ART & DESIGN

UARTS 250. Creative Process. (4). (CE).

UP, URBAN PLANNING – A. ALFRED TAUBMAN COLLEGE OF ARCHITECTURE + URBAN PLANNING

UP 263 / ENVIRON 263 / RCNSCI 263. Energy and the Environment. (4). (NS). (BS).

UP 406 / GEOG 406. Introduction to Geographic Information Systems. (3).

UP 423 / ARCH 423 / ENVIRON 370. Introduction to Urban and Environmental Planning. (3).

UP 572 / GEOG 472. Transportation and Land Use Planning. (3).

Creative Expression Courses in Other Units

This list shows courses offered by other academic units of the University of Michigan, but which can be used toward the Creative Expression category of the Area Distribution requirement. Courses that count as non-LSA credit are indicated.

A. ALFRED TAUBMAN COLLEGE OF ARCHITECTURE + URBAN PLANNING

Architecture (ARCH)

ARCH 201. Basic Drawing. (3). (CE). (non-LSA credit). ARCH 202. Graphic Commun. (3). (CE). (non-LSA credit). ARCH 218. Visual Studies. (3). (CE). (non-LSA credit).

SCHOOL OF ART & DESIGN Art & Design (ARTDES)

- ARTDES 110. Digital Studio I. (3). (CE). (non-LSA credit).
- ARTDES 116. Basic Drawing II. (3). (CE). (non-LSA credit).
- ARTDES 120. Tools, Materials and Processes I. (3). (CE).
- ARTDES 121. Tools, Materials, and Processes II. (3). (CE).
- ARTDES 122. Tools, Materials and Processes III. (1.5). (CE). (non-LSA credit).
- ARTDES 123. Tools, Materials and Processes IV. (1.5). (CE). (non-LSA credit).
- ARTDES 130. Concept, Form and Context I. (3). (CE).
- ARTDES 170. Fundamentals of Drawing for Non-majors. (3). (CE). (non-LSA credit).
- ARTDES 171. Printmaking for Non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 172. Painting for Non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 173. Digital Photography for Non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 174. Watercolor for Non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 175. Life Drawing for Non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 176. Graphic Imaging for Non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 177. Metals for non-Majors. (3). (CE). (non-LSA credit).

UNIVERSITY OF MICHIGAN SCHOOL OF MUSIC, THEATRE & DANCE

Baroque Cello (BARCELLO)

BARCELLO 100. Performance. (2 - 4). (CE). (non-LSA credit).

Baroque Flute (BARFLUTE)

BARFLUTE 100. Performance. (2 - 4). (CE). (non-LSA credit).

Baroque Oboe (BAROBOE)

BAROBOE 100. Performance. (2 - 4). (CE). (non-LSA credit).

Baroque Violin (BAROQVIO)

BAROQVIO 100. Performance. (2 - 4). (CE). (non-LSA credit).

Baroque Viola (BARVIOLA)

BARVIOLA 100. Performance. (2 - 4). (CE). (non-LSA credit).

Bassoon (BASSOON)

BASSOON 100. Performance. (2 - 6). (CE). (non-LSA credit).
BASSOON 111. Performance. (1). (CE). (non-LSA credit).
BASSOON 112. Performance. (2). (CE). (non-LSA credit).
BASSOON 113. Performance. (2). (CE). (non-LSA credit).
BASSOON 114. Performance. (2). (CE). (non-LSA credit).
BASSOON 115. Performance. (2 - 4). (CE). (non-LSA credit).
BASSOON 116. Performance. (2 - 4). (CE). (non-LSA credit).
BASSOON 139. Performance. (2 - 4). (CE). (non-LSA credit).
BASSOON 140. Performance. (2 - 4). (CE). (non-LSA credit).
BASSOON 150. Performance. (2). (CE). (non-LSA credit).
BASSOON 190. Performance. (4). (CE). (non-LSA credit).
BASSOON 217. Performance. (2 - 4). (CE). (non-LSA credit).
BASSOON 218. Performance. (2 - 4). (CE). (non-LSA credit).

- ARTDES 178. Animation for non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 179. Sculpture non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 181. Clay for non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 182. Wood for non-Majors. (3). (CE). (non-LSA credit).
- ARTDES 191. Sculpture I. (3). (CE). (non-LSA credit).
- ARTDES 200. Drawing Studio II. (3). (CE). (non-LSA credit).
- ARTDES 210. Digital Studio II. (3). (CE). (non-LSA credit).
- ARTDES 220. Tools, Materials and Processes III: Time. (1.5). (CE).
- (non-LSA credit).
 ARTDES 221. Tools, Materials, and Processes VI: Fiber. (1.5). (CE).
 (non-LSA credit).
- ARTDES 222. Tools, Materials and Processes VII: Video. (1.5). (CE). (non-LSA credit).
- ARTDES 223. Tools, Materials and Processes VIII: Metal. (1.5). (CE). (non-LSA credit).
- ARTDES 230. Concept, Form and Context II: Culture. (3). (CE). (non-LSA credit).
- ARTDES 231. Concept, Form and Context III: Nature. (3). (CE). (non-LSA credit).
- ARTDES 253. Jewelry Casting. (3). (CE). (non-LSA credit).

University Arts (UARTS)

UARTS 250. Creative Process. (4). (CE).

BASSOON 219. Performance. (2 - 4). (CE). (non-LSA credit). BASSOON 220. Performance. (2 - 4). (CE). (non-LSA credit). BASSOON 221. Performance. (2 - 4). (CE). (non-LSA credit). BASSOON 222. Performance. (2 - 4). (CE). (non-LSA credit). BASSOON 239. Performance. (2 - 4). (CE). (non-LSA credit). BASSOON 240. Performance. (2 - 4). (CE). (non-LSA credit). BASSOON 339. Performance. (2 - 6). (CE). (non-LSA credit). BASSOON 340. Performance. (2 - 6). (CE). (non-LSA credit).

Carillon (CARILLON)

CARILLON 100. Performance. (2 - 6). (CE). (non-LSA credit). CARILLON 111. Performance. (2). (CE). (non-LSA credit). CARILLON 112. Performance. (2). (CE). (non-LSA credit). CARILLON 113. Performance. (2). (CE). (non-LSA credit). CARILLON 114. Performance. (2). (CE). (non-LSA credit). CARILLON 115. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 116. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 139. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 140. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 145. Performance. (1). (CE). (non-LSA credit). CARILLON 150. Performance. (2). (CE). (non-LSA credit). CARILLON 190. Performance. (4). (CE). (non-LSA credit). CARILLON 217. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 218. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 219. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 220. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 221. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 222. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 239. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 240. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 339. Performance. (2 - 4). (CE). (non-LSA credit). CARILLON 340. Performance. (2 - 4). (CE). (non-LSA credit).

Cello (CELLO)

CELLO 100. Performance. (2 - 6). (CE). (non-LSA credit). CELLO 111. Performance. (1). (CE). (non-LSA credit). CELLO 112. Performance. (2). (CE). (non-LSA credit). CELLO 113. Performance. (2). (CE). (non-LSA credit). CELLO 114. Performance. (2). (CE). (non-LSA credit). CELLO 115. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 116. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 139. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 140. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 150. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 190. Performance. (4). (CE). (non-LSA credit). CELLO 217. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 218. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 219. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 220. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 221. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 222. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 239. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 240. Performance. (2 - 4). (CE). (non-LSA credit). CELLO 339. Performance. (2 - 6). (CE). (non-LSA credit). CELLO 340. Performance. (2 - 6). (CE). (non-LSA credit).

Clarinet (CLARINET)

CLARINET 100. Performance. (2 - 6). (CE). (non-LSA credit). CLARINET 111. Performance. (1). (CE). (non-LSA credit). CLARINET 112. Performance. (2). (CE). (non-LSA credit). CLARINET 113. Performance. (2). (CE). (non-LSA credit). CLARINET 114. Performance. (2). (CE). (non-LSA credit). CLARINET 115. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 116. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 139. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 140. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 150. Performance. (2). (CE). (non-LSA credit). CLARINET 190. Performance. (4). (CE). (non-LSA credit). CLARINET 217. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 218. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 219. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 220. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 221. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 222. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 239. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 240. Performance. (2 - 4). (CE). (non-LSA credit). CLARINET 339. Performance. (2 - 6). (CE). (non-LSA credit). CLARINET 340. Performance. (2 - 6). (CE). (non-LSA credit).

Music Composition (COMP)

COMP 221. Intro Elem Comp. (3; 2 in the half-term). (CE). COMP 222. Composition. (3; 2 in the half-term). (CE).

Cornetto (CORNETTO)

CORNETTO 100. Performance. (2 - 4). (CE). (non-LSA credit).

Crumhorn (CRUMHORN)

CRUMHORN 100. Performance. (2 - 4). (CE). (non-LSA credit).

Dance (DANCE)

DANCE 101. Modern I. (1). (CE). (non-LSA credit). DANCE 261. Congolese Dance I. (CE). (non-LSA credit).

Double Bass (DBLBASS)

DBLBASS 100. Performance. (2 - 6). (CE). (non-LSA credit). DBLBASS 111. Performance. (1). (CE). (non-LSA credit). DBLBASS 112. Performance. (2). (CE). (non-LSA credit). DBLBASS 113. Performance. (2). (CE). (non-LSA credit). DBLBASS 114. Performance. (2). (CE). (non-LSA credit).

DBLBASS 115. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 116. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 139. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 140. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 150. Performance. (2). (CE). (non-LSA credit). DBLBASS 190. Performance. (4). (CE). (non-LSA credit). DBLBASS 217. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 218. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 219. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 220. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 221. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 222. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 239. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 240. Performance. (2 - 4). (CE). (non-LSA credit). DBLBASS 339. Performance. (2 - 6). (CE). (non-LSA credit). DBLBASS 340. Performance. (2 - 6). (CE). (non-LSA credit).

Ensemble (ENS)

ENS 181. St Read Skills-Pno. (2). (CE). (non-LSA credit). ENS 235. Chamber Music. (1 - 3). (CE). (non-LSA credit). ENS 325. Orch Rep-Strings. (1 - 2). (CE). (non-LSA credit). ENS 326. Orc Repertoire-Harp. (2). (CE). (non-LSA credit). ENS 335. String Quartet. (1 - 2). (CE). (non-LSA credit). ENS 344. Univ Campus Orch. (1). (CE). (non-LSA credit). ENS 345. Univ Orchestras. (1 - 2). (CE). (non-LSA credit). ENS 346. Campus Band. (1). (CE). (non-LSA credit). ENS 347. Univ Band. (1 - 2). (CE). (non-LSA credit). ENS 348. Marching Band. (1 - 2). (CE). (non-LSA credit). ENS 349. Univ Choir. (1 - 2). (CE). (non-LSA credit). ENS 350. Univ Chamber Choir. (1 - 2). (CE). (non-LSA credit). ENS 351. Arts Chorale. (1). (CE). (non-LSA credit). ENS 352. Opera Chorus. (1). (CE). (non-LSA credit). ENS 353. Mens Glee Club. (1). (CE). (non-LSA credit). ENS 354. Univ Choral Union. (1). (CE). (non-LSA credit). ENS 356. Womens Glee Club. (1). (CE). (non-LSA credit). ENS 357. Gospel Chorale. (1). (CE). (non-LSA credit).

Euphonium-Baritone (EUPHBARI)

EUPHBARI 100. Performance. (2 - 6). (CE). (non-LSA credit). EUPHBARI 111. Performance. (2). (CE). (non-LSA credit). EUPHBARI 112. Performance. (2). (CE). (non-LSA credit). EUPHBARI 113. Performance. (2). (CE). (non-LSA credit). EUPHBARI 114. Performance. (2). (CE). (non-LSA credit). EUPHBARI 115. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 116. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 139. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 140. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 150. Performance. (2). (CE). (non-LSA credit). EUPHBARI 190. Performance. (4). (CE). (non-LSA credit). EUPHBARI 217. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 218. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 219. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 220. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 221. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 222. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 239. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 240. Performance. (2 - 4). (CE). (non-LSA credit). EUPHBARI 339. Performance. (2 - 6). (CE). (non-LSA credit). EUPHBARI 340. Performance. (2 - 6). (CE). (non-LSA credit).

Early Vocal Practice (EVOCPRAC)

EVOCPRAC 100. Performance. (2 - 4). (CE). (non-LSA credit).

Flute (FLUTE)

FLUTE 100. Performance. (2 - 6). (CE). (non-LSA credit). FLUTE 111. Performance. (1). (CE). (non-LSA credit). FLUTE 112. Performance. (2). (CE). (non-LSA credit). FLUTE 113. Performance. (2). (CE). (non-LSA credit). FLUTE 114. Performance. (2). (CE). (non-LSA credit). FLUTE 115. Performance. (2 - 4). (CE). (non-LSA credit).

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FLUTE 116. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 139. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 140. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 150. Performance. (2). (CE). (non-LSA credit).
FLUTE 190. Performance. (4). (CE). (non-LSA credit).
FLUTE 217. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 218. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 219. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 220. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 221. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 222. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 239. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 240. Performance. (2 - 4). (CE). (non-LSA credit).
FLUTE 339. Performance. (2 - 6). (CE). (non-LSA credit).
FLUTE 340. Performance. (2 - 6). (CE). (non-LSA credit).

Fortepiano (FPIANO)

FPIANO 100. Performance. (2 - 4). (CE). (non-LSA credit).

French Horn (FRENHORN)

FRENHORN 100. Performance. (2 - 6). (CE). (non-LSA credit). FRENHORN 111. Performance. (1). (CE). (non-LSA credit). FRENHORN 112. Performance. (2). (CE). (non-LSA credit). FRENHORN 113. Performance. (2). (CE). (non-LSA credit). FRENHORN 114. Performance. (2). (CE). (non-LSA credit). FRENHORN 115. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 116. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 139. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 140. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 150. Performance. (2). (CE). (non-LSA credit). FRENHORN 190. Performance. (4). (CE). (non-LSA credit). FRENHORN 217. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 218. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 219. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 220. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 221. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 222. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 239. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 240. Performance. (2 - 4). (CE). (non-LSA credit). FRENHORN 339. Performance. (2 - 6). (CE). (non-LSA credit). FRENHORN 340. Performance. (2 - 6). (CE). (non-LSA credit).

Guitar (GUITAR)

GUITAR 100. Performance. (2 - 4). (CE). (non-LSA credit).
GUITAR 111. Performance. (2). (CE). (non-LSA credit).
GUITAR 112. Performance. (2). (CE). (non-LSA credit).
GUITAR 113. Performance. (2). (CE). (non-LSA credit).
GUITAR 114. Performance. (2). (CE). (non-LSA credit).
GUITAR 150. Performance. (2 - 4). (CE). (non-LSA credit).
GUITAR 190. Performance. (2 - 4). (CE). (non-LSA credit).
GUITAR 219. Performance. (2 - 4). (CE). (non-LSA credit).
GUITAR 220. Performance. (2 - 4). (CE). (non-LSA credit).
GUITAR 221. Performance. (2 - 4). (CE). (non-LSA credit).
GUITAR 222. Performance. (2 - 4). (CE). (non-LSA credit).

Harp (HARP)

HARP 100. Performance. (2 - 6). (CE). (non-LSA credit).
HARP 111. Performance. (1 - 2). (CE). (non-LSA credit).
HARP 112. Performance. (2). (CE). (non-LSA credit).
HARP 113. Performance. (2). (CE). (non-LSA credit).
HARP 114. Performance. (2). (CE). (non-LSA credit).
HARP 115. Performance. (2 - 4). (CE). (non-LSA credit).
HARP 116. Performance. (2 - 4). (CE). (non-LSA credit).
HARP 139. Performance. (2 - 4). (CE). (non-LSA credit).
HARP 140. Performance. (2 - 4). (CE). (non-LSA credit).
HARP 150. Performance. (2 - 4). (CE). (non-LSA credit).
HARP 150. Performance. (2). (CE). (non-LSA credit).
HARP 190. Performance. (2 - 4). (CE). (non-LSA credit).
HARP 217. Performance. (2 - 4). (CE). (non-LSA credit).
HARP 218. Performance. (2 - 4). (CE). (non-LSA credit).
HARP 219. Performance. (2 - 4). (CE). (non-LSA credit).

HARP 220. Performance. (2 - 4). (CE). (non-LSA credit). HARP 221. Performance. (2 - 4). (CE). (non-LSA credit). HARP 222. Performance. (2 - 4). (CE). (non-LSA credit). HARP 239. Performance. (2 - 4). (CE). (non-LSA credit). HARP 240. Performance. (2 - 4). (CE). (non-LSA credit). HARP 339. Performance. (2 - 6). (CE). (non-LSA credit). HARP 340. Performance. (2 - 6). (CE). (non-LSA credit).

Harpsichord (HARPSCH)

HARPSCH 100. Performance. (1 - 2). (CE). (non-LSA credit). HARPSCH 150. Performance. (2). (CE). (non-LSA credit). HARPSCH 190. Performance. (4). (CE). (non-LSA credit). HARPSCH 219. Performance. (2 - 4). (CE). (non-LSA credit). HARPSCH 220. Performance. (2 - 4). (CE). (non-LSA credit). HARPSCH 221. Performance. (2 - 4). (CE). (non-LSA credit). HARPSCH 222. Performance. (2 - 4). (CE). (non-LSA credit).

Jazz & Improvisational Studies (JAZZ)

JAZZ 101. Jazz Performance. (2 - 4). (CE). (non-LSA credit).
JAZZ 102. Jazz Performance. (2 - 4). (CE). (non-LSA credit).
JAZZ 113. Jazz Piano. (1). (CE). (non-LSA credit).
JAZZ 150. Performance. (2). (CE). (non-LSA credit).
JAZZ 201. Jazz Performance. (2 - 4). (CE). (non-LSA credit).
JAZZ 202. Jazz Performance. (2 - 4). (CE). (non-LSA credit).
JAZZ 203. Basic Musicianship I. (3). (CE). (non-LSA credit).
JAZZ 204. Basic Musicianship II. (3). (CE). (non-LSA credit).
JAZZ 205. Basic Musicianship II. (3). (CE). (non-LSA credit).
JAZZ 206. Jazz Performance. (2 - 4). (CE). (non-LSA credit).
JAZZ 207. Jazz Performance. (2 - 4). (CE). (non-LSA credit).
JAZZ 301. Jazz Performance. (2 - 4). (CE). (non-LSA credit).
JAZZ 302. Jazz Performance. (2 - 4). (CE). (non-LSA credit).

Musical Theatre (MUSTHTRE)

MUSTHTRE 235. Performance I. (3). (CE). (non-LSA credit). MUSTHTRE 236. Performance II. (3). (CE). (non-LSA credit). MUSTHTRE 280. Prod Performance. (1 - 3). (CE). (non-LSA credit).

Oboe (OBOE)

OBOE 100. Performance. (2 - 6). (CE). (non-LSA credit). OBOE 111. Performance. (1). (CE). (non-LSA credit). OBOE 112. Performance. (2). (CE). (non-LSA credit). OBOE 113. Performance. (2). (CE). (non-LSA credit). OBOE 114. Performance. (2). (CE). (non-LSA credit). OBOE 115. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 116. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 139. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 140. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 150. Performance. (2). (CE). (non-LSA credit). OBOE 190. Performance. (4). (CE). (non-LSA credit). OBOE 217. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 218. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 219. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 220. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 221. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 222. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 239. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 240. Performance. (2 - 4). (CE). (non-LSA credit). OBOE 339. Performance. (2 - 6). (CE). (non-LSA credit). OBOE 340. Performance. (2 - 6). (CE). (non-LSA credit).

<u>Organ (ORGAN)</u>

ORGAN 100. Performance. (2 - 6). (CE). (non-LSA credit).
ORGAN 111. Performance. (2). (CE). (non-LSA credit).
ORGAN 112. Performance. (2). (CE). (non-LSA credit).
ORGAN 113. Performance. (2). (CE). (non-LSA credit).
ORGAN 114. Performance. (2). (CE). (non-LSA credit).
ORGAN 115. Performance. (2 - 4). (CE). (non-LSA credit).
ORGAN 116. Performance. (2 - 4). (CE). (non-LSA credit).
ORGAN 139. Performance. (2 - 4). (CE). (non-LSA credit).
ORGAN 139. Performance. (2 - 4). (CE). (non-LSA credit).
ORGAN 140. Performance. (2 - 4). (CE). (non-LSA credit).
ORGAN 150. Performance. (2). (CE). (non-LSA credit).
ORGAN 190. Performance. (4). (CE). (non-LSA credit).
ORGAN 205. Organ Keyboard Tech. (2). (CE). (non-LSA credit).

ORGAN 206. Organ Keyboard Tech. (2). (CE). (non-LSA credit). ORGAN 217. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 218. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 219. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 220. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 221. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 222. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 239. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 239. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 240. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 339. Performance. (2 - 4). (CE). (non-LSA credit). ORGAN 340. Performance. (2 - 4). (CE). (non-LSA credit).

Performing Arts Technology (PAT)

PAT 111. Performance. (1). (CE). (non-LSA credit).

Percussion (PERCUSS)

PERCUSS 100. Performance. (2 - 6). (CE). (non-LSA credit). PERCUSS 111. Performance. (1). (CE). (non-LSA credit). PERCUSS 112. Performance. (2). (CE). (non-LSA credit). PERCUSS 113. Performance. (2). (CE). (non-LSA credit). PERCUSS 114. Performance. (2). (CE). (non-LSA credit). PERCUSS 115. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 116. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 139. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 140. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 150. Performance. (2). (CE). (non-LSA credit). PERCUSS 190. Performance. (4). (CE). (non-LSA credit). PERCUSS 217. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 218. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 219. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 220. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 221. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 222. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 239. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 240. Performance. (2 - 4). (CE). (non-LSA credit). PERCUSS 339, Performance, (2 - 6), (CE), (non-LSA credit), PERCUSS 340. Performance. (2 - 6). (CE). (non-LSA credit).

Piano (PIANO)

PIANO 100. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 110. Performance. (2). (CE). (non-LSA credit). PIANO 111. Performance. (2). (CE). (non-LSA credit). PIANO 112. Performance. (2). (CE). (non-LSA credit). PIANO 113. Performance. (2). (CE). (non-LSA credit). PIANO 114. Performance. (2). (CE). (non-LSA credit). PIANO 115. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 116. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 117. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 118. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 139. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 140. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 150. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 190. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 201. Performance. (2). (CE). (non-LSA credit). PIANO 205. Performance. (2). (CE). (non-LSA credit). PIANO 206. Performance. (2). (CE). (non-LSA credit). PIANO 207. Performance. (2). (CE). (non-LSA credit). PIANO 208. Performance. (2). (CE). (non-LSA credit). PIANO 217. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 218. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 219. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 220. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 221. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 222. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 239. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 240. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 339. Performance. (2 - 4). (CE). (non-LSA credit). PIANO 340. Performance. (2 - 4). (CE). (non-LSA credit).

Recorder (RECORDER)

RECORDER 100. Performance. (2 - 4). (CE). (non-LSA credit).

Sackbut (SACKBUT)

SACKBUT 100. Performance. (2 - 4). (CE). (non-LSA credit).

Saxophone (SAX)

SAX 100. Performance. (2 - 6). (CE). (non-LSA credit).
SAX 111. Performance. (1). (CE). (non-LSA credit).
SAX 112. Performance. (2). (CE). (non-LSA credit).
SAX 113. Performance. (2). (CE). (non-LSA credit).
SAX 114. Performance. (2). (CE). (non-LSA credit).
SAX 115. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 116. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 139. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 140. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 150. Performance. (2). (CE). (non-LSA credit).
SAX 190. Performance. (4). (CE). (non-LSA credit).
SAX 217. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 218. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 219. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 220. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 221. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 222. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 239. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 240. Performance. (2 - 4). (CE). (non-LSA credit).
SAX 339. Performance. (2 - 6). (CE). (non-LSA credit).
SAX 340. Performance. (2 - 6). (CE). (non-LSA credit).

<u>Shawm (SHAWM)</u>

SHAWM 100. Performance. (2 - 4). (CE). (non-LSA credit).

Strings (STRINGS)

STRINGS 121. Performance. (1). (CE). (non-LSA credit).

Theatre and Drama (THTREMUS)

THTREMUS 101. Introduction to Acting I. (3). (CE).
THTREMUS 102. Intro to Acting II. (3). (CE).
THTREMUS 110. Introduction to Acting for the Camera. (3). (CE).
THTREMUS 181. Acting I. (3). (CE).
THTREMUS 227 / ENGLISH 227. Introductory Playwriting. (3; 2 in the half-term). (CE).
THTREMUS 240. Introduction to Design. (3). (CE).
THTREMUS 242. Directing II. (3). (CE).
THTREMUS 245. Introduction to Stage Management. (2 - 3). (CE).

Trombone (TROMBONE)

TROMBONE 100. Performance. (2 - 6). (CE). (non-LSA credit). TROMBONE 111. Performance. (1). (CE). (non-LSA credit). TROMBONE 112. Performance. (2). (CE). (non-LSA credit). TROMBONE 113. Performance. (2). (CE). (non-LSA credit). TROMBONE 114. Performance. (2). (CE). (non-LSA credit). TROMBONE 115. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 116. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 139. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 140. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 150. Performance. (2). (CE). (non-LSA credit). TROMBONE 190. Performance. (4). (CE). (non-LSA credit). TROMBONE 217. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 218. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 219. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 220. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 221. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 222. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 239. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 240. Performance. (2 - 4). (CE). (non-LSA credit). TROMBONE 339. Performance. (2 - 6). (CE). (non-LSA credit). TROMBONE 340. Performance. (2 - 6). (CE). (non-LSA credit).

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Trumpet-Cornet (TRUM)

TRUM 100. Performance. (2 - 6). (CE). (non-LSA credit). TRUM 111. Performance. (1). (CE). (non-LSA credit). TRUM 112. Performance. (2). (CE). (non-LSA credit). TRUM 113. Performance. (2). (CE). (non-LSA credit). TRUM 114. Performance. (2). (CE). (non-LSA credit). TRUM 115. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 116. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 139. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 140. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 150. Performance. (2). (CE). (non-LSA credit). TRUM 190. Performance. (4). (CE). (non-LSA credit). TRUM 217. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 218. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 219. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 220. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 221. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 222. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 239. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 240. Performance. (2 - 4). (CE). (non-LSA credit). TRUM 339. Performance. (2 - 6). (CE). (non-LSA credit). TRUM 340. Performance. (2 - 6). (CE). (non-LSA credit).

<u>Tuba (TUBA)</u>

TUBA 100. Performance. (2 - 6). (CE). (non-LSA credit). TUBA 111. Performance. (1 - 2). (CE). (non-LSA credit). TUBA 112. Performance. (2). (CE). (non-LSA credit). TUBA 113. Performance. (2). (CE). (non-LSA credit). TUBA 114. Performance. (2). (CE). (non-LSA credit). TUBA 115. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 116. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 139. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 140. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 150. Performance. (2). (CE). (non-LSA credit). TUBA 190. Performance. (4). (CE). (non-LSA credit). TUBA 217. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 218. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 219. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 220. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 221. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 222. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 239. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 240. Performance. (2 - 4). (CE). (non-LSA credit). TUBA 339. Performance. (2 - 6). (CE). (non-LSA credit). TUBA 340. Performance. (2 - 6). (CE). (non-LSA credit).

Viola Da Gamba (VDAGAMBA)

VDAGAMBA 100. Performance. (2 - 4). (CE). (non-LSA credit).

Viola (VIOLA)

VIOLA 100. Performance. (2 - 6). (CE). (non-LSA credit).
VIOLA 111. Performance. (1 - 2). (CE). (non-LSA credit).
VIOLA 112. Performance. (2). (CE). (non-LSA credit).
VIOLA 113. Performance. (2). (CE). (non-LSA credit).
VIOLA 114. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 115. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 116. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 139. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 140. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 150. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 190. Performance. (4). (CE). (non-LSA credit).

VIOLA 217. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 218. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 219. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 220. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 221. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 222. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 239. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 240. Performance. (2 - 4). (CE). (non-LSA credit).
VIOLA 339. Performance. (2 - 6). (CE). (non-LSA credit).
VIOLA 340. Performance. (2 - 6). (CE). (non-LSA credit).

Violin (VIOLIN)

VIOLIN 100. Performance. (2 - 6). (CE). (non-LSA credit). VIOLIN 111. Performance. (1). (CE). (non-LSA credit). VIOLIN 112. Performance. (1). (CE). (non-LSA credit). VIOLIN 113. Performance. (2). (CE). (non-LSA credit). VIOLIN 114. Performance. (2). (CE). (non-LSA credit). VIOLIN 115. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 116. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 139. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 140. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 150. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 190. Performance. (4). (CE). (non-LSA credit). VIOLIN 217. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 218. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 219. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 220. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 221. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 222. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 239. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 240. Performance. (2 - 4). (CE). (non-LSA credit). VIOLIN 339. Performance. (2 - 6). (CE). (non-LSA credit). VIOLIN 340. Performance. (2 - 6). (CE). (non-LSA credit).

Voice (VOICE)

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VOICE 100, Performance, (2 - 6), (CE), (non-LSA credit),
VOICE 111. Performance. (1 - 2). (CE). (non-LSA credit).
VOICE 112. Performance. (1 - 2). (CE). (non-LSA credit).
VOICE 113. Performance. (1 - 2). (CE). (non-LSA credit).
VOICE 114. Performance. (1 - 2). (CE). (non-LSA credit).
VOICE 115. Performance. (1 - 4). (CE). (non-LSA credit).
VOICE 116. Performance. (1 - 4). (CE). (non-LSA credit).
VOICE 139. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 140. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 150. Performance. (2). (CE). (non-LSA credit).
VOICE 190. Performance. (4). (CE). (non-LSA credit).
VOICE 217. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 218. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 219. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 220. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 221. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 222. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 239. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 240. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 339. Performance. (2 - 4). (CE). (non-LSA credit).
VOICE 340. Performance. (2 - 4). (CE). (non-LSA credit).
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Wind Instruments (WINDINST)

WINDINST 109. Performance. (1). (CE). (non-LSA credit).

Winds And Percussion (WINDPERC)

WINDPERC 101. Performance. (1). (CE). (non-LSA credit).

Additional Distribution Courses in Other Units

This list shows courses offered by other academic units of the University of Michigan, but which can be used toward other categories of the Area Distribution requirement. These courses all count as LSA credit.

A. ALFRED TAUBMAN COLLEGE OF ARCHITECTURE + URBAN PLANNING

<u>ARCH (Architecture)</u>

ARCH 213 / HISTART 213. Architecture and Modernity. (4). (HU).

SCHOOL OF ART & DESIGN

<u> ARTDES (Art & Design)</u>

ARTDES 150. Art-Design Perspective I: Creators. (3). (HU).

COLLEGE OF ENGINEERING

AOSS (Atmospheric, Oceanic & Space Sciences)

AOSS 101 / ASTRO 103. Rocket Science. (3 in the half-term). (NS).

- AOSS 102 / ENVIRON 102 / GEOSCI 122. Extreme Weather. (3). (NS).
 AOSS 105 / CHEM 105 / ENSCEN 105 / ENVIRON 105. Our Changing Atmosphere. (3). (NS).
- AOSS 135 / ASTRO 135. Exploration of the Solar System. (3). (NS). (QR/2). AOSS 171 / BIOLOGY 110 / ENSCEN 171 / ENVIRON 110 / GEOSCI 171. Introduction of Global Change: Physical Processes. (4). (NS).

AOSS 172 / ENSCEN 172 / ENVIRON 111 / GEOG 111 / GEOSCI 172 / SOC 111. Introduction to Global Change: Human Impacts. (4). (SS).

AOSS 202. The Atmosphere. (3). (NS).

AOSS 204 / ASTRO 204 / GEOSCI 204. The Planets: Their Geology and Climates. (3). (NS).

EECS (Electrical Engineering & Computer Science)

EECS 182 / SI 182. Building Applications for Information Environments. (4). (MSA).

SCHOOL OF INFORMATION

<u>SI (Information)</u>

SI 110 / SOC 110. Introduction to Information Studies. (4). (SS).

<u>UP (Urban Planning)</u>

UP 263 / ENVIRON 263 / RCNSCI 263. Energy and the Environment. (4). (NS).

ARTDES 151. Art-Design Perspectives II. (3). (HU). ARTDES 250. Art-Design Perspectives III: Tech/Environment. (3). (ID).

EECS 183. Elementary Programming Concepts. (4). (MSA).
EECS 203. Discrete Math. (4). (MSA).
EECS 270. Introduction to Logic Design. (4). (MSA).
EECS 280. Programming and Introductory Data Structures. (4). (MSA).
EECS 281. Data Structures and Algorithms. (4). (NS).
EECS 282. Information Systems Design and Programming. (4). (MSA).

ENSCEN (Environmental Sciences & Engineering)

- ENSCEN 105 / AOSS 105 / CHEM 105 / ENVIRON 105. Our Changing Atmosphere. (3). (NS).
- ENSCEN 171 / AOSS 171 / BIOLOGY 110 / ENVIRON 110 / GEOSCI 171. Introduction of Global Change: Physical Processes. (4). (NS).
- ENSCEN 172 / AOSS 172 / ENVIRON 111 / GEOG 111 / GEOSCI 172 / SOC 111. Introduction to Global Change: Human Impacts. (4). (SS).
- SI 182 / EECS 182. Building Applications for Information Environments. (4). (MSA).
- SI 379 / HISTORY 379 / RCSSCI 379. History of Computers and the Internet. (4). (SS).

MEDICAL SCHOOL

CDB (Cell and Developmental Biology)

CDB 264 / PHYSICS 264 / PSYCH 241 / UC 264. Introduction to Sensory Systems: Sound, Hearing, and Deafness. (4). (NS).

UNIVERSITY OF MICHIGAN SCHOOL OF MUSIC, THEATRE & DANCE

DANCE (Dance)

DANCE 220 / RCHUMS 260. The Art of Dance: An Introduction to American and European Dance History, Aesthetics, and Criticism. (3). (HU).

MUSICOL (Music History and Musicology)

MUSICOL 111 / THEORY 111. The Foundations of Rock. (3). (HU).
MUSICOL 121. Introduction to the Art of Music. (3). (HU).
MUSICOL 122. Intro World Music. (3). (HU).
MUSICOL 123. Introduction to Popular Music. (3). (HU).
MUSICOL 139. Intro to Mus. (2). (HU).
MUSICOL 140. History of Music. (2). (HU).
MUSICOL 239. History of Music. (2). (HU).
MUSICOL 240. History of Music. (2). (HU).
MUSICOL 343. Music and Islam. (3). (ID).
MUSICOL 345. History of Music. (3). (HU).

SCHOOL OF NATURAL RESOURCES & ENVIRONMENT

NRE (Natural Resources and Environment)

NRE 336 / CAAS 332 / ENVIRON 336. Environment and Inequality. (4). (SS). (R&E).

SCHOOL OF NURSING

NURS (Nursing)

NURS 220 / WOMENSTD 220. Perspectives in Women's Health. (3). (SS). (R&E).

PHYSIOL (Molecular and Integrative Physiology)

PHYSIOL 201. Introduction to Human Physiology. (4). (NS).

MUSICOL 346. History of Music. (3). (HU). MUSICOL 347. Opera Past&Present. (3). (HU).

THEORY (Music Theory)

THEORY 111 / MUSICOL 111. The Foundations of Rock. (3). (HU). THEORY 137. Intro Mus Theory. (3). (HU). THEORY 238. Introduction Music Analysis. (3; 2 in the half-term). (HU).

THTREMUS (Theatre and Drama)

THTREMUS 211 / ENGLISH 245 / RCHUMS 280. Introduction to Drama and Theatre. (3; 2 in the half-term). (HU).

THTREMUS 222 / CAAS 341. Introduction to Black Theatre. (3; 2 in the half-term). (HU).

THTREMUS 233 / CAAS 342. Acting and the Black Experience. (3). (HU). THTREMUS 323 / ENGLISH 349. American Theatre and Drama. (3). (HU). THTREMUS 330. Amer Women Playwrts. (3). (HU).

SCHOOL OF PUBLIC HEALTH

HMP (Health Management And Policy)

HMP 200 / PUBHLTH 200 / PUBPOL 210. Health and Society: Introduction to Public Health. (4). (SS).

GERALD R. FORD SCHOOL OF PUBLIC POLICY

PUBPOL (Public Policy)

PUBPOL 201. Systematic Thinking About the Problems of the Day. (4). (SS).
 PUBPOL 210 / HMP 200 / PUBHLTH 200. Health and Society: Introduction to Public Health. (4). (SS).

SCHOOL OF SOCIAL WORK

SW (Social Work)

SW 305. Theories and Practices for Community Action and Social Change. (3). (SS).

PUBHLTH (Public Health)

PUBHLTH 200 / HMP 200 / PUBPOL 210. Health and Society: Introduction to Public Health. (4). (SS).

PUBPOL 224 / HISTORY 224. Global Nuclear Proliferation. (4; 3 in the half-term). (SS).

African Studies Center (ASC)

1080 South University Avenue, Suite 2620 (734) 615-3027 (phone) (734) 763-9154 (fax) www.umich.edu/~iinet/asc e-mail: asc-contact@umich.edu Associate Professor Kelly Askew (Anthropology), Director Not a concentration program. Undergraduates may pursue African Studies through a concentration or academic minor in the Center for Afroamerican and African Studies

The African Studies Center (ASC) supports and promotes the work of more than 120 faculty members engaged in scholarship related to Africa by organizing lectures, workshops, conferences and outreach events and by serving as the focal point for U-M faculty and students engaged in African studies on campus and in Africa.

Afroamerican and African Studies

4700 Haven Hall 505 South State Street (734) 764-5513 (phone) (734) 763-0543 (fax) www.lsa.umich.edu/caas e-mail: caas-info@umich.edu

Professor Kevin K. Gaines, Director

Professors

- Michael Awkward (English) (Gayl A. Jones Collegiate Professor of Afro-American Literature and Culture), *feminist scholar, gender in Afro-American expressive culture*
- James Chaffers (Urban Planning), *design links between spatial equality and human spirituality*
- Angela Dillard (Residential College), American and African-American intellectual history and political thought; religious studies; critical race theory; and conservatism
- Kevin K. Gaines (History), African American history, progressive era; jazz
- Lorna Goodison (Lemuel A. Johnson Collegiate Professor of English and Afroamerican and African Studies) (English Language and Literature), *Creative Writing*
- Sandra Gunning (English), 19th- and 20th-Century American literature and Afro-American literature
- Paul Johnson (History), *History and ethnography of the religions of the African Diaspora in Brazil and the Caribbean, religion and race, religion and migration, ritual studies, and methodological and theoretical perspectives on the comparative study of religion more broadly*
- M. Anne Pitcher (Political Science), *African Politics, Privatization in Africa*
- Elisha Renne (Anthropology), *ethnographic research, abortion in Nigeria, reproductive health matters in Nigeria, aesthetics in northern Nigeria, African art*
- Ray Silverman (History of Art), *African Visual Culture, especially Ghana and Ethiopia; Museum Studies*
- Howard Stein, African development including foreign aid, finance, institutional transformation, industrial and trade policy, health and economic change and structural adjustment
- Hanes Walton, Jr. (Political Science), *American politics, African American politics, the politics of civil rights, and regulatory agencies*
- Warren Whatley (Economics), *southern labor history; migration; urban poverty; and Black workers in the industrial age*
- Alford A. Young (Sociology) (Arthur F. Thurnau Professor), race and urban poverty; African American social thought; African American intellectuals; race and ethnic relations; low-income African American men in urban communities; and the political orientations of African American scholars
- Magdalena Zaborowska (American Culture), *Immigrant literatures,* narrative and gender, cultural theory

Associate Professors

- Paul Anderson (American Culture), modern U.S. cultural history; cultural history of popular music
- Kelly Askew (Anthropology), cultural politics, ethnomusicology, nationalism, media, performance, Swahili studies, East Africa
- Marlyse Baptista (CAAS/Linguistics), morpho-syntax interface in pidgin and Creole languages, combining corpus data with the use of theoretical, descriptive and technological tools; how Creole languages inform linguistic theory and to what extent linguistic theory, in turn, informs Creole grammatical systems

David Doris (History of Art), African Art and Culture

- Amal Hassan Fadlalla (Women's Studies), *Cultural anthropology, Gender Studies, Medical anthropology, and Anthropological demography*
- Martha Jones (History), African American History, 19th-Century United States History; Women's History; Race and the Law
- Karyn Lacy (Sociology), *Race, Class, and Gender; Community; Qualitative Methodology*
- Robin Means-Coleman (Communication Studies), African Americans and the media (texts, contexts, industry, and audiences); Black popular culture; and African American identity formation / performance
- Tiya Miles (American Culture/History), *African American and Native American Comparative and interrelated histories, women of color history, literature and feminist history*
- Derek Peterson (CAAS/History), intellectual history of colonial eastern Africa
- Xiomara Santamarina (English), *nineteenth-century African American* women; antebellum *culture; nineteenth-century African American* and American literature; and African American writers
- Megan Sweeney (English), 20th/21st-Century African American literature and culture; inter-American literatures; U.S. Latino/a literature; critical race studies; transnational feminist and gender studies; critical prison studies; cultural studies and ethnography
- Richard Turits (History), *Hispanic, Caribbean, and Haiti; race, slavery, violence, non-democratic régimes, peasantries, and U.S. interventions*

Assistant Professors

- Lori Brooks (CAAS/American Culture), race and cultural studies, urban culture, Black intellectual culture, popular culture with a special interest in music, humor and performance
- Lori Hill (Education), Education inequality and stratification; urban education; and South African education and social policy
- Damani J. Partridge (Anthropology), *Cultural anthropology, race and displacement, citizenship and non-citizens, technologies of exclusion, gender and sexuality, critical visual anthropology, German studies, European studies, anthropology of the state, post-socialism*
- Sherie Randolph (History), *Creation of a feminist pedagogy for political and social change, African Americans, the African Diaspora, women and gender*

48 / COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS

- Larry Rowley (Education), African-American issues in higher education, the role of race in American academic and intellectual hierarchies, relationships between urban universities and communities, and organizational analyses of racial diversity and the public service mission of higher education; relevance of W.E.B. Du Bois for African Americans in higher education and the importance of role models and mentors for Black college students
- Stephen Ward (Residential College), *urban studies, Black politics, Detroit history*

Lecturers

Scott Ellsworth, history and literature of the American South, slavery, the Civil Rights movement, criminal justice in America

Nesha Haniff (Women's Studies), *abortion in Jamaica; women's reproductive health, violence against women in the Caribbean; AIDS in South Africa*

Yazir Henry

- Nyambura Mpesha, Swahili language and literature, African folklore, African literature, Children's literature, creative writing
- Julius Scott (History), Caribbean world in the 17th, 18th, and 19th Centuries; slavery and emancipation; the Haitian Revolution and its impact in Afro-America

Visiting Assistant Professor

Adam Ashforth, HIV/AIDS in rural Malawi, ethnic conflict in Kenya's rift valley history and representation of jazz and African American music, critical theory and Black modernism

Adjunct Professor

Martin Murray, Sociology and African studies, Urban planning, South Africa, global cities

Adjunct Lecturers

- Melba Joyce Boyd (Wayne State University, Distinguished University Professor and Chair of the Department of Africana Studies), *African American film and literature*
- Jon Onye Lockard, African, Afro-Brazilian, and traditional art of the Americas; contemporary African American art and comparative Black art
- Ronald Woods, African American constitutional and legal studies and civil rights law and policy

The Center for Afroamerican and African Studies (CAAS) provides students an opportunity to examine the histories, social organizations, cultures, and arts of people of African descent, particularly those of Africa, the United States, and the Caribbean. The Center fosters a comprehensive program of study that enables students to focus within and across these areas, as well as to work within and across various disciplines, including history, literature, linguistics, anthropology, sociology, psychology, political science, economics, music, art, film, communications, and religion. While encouraging comparative analysis of the diverse cultural and social traditions derived from Africa, courses also bring attention to current theories, methodologies, and research on race, cultural identity, socioeconomic class, gender, and sexuality in relation to African, African American, and Afro-Caribbean experiences. In addition to exploring the historical cultures of Africa and its Diaspora, students also have opportunities to study contemporary issues treated in such professional fields as public policy, urban planning, education, environmental studies, information technology, and health sciences.

Prizes. *The Walter Rodney Student Essay Prize Competition* is sponsored annually by the Center to encourage excellence in scholarship on the experience of the African diaspora. Two prizes are awarded for the best original undergraduate and graduate student essays on any topic in Afroamerican, Caribbean, and/or African Studies.

CAAS Information Resource Center. The CAAS Information Resource Center (IRC) is a reference and referral library designed to support the curriculum and general information needs of faculty, staff, and students. Located at 5511 Haven Hall, the IRC is currently open Mondays-Fridays 9:30 a.m. to 5 p.m. Call (734) 764-5518 for

more information. The collection includes books, pamphlets, periodicals, and popular magazines, as well as audio and videotapes, computer work stations, and other resources.

Course Credit. Many 400- and 500-level courses are elected by undergraduate and, often for less credit, by graduate students. The *LSA Bulletin* lists credits earned by undergraduates.

African Language Courses. The Center for Afroamerican and African Studies offers elementary and intermediate language instruction in the following languages: Akan, Bambara, Swahili, Wolof, and Zulu.

Swahili is spoken in Kenya, Tanzania, Burundi, Rwanda, Congo and the Comoros Islands. The sequence provides students with a solid knowledge of Swahili morphology and syntax, functional vocabulary, and practice in speaking and writing. It covers many facets of the East African cultures in which it is spoken. (CAAS 115, 116, 215, 216.)

Akan, Bambara, Wolof, and Zulu are offered under CAAS 125, 126, 225, 226.

Akan, a major language of West Africa, is spoken by the Akan people of Ghana, and in the Ivory Coast.

Bambara is spoken in West Africa especially in Mali and Burkina Faso, Guinea-Conakry, Cote D'Ivoire and Senegal. Instruction is given in both Bambara language and culture.

Wolof is spoken in Senegal, Gambia, Mali, Mauritania, and Guinea-Bissau. Instruction is given in both Wolof language and culture.

Zulu is spoken in South Africa and the neighboring countries of Zimbabwe, Malawi, Namibia, Mozambique, Swaziland, and Lesotho. Instruction is given in both Zulu language and culture.

Roster of CAAS Area and Cross-Area Courses

African Studies Courses: 108, 200, 246, 247, 355, 380, 385, 403, 404, 408, 422, 427, 440, 449, 453, 479, 562, 595.

African-American Studies Courses: 201, 203, 204, 214, 230, 231, 274, 303, 321, 326, 327, 329, 333, 334, 335, 336, 338, 340, 341, 342, 357, 360, 370, 400, 418, 425, 434, 435, 450, 451, 452, 454, 457, 459, 465, 475, 476, 486, 489, 521, 533.

Afro-Caribbean Studies: 202, 384, 439, 442, 444, 464, 478.

Cross-Area Courses: 103, 104, 111, 306, 331, 322, 332, 348, 361, 394, 410, 420, 426, 430, 431, 470, 477, 495.

Afroamerican and African Studies

May be elected as an interdepartmental concentration program

The CAAS concentration is centered on the idea of the African Diaspora so that students can explore the contrasting cultures of Africandescended people around the globe. In addition, students will specialize in one geographic area of the Diaspora. Three areas have been defined: African Studies, Afroamerican Studies and Caribbean Studies.

Prerequisite to the Concentration. CAAS 111: Introduction to Africa and Its Diaspora (4 credits).

The 200-Level Requirements. At the 200 level, CAAS courses are introductory or general surveys either within one of the geographic areas (Africa, African America, or the Afro-Caribbean) or across at least two of these areas. Because these courses build on the basic concepts and methods introduced in CAAS 111, students are strongly encouraged to take CAAS 111 before proceeding to any of these 200-level courses. At the 200 level, there are two requirements: (1) one course within one of the three major geographic areas; and (2) either one cross-area course focusing on Diasporic connections or a course within a second geographic area.

1. **One Area Course** (3 credits): Each concentrator is required to take at least one course (3 credits) at the 200-level that is focused

on issues solely in one of the geographic areas. This course may be in African Studies, Black U.S. Studies, or Afro-Caribbean/Latin American Studies. Students are strongly encouraged to take one of the following courses to meet this requirement: CAAS 200, "Introduction to African Studies"; CAAS 201, "Introduction to African American Studies"; or CAAS 202, "Introduction to Afro-Caribbean Studies."

2. **One Cross-Area Course or Second Area Course** (3 credits): Each concentrator is required to take at least one 200-level course that examines Diasporic issues across at least two geographic areas: Africa and the U.S., Africa and the Afro-Caribbean, or the Afro-Caribbean and the U.S., or one additional 200-level course that focuses on issues in a second geographical area.

The Upper-Level Requirements. Upper-level CAAS courses focus on more specialized issues and methods, frequently within particular disciplines or concerning an interdisciplinary problem in the study of an area. At this level, there are also courses focused on particular historical periods, literary genres and periods, sub-areas of the African continent (such as East Africa), national identities (such as Ethiopia), social, political, or economic movements (such as Pan-Africanism, urban redevelopment in the U.S., or Black feminist thought).

Students are required to take at least 9 courses (27 credits) at the 300 and 400 level. Six of these courses are devoted to the student's chosen track, enabling in-depth study in one geographic area (the subconcentration). One course must focus on materials solely outside the subconcentration. One course must have a cross-area focus on Africa and its Diaspora. Each student is also required to take one Senior Seminar (CAAS 495) for 4 credits.

1. The Subconcentration (18 credits).

CAAS offers three tracks based in study of the three major geographic areas of Africa and its Diaspora: African Studies, African-American Studies (U.S.-focused), and Afro-Caribbean Studies. To ensure that students gain depth in their studies, they must complete at least six upper-level courses (18 credits) in one of these geographic areas. Among these six courses, the student may include some cross-area courses, as long as the subconcentration area plays a central role in the course materials.

In choosing courses for the subconcentration, students should do work across traditional disciplines. For instance, a student especially interested in African anthropology would be well served in also taking a course in African sociology or African literature. A student interested in African American film and visual art would be well served to take a course in African American psychology, history, or communication studies.

(Students who are interested in specializing in Afro-Caribbean/Latin American Studies may supplement their CAAS courses with those from other units, such as courses offered through the Center for Latin American and Caribbean Studies and the Department of Romance Languages. Students, however, must first seek permission from CAAS academic advising staff before doing so.)

2. The Upper-Level Cross-Area Requirements (6 credits).

If the subconcentration facilitates depth in a geographic area, the upper-level cross-area requirements encourage students to continue to build a breadth of knowledge. Students must take at least two courses (6 credits) that focus on geographic areas outside their chosen track.

Each student is required to take one course (3 credits) fully outside his or her subconcentration either in Africa or the Diaspora. That is, those who choose the African Studies track must complete at least one upper-level course solely in Afroamerican or Afro-Caribbean Studies. Likewise, students subconcentrating in one of the Diaspora areas *(i.e.,* African American or Afro-Caribbean Studies) must complete at least one upper-level course devoted solely to Africa.

Each student must also complete at least one upper-level course (3 credits) that focuses on cross-area study between Africa and its

Diaspora. This is in addition to any such cross-area courses counted toward the 18 credits of the subconcentration.

3. CAAS 495: The Senior Seminar (4 credits).

All students are required to take a Senior Seminar. As a capstone course, CAAS 495 invites students to reflect on and synthesize their studies by participating in a seminar format, by working on a particular problem of interest to the student, and through the production of a major research paper.

The Theme Cluster Option. In addition to the above requirements, students can enhance their educational experience in CAAS by also clustering their courses around a theme crucial to understanding the historical cultures and contemporary issues of people of African descent. As students examine the course offerings in consultation with their CAAS academic advisor, they may seek to create a dialogue among their courses within a term and across terms by electing courses in which that particular theme stands out. This option is strongly recommended, especially for Honors concentrators.

Students may choose one of the following themes around which to cluster their courses:

- The Arts and Performance
- Colonialism and Post-colonialism
- Contemporary Culture
- Diasporic Connections
- Education and Literacy
- Gender and Sexuality
- Health and Development
- Information Technology
- Mass Media
- Migration and Travel
- Nationalism and Pan-Africanism
- Philosophy and Political Thought
- Race and Environment
- Urban and Community Studies

Honors Concentration. Students wishing to pursue CAAS Honors must have a 3.4 overall GPA and a 3.5 GPA in CAAS courses. In addition to requirements set for the concentration, students seeking Honors need to:

- Contact the CAAS Honors Coordinator to apply for the program by the first term of their junior year, and no later than the end of the second term of their junior year. As part of the application process students also select a Faculty Thesis Advisor, who should be a member of the CAAS faculty.
- Take a special section of the Senior Seminar (CAAS 495), titled "Advanced research in Afroamerican & African Studies," in the Fall term of their senior year. The student's work in the Senior Seminar will focus on drafting a portion (approximately 25 pages) of the Honors thesis.
- Take CAAS 410, "Supervised Reading and Research," in the Winter term of their senior year, when they will expand, revise, and complete the thesis. The student's faculty advisor will normally oversee this independent study. The finished Honors thesis should be 40 to 60 pages.
- Submit their final thesis to the CAAS office by the end of March. All theses must have the final approval of the faculty advisor. All theses are also read by at least one and in many cases two additional members of the faculty who will offer feedback and assess the quality of the thesis. If the thesis meets the criteria of excellence for receiving Honors, it will be assigned one of the following rankings: "Honors," "High Honors," or "Highest Honors." The final determination of Honors ranking is made by the Honors Program Coordinator in consultation with the Director of Undergraduate Studies.

Seniors earning Honors are invited along with their guests and advisors to the CAAS Graduation Ceremony, at which the students

present brief summaries of their theses and receive a special certificate of achievement.

Study Abroad. The Center for Afroamerican and African Studies currently has three study abroad programs in Africa which include the countries of Ghana, South Africa, and Senegal. Each of the programs is unique with varying length of stays and academic goals. Please contact CAAS at the start of each fall academic term for more information specific to each program. Students interested in spending a term or a summer in Africa or in the Caribbean can also contact the U-M Center for Global and Intercultural Study (CGIS).

Advising. The CAAS Advising Center (4649 Haven Hall) is staffed with faculty and graduate students eager to provide academic advising on the CAAS curriculum for any student interested in these fields of study, whether pursuing a concentration, an academic minor, or one course. Call (734) 615-7315 or drop by during the posted hours. The CAAS Advising Center also sponsors final exam study breaks, informational meetings on graduate study, and other such events.

Afroamerican and African Studies Academic Minor

An academic minor in Afroamerican and African Studies is not open to students with a concentration in the Center for Afroamerican and African Studies.

Students wishing to pursue an academic minor in Afroamerican and African Studies must develop a specific plan for its completion in consultation with the Center's designated advisor. Appointments are scheduled at the Advising Office.

CAAS is an ideal unit for the student interested in an academic minor in one of the fields concerned with the study of Africa and its Diaspora. Students can use a CAAS academic minor to supplement and make more coherent their understanding of the knowledge in a traditional discipline. For instance, students concentrating in U.S. history could enhance and deepen their course work by taking a systematic course of study in CAAS focusing not only on the many cross-listed courses between CAAS and History but also on other non-cross-listed courses that the student might otherwise overlook if not affiliated with CAAS. A course in African politics after colonialism, for example, would work well for such a History concentrator.

Because of the plethora of disciplines, interdisciplinary faculty, and geographic connections designed into the CAAS curriculum, a CAAS academic minor can become a valuable intellectual resource for concentrators in any field where CAAS has faculty strengths, including history, literature in English, anthropology, political science, sociology, education, psychology, art, and communications. Students in other disciplines, such as languages, could also find an asset in the range of CAAS courses. A student of French language and literature would benefit from being able to take a series of courses related to Francophone Africa and the West Indies. Students in fairly regulated concentrations (such as chemistry) who have an interest in African history and culture would be able to pursue such an interest without jeopardizing the concentration.

Academic Minor Program. Students interested in pursuing an academic minor in Afroamerican and African Studies must meet the following requirements:

- 1. CAAS 111 (4 credits), to be completed by the sophomore year.
- The 200-Level Requirement (3 credits). Students need at least one 200-level course in one of the three areas (African, African American, or Caribbean), or they can select a cross-area course to meet this requirement.
- Upper-Level Area Requirements (6 credits). Students need at least two courses at the 300 and 400 level, excluding CAAS 495. One of these courses must be in African Studies and the other must be in either African American or Afro-Caribbean/Latin American Studies.
- 4. *CAAS 495, Senior Seminar* (4 credits). All students are required to take a Senior Seminar. As a capstone course, CAAS 495 invites students to reflect on and synthesize their studies by participating in a seminar format, by working on a particular problem of interest to the student, and through the production of a major research paper. CAAS academic minors are expected to complete a paper of approximately 12 pages as a written requirement for this course.

COURSES IN AFROAMERICAN AND AFRICAN STUDIES (CAAS)

CAAS 103. First Year Social Science Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (SS). May not be repeated for credit. (Cross-Area Courses). May not be included in a concentration plan.

CAAS 104. First Year Humanities Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit. (Cross-Area Courses). May not be included in a concentration plan.

CAAS 111. Introduction to Africa and Its Diaspora

(4). (HU). (R&E). May not be repeated for credit. May not be included in a concentration plan. F.

CAAS 115. Elementary Swahili

(4). May not be repeated for credit.

CAAS 116. Elementary Swahili II

CAAS 115 or permission of instructor. (4). May not be repeated for credit.

CAAS 117. Intensive Elementary Swahili

(8). May not be repeated for credit. CAAS 125. Elementary African Languages I

(4). May not be repeated for credit.

CAAS 126. Elementary African Languages II CAAS 125. (4). May not be repeated for credit. May not repeat the same language at the same level.

CAAS 200. Introduction to African Studies

CAAS 111. (3). (SS). May not be repeated for credit.

CAAS 201. Introduction to Afro-American Studies CAAS 111. (3). (SS). May not be repeated for credit.

CAAS 202. Introduction to Afro-Caribbean Studies

CAAS 111. (3). May not be repeated for credit.

CAAS 206. Issues in African Studies

CAAS 111. (3). May not be repeated for credit. (African Studies).

CAAS 208 / HISTART 208. Introduction to African Art (4). (HU). May not be repeated for credit.

CAAS 211. Dynamics of the Black Diaspora CAAS 111. (3). (HU). May not be repeated for credit.

CAAS 215. Intermediate Swahili I

Swahili 115 and 116. (4). May not be repeated for credit.

CAAS 216. Intermediate Swahili II CAAS 215. (4). (Lang Req). May not be repeated for credit.

CAAS 224 / HISTART 224. African Visual Cultures: Akan/Kongo/Yoruba (3). May not be repeated for credit.

CAAS 225. Intermediate African Languages I CAAS 126, or permission of instructor based on proficiency in elementary language skills. (4). May not be repeated for credit.

CAAS 226. Intermediate African Languages II (4). (Lang Req). May not be repeated for credit. May not repeat the same language at the same level.

CAAS 230 / HISTORY 274. Survey of Afro-American History I CAAS 111. (3). (SS). May not be repeated for credit. (African-American Studies).

CAAS 231 / HISTORY 275. Survey of Afro-American History, II CAAS 111. (3). (SS). May not be repeated for credit. (African-American Studies). CAAS 246 / HISTORY 246. Africa to 1850

(4). (SS). May not be repeated for credit.

CAAS 247 / HISTORY 247. Modern Africa (4). (SS). (R&E). May not be repeated for credit.

CAAS 248. Crime, Race, and the Law (3). May not be repeated for credit.

CAAS 274 / ENGLISH 274. Introduction to Afro-American Literature CAAS 111. (3; 2 in the half-term). (HU). May not be repeated for credit.

CAAS 303 / SOC 303. Race and Ethnic Relations An introductory course in Sociology or CAAS; CAAS 201 recommended. (4; 3 in the halfterm). (SS). (R&E). May not be repeated for credit. (African-American Studies).

CAAS 305 / HISTORY 305. Histories of the Modern Caribbean (3). May not be repeated for credit.

CAAS 321 / SOC 323. African American Social Thought

CAAS 201. (3). (SS). May not be repeated for credit. (African-American Studies).

CAAS 323 / HISTORY 388 / WOMENSTD 323. Black Feminist Thought and Practice (3). May not be repeated for credit.

CAAS 324. Dealing with the Past and Doing Justice in Africa: South Africa, Rwanda, Sierra Leone

CAAS 111 and CAAS 200, prior coursework in comparative politics, international relations, or permission of instructor. (3). May not be repeated for credit.

CAAS 328 / WOMENSTD 328. Women, Agency and Sexual Safety

One course in WOMENSTD or CAAS. (3). May not be repeated for credit. CAAS 330 / RCSSCI 330. Urban and Community Studies I

(4). May not be repeated for credit.

CAAS 331 / PSYCH 316. The World of the Black Child

One course in Psychology or Afro-American and African Studies. (3). May not be repeated for credit. (Cross-Area Courses).

CAAS 333. Perspectives in Afro-American History

CAAS 201. (4; 3 in the half-term). May not be repeated for credit. (African-American Studies). Sp.

CAAS 334 / AMCULT 336 / HISTORY 365. Popular Culture in Contemporary Black America

CAAS 201. (3). (HU). May not be repeated for credit. (African-American Studies).

CAAS 335 / AAPTIS 335 / RELIGION 310. African-American Religion Between Christianity and Islam

(4). (HU). May not be repeated for credit. (African-American Studies).

CAAS 336 / HISTORY 336 / WOMENSTD 336. Black Women in America CAAS 201. (3). (SS). May not be repeated for credit. (African-American Studies).

CAAS 337 / HISTORY 337 / WOMENSTD 337. Black Women in the United States, Part Is From the American Revolution through the Women's Era

CAAS 201. (4). May not be repeated for credit.

CAAS 338 / ENGLISH 379. Literature in Afro-American Culture CAAS 201. (3). (HU). May not be repeated for credit. (African-American Studies).

CAAS 340 / AMCULT 340. A History of Blacks in American Film

CAAS 201. (3). May not be repeated for credit. (African-American Studies). Sp.

CAAS 341 / THTREMUS 222. Introduction to Black Theatre CAAS 201. (3; 2 in the half-term). (HU). May not be repeated for credit. (African-American Studies).

CAAS 342 / THTREMUS 233. Acting and the Black Experience

Permission of instructor (brief interview). CAAS 201 recommended. (3). (HU). May not be repeated for credit. (African-American Studies).

CAAS 344. Black Male/Female Relationships

CAAS 111 and CAAS 201. (3). May not be repeated for credit.

CAAS 346 / ENGLISH 389 / HISTORY 362. Literature in African History CAAS 111 and 200. (3). (HU). May not be repeated for credit.

CAAS 354 / HONORS 354 / RCHUMS 354 / WOMENSTD 354. Race and Identity in Music

(3). (HU). (R&E). May not be repeated for credit.

CAAS 355 / ANTHRCUL 355 / HISTORY 355. Health and Illness in African Worlds (4; 3 in the half-term). (R&E). May not be repeated for credit. (African Studies).

CAAS 357 / ECON 357. Economic History of African-Americans

CAAS 201. (3). (SS). May not be repeated for credit. (African-American Studies).

CAAS 358. Topics in Black World Studies

(3). May be repeated for a maximum of 6 credits.

CAAS 359 / POLSCI 359. African Politics CAAS 200. (4; 3 in the half-term). May not be repeated for credit.

CAAS 360. Afro-American Art

CAAS 201. (3). (HU). May not be repeated for credit. (African-American Studies). F. CAAS 361. Comparative Black Art

CAAS 360. (3). May not be repeated for credit. (Cross-Area Courses). W.

CAAS 362 / HISTART 362. Expressive Cultures of the Black Atlantic: Vision and Time HISTART 208/CAAS 208 and upperclass standing. (3). May not be repeated for credit.

CAAS 365 / WOMENSTD 365. Global Perspectives on Gender, Health, and Reproduction

One course in either Women's Studies or CAAS. (3). (SS). May not be repeated for credit.

CAAS 384 / AMCULT 406 / ENGLISH 384. Caribbean Literature

CAAS 202. (3). May be repeated for a maximum of 6 credits.

CAAS 385 / ENGLISH 385. African Literature

CAAS 200. (3). (HU). May be elected twice for credit. (African Studies).

CAAS 390 / WOMENSTD 390. Homophobia in the Black World One course in WOMENSTD or CAAS. (3). May not be repeated for credit.

CAAS 394. Junior Seminar

Upperclass standing. (4). May be repeated for a maximum of 8 credits. (Cross-Area Courses).

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CAAS 403. Education and Development in Africa

CAAS 200. (3). May not be repeated for credit. (African Studies).

CAAS 405 / ANTHRARC 400. Field Studies Junior standing. (8). May not be repeated for credit.

CAAS 406 / ANTHRARC 401. Archaeology Laboratory Studies

Junior standing; concurrent enrollment in ANTHRARC 400/CAAS 405. (6). May not be repeated for credit. W in West Africa.

CAAS 407 / HISTART 406. Looking at African Things

HISTART 208/CAAS 208. (3). May not be repeated for credit. Rackham credit requires additional work.

CAAS 408. African Economies: Social and Political Settings

CAAS 200. (4; 3 in the half-term). May not be repeated for credit. (African Studies). CAAS 409 / ANTHRCUL 408. Maternal/Child Health and Environmental Pollution in Africa

Junior or above. (3). May not be repeated for credit. Rackham credit requires additional work.

CAAS 410. Supervised Reading and Research

Consent of instructor required. Permission of instructor. (1 - 6). (INDEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term (CAAS 410 or 510), the final grade is posted for both term's elections. (Cross-Area Courses). F, W, Sp, Su.

CAAS 417. Studying African Americans: An Introduction to Qualitative Research Methods

CAAS 111 or CAAS 201. (3). May not be repeated for credit.

CAAS 418 / POLSCI 324. Black Americans and the Political System One course in Political Science and CAAS 201. (3). May not be repeated for credit. (African-American Studies).

CAAS 420 / ANTHRCUL 347. Race and Ethnicity

Junior standing. (3; 2 in the half-term). May not be repeated for credit.

CAAS 421 / HISTORY 421 / LACS 421 / RELIGION 421. Religions of the African Diaspora

(3). May not be repeated for credit. Rackham credit requires additional work. CAAS 422 / ANTHRCUL 411. African Culture

Junior standing and CAAS 200. (3; 2 in the half-term). May not be repeated for credit. (African Studies).

CAAS 426. Urban Redevelopment and Social Justice

(3). May not be repeated for credit. (Cross-Area Courses). F.

CAAS 427 / ANTHRCUL 427 / WOMENSTD 427. African Women

One course in African Studies, Anthropology, or Women's Studies. CAAS 200 recommended. Permission of instructor. (3). May not be repeated for credit. (African Studies).

CAAS 431. Topics in Black Education

CAAS 430 recommended but not required. (3). May be elected twice for credit. (Cross-Area Courses).

CAAS 434 / SOC 434. Social Organization of Black Communities

Introduction to SOC or introduction to CAAS. (3). May not be repeated for credit. (African-American Studies).

CAAS 436. African Religions and Philosophies

(3). May not be repeated for credit. (African Studies).

CAAS 440 / SAC 440. African Cinema

CAAS 200. (3). May not be repeated for credit. (African Studies).

CAAS 443 / WOMENSTD 443. Pedagogy of Empowerment: Activism in Race, Gender, and Health

WOMENSTD 240 or CAAS 201. (3). May not be repeated for credit.

CAAS 444 / ANTHRCUL 414. Introduction to Caribbean Societies and Cultures, I

Junior standing or above. (3). May not be repeated for credit. (Afro-Caribbean Studies). F.

CAAS 450. Law, Race, and the Historical Process, I

(3). May not be repeated for credit. (African-American Studies). F.

CAAS 451. Law, Race, and the Historical Process, II CAAS 450. (3). May not be repeated for credit. (African-American Studies). W.

CAAS 453. Culture, Class, and Conflict in Southern Africa

CAAS 200. (3). May not be repeated for credit. (African Studies).

CAAS 454 / ANTHRCUL 453. African-American Culture

One introductory course in the social sciences. CAAS 201 recommended. (3). May not be repeated for credit. (African-American Studies).

CAAS 458. Issues in Black World Studies

(3). May be repeated for a maximum of 6 credits.

CAAS 459 / ANTHRCUL 451. African-American Religion

One introductory course in the social sciences. CAAS 201 recommended. (3). May not be repeated for credit. (African-American Studies).

CAAS 460. Africa and Post-war Development Theory and Policy

CAAS 200 & ECON 102. (3). May not be repeated for credit. Rackham credit requires additional work.

CAAS 462. Globalization and African Health

CAAS 200 recommended. (3). May not be repeated for credit. Rackham credit requires additional work.

CAAS 463. The Black Middle Class in America

(3). May not be repeated for credit. Rackham credit requires additional work. CAAS 464 / MUSICOL 464. Music of Latin America and the Caribbean

CAAS 202. (3). May not be repeated for credit. (Afro-Caribbean Studies).

CAAS 468. Practicum in Field Studies in the Diaspora

CAAS 111 or permission of instructor. May require concurrent registration in CAAS 469, Issues in the Diaspora. (3). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. Rackham credit requires additional work.

CAAS 469. Issues in Field Studies in the Diaspora

CAAS 111 or permission of instructor. May require concurrent registration in CAAS 468, Field Studies in the Diaspora. (3). May be repeated for a maximum of 6 credits. Rackham credit requires additional work.

CAAS 471. Higher Education and African-American Social Development Upperclass standing. (3). May not be repeated for credit.

CAAS 473 / HISTORY 473 / LACS 483. Brazil: History and Culture (3). May not be repeated for credit. Rackham credit requires additional work. CAAS 476 / ENGLISH 478. Contemporary Afro-American Literature

CAAS 201. (3; 2 in the half-term). May not be repeated for credit. (African-American Studies).

CAAS 487. Communication Media in the Black World: Electronic Media CAAS 201. (3). May not be repeated for credit. (African-American Studies).

CAAS 489 / ENGLISH 479. Topics in Afro-American Literature CAAS 201, ENGLISH 274/CAAS 274 and/or ENGLISH 379/CAAS 338 strongly recommended. (3; 2 in the half-term). May be repeated for a maximum of 6 credits.

CAAS 490. Special Topics in Black World Studies Upperclass standing or permission of instructor. (1 - 2). May be repeated for a maximum of 6 credits.

CAAS 491 / AMCULT 491. The Culture of Jazz

CAAS 111 and 201. (3). May not be repeated for credit.

CAAS 495. Senior Seminar

Upperclass standing. (4). May be repeated for a maximum of 8 credits. (Cross-Area Courses). (Capstone Course).

CAAS 558. Seminar in Black World Studies

Graduate standing or permission of instructor. (3). May be repeated for a maximum of 6 credits.

CAAS 595 / HISTORY 595. Topics in African History

CAAS 200. (3). May not be repeated for credit. (African Studies).

American Culture

3700 Haven Hall 505 South State Street (734) 763-1460 (phone) (734) 936-1967 (fax) www.lsa.umich.edu/ac e-mail: ac.inq@umich.edu Professor Gregory Dowd, Director Professor Julie Ellison, Director of Undergraduate Studies

Professors

- Philip Deloria (American Culture/History) (Richard Hudson Research Professor of History; Carroll Smith-Rosenberg Collegiate Professor of History and American Culture), 19th-century cultural history and theory; Native American history; history of the American West; American environmental history
- Gregory Dowd (American Culture/History), *Native American and Early American History*
- Julie Ellison (American Culture) *public scholarship, poetry of everyday life, 18th- & 19th-century American and English literature, gender studies*
- Jonathan Freedman (American Culture/English), *late 19th-century British and American literature; cultural theory; film*
- June Howard (Arthur F. Thurnau Professor of English, American Culture, and Women's Studies), (American Culture/English/Women's Studies), *late 19th-century early 20th-century American Literature* and Culture
- Mary Kelley (American Culture/History) (Ruth Bordin Collegiate Professor of History, American Culture and Women's Studies), 19th-*Century women's writers, women's intellectual history, American intellectual history*
- Penny Von Eschen (American Culture/History), *transnational cultural* and political dynamics; race, gender, and empire; the political culture of United States imperialism
- Alan Wald (American Culture/English) (H. Chandler Davis Collegiate Professor of English and American Culture), 20th-century U.S. cultural Left; working-class culture
- Magdalena Zaborowska (American Culture/Afroamerican Studies), Immigrant literatures, narrative and gender, cultural theory

Associate Professors

- Paul Anderson (American Culture/History), modern U.S. cultural history; cultural history of popular music
- James W. Cook (American Culture/History), 19th-century U.S. Cultural, Social, and Intellectual History; Popular, visual and urban culture; race and ethnicity

- Maria Cotera (American Culture/Women's Studies), *Latina/o gender* studies; comparative ethnic studies; ethnography
- Matthew Countryman (American Culture/History), African-American social movements; 20th-century U.S. history
- Vicente Diaz (American Culture), American Imperialism and Decolonization in the Pacific; historiography; cultural and postcolonial studies; Native Pacific cultural studies; Film/Video critique and production in the Pacific; traditional Carolinian seafaring; sports
- Joseph Gone (American Culture/Psychology), *Mental Health Services* for American Indians
- Kristin Hass (American Culture), 20th-century cultural history; visual and material culture
- Jesse Hoffnung-Garskof (American Culture/History), Latino Studies, Latin American and Caribbean History, transnational migrations, music, race and ethnicity
- Scott Kurashige (American Culture), 20th-century U.S. History; Asian American History; Comparative Ethnic Studies
- Lawrence La Fountain-Stokes (Romance Languages & Literatures / American Culture), *Latina/o Studies, queer studies, Latina/o diasporic studies, Latin American literary and cultural studies*
- Tiya Miles (American Culture/Afroamerican Studies/History), African American and Native American Comparative and interrelated histories, women of color history, literature and feminist theory
- Susan Najita (American Culture/English), Pacific literatures in English; 20th-century American literature
- Yeidy Rivero (American Culture/Screen Arts & Culture), *Television* studies, race and media, global media, Latino/a, Spanish Caribbean, Latin American, and African diaspora studies
- Damon Salesa (American Culture/History), Island Pacific studies, American and British imperialisms and colonialism in the Pacific, race studies (particularly race mixing/racial hybridity)
- Sarita See (American Culture/English), Asian/Pacific American literature, U.S. imperialism, Anglophone Southeast Asian literature
- Alexandra Stern (Zina Pitcher Collegiate Professor in the History of Medicine) (Associate Director, Center for History of Medicine), medical history, border culture, and gender history
- Amy Stillman (American Culture), *ethnomusicology, Pacific Islands* performance traditions, dance ethnology music and dance
- Gustavo Verdesio (American Culture/Romance Languages and Literatures), colonial studies, Native American Studies, pre-contact indigenous studies, material culture

Assistant Professors

Evelyn Alsultany (American Culture), Arab-American Studies; mixedrace identities; media and popular culture; politics of race

- Amy Carroll (American Culture/English), Latina/o Studies; performance studies; multicultural literature studies
- Nadine Naber (American Culture/Women's Studies), *interdisciplinary Arab-American studies, particularly focusing on gender, religion, urban and diasporic populations*
- Michael Witgen (American Culture/History), *Native American history* and culture, early American history, ethno-history, transnational history

Lecturers

- Bruce Conforth (American Culture), *popular culture, ethnomusicology, and folklore*
- Emily Lawsin (American Culture/Women's Studies), Asian American Studies, Filipino American women, literature, history, education, and media analysis, oral history of working class women, comparative ethnic literature
- MacDonald Moore (American Culture/Judaic Studies), *media studies, Jewish cultural studies*
- Richard Meisler (American Culture), contemporary American social problems and cultural trends, educational philosophy
- Margaret Noori (American Culture), *Ojibwe language and culture, Native American literature*

Term Professor

Esther Newton (American Culture/Women's Studies/Art & Design), sexuality, queer studies; gender studies

The U-M Program in American Culture is among the most dynamic units on the campus, and is currently engaged in a dramatic transformation entailing intellectual thrust, faculty resources, and even its physical location. The first, the intellectual development, focuses on a rethinking of interdisciplinarity. In the spirit of the most creative and responsible scholarship of the new millennium, the Program is moving its intellectual center beyond a coalition of disciplinary specialists laboring in a collaborative relationship and toward the production of scholars whose accomplishments express a genuine synthesis of methods. Moreover, a critical constituent of this process is the reformulation of a vision of American cultures without borders, in an international framework, and with the study of Asian Americans, Latina/os, Native Americans, Arab Americans, and African Americans pivotal to teaching and research. Our goal is to enrich the investigation of American culture by engaging in a refashioning of the more traditional areas of the field of American Studies, together with attentiveness to budding subjects of new study within disciplines across the social sciences and humanities.

American Culture

May be elected as an area concentration program

The Program in American Culture exposes students to the interdisciplinary study of U.S. society and culture. Our courses integrate a rich array of materials, themes, and approaches from many fields: not only historical and literary study, but also visual studies, musicology, film and media, anthropology, and others. The curriculum of the Program emphasizes the multicultural diversity of American society, paying particular attention to ethnic, gender, and other forms of soc cial difference and inequality. At the same time, it stresses the importance of studying U.S. nationhood, including Americans' (sometimes conflicting) ideals and experiences of what it means to be American. Our courses are designed to explore these issues in both historical and contemporary settings.

Although the concentration in American Culture offers considerable flexibility and intellectual diversity, it also is designed to foster a community of learning among undergraduates. The Program aims to be an interdisciplinary "village" within the larger College, in which concentrators share the opportunity for intensive study, conversation, and research about American society and culture. **Gateway courses:** The Program has a broad array of 200-level courses through which students may get an initial exposure to American studies. These "gateway courses" include introductions to ethnic studies, topical seminars, "periods" courses on particular eras, and AMCULT 201 (American Values). Gateway courses are not primarily surveys, but discussion-based "modes of thought" courses that model various themes and approaches to interdisciplinary American studies.

Prerequisites to Concentration. One 200-level AMCULT course (either completed or enrolled in at the time concentration is declared).

Concentration Program. A minimum of 31 credits (includes prerequisite).

- 1. *Required courses* (16 credits): AMCULT 335, 345, 350, 399, and either 496 or 498.
- 2. *Electives:* Four additional AMCULT courses, at least two of which must be at the 300 level or above, with at least one of these at the 400 level. Students may take an additional AMCULT 496 or 498 topics course not being counted toward the senior seminar requirement. Upper division electives should cohere around a theme of each student's own choosing, in consultation with the American Culture undergraduate advisor.
- 3. Breadth requirements: Among the electives within AMCULT, at least one course at the 200 level or above must fall into each of the following areas (any single course may count toward one or more of the breadth requirements; required core courses cannot satisfy breadth requirements):
 - Pre-Twentieth-Century United States
 - Transnationalism, Diaspora, and/or Empire
 - · Women, Gender, and/or Sexuality
 - Ethnic and/or Indigenous Studies

Substitutions: When necessary, an appropriate course listed in another department may substitute for a required or elective course with permission of the American Culture undergraduate advisor.

Advising. Students are encouraged to consult with the undergraduate advisor. For appointments regarding the concentration program, visit www.lsa.umich.edu/ac/undergrad.

American Culture Honors Program

The American Culture Honors Program provides an opportunity for concentrators in American Culture and Latina/o Studies to complete a comprehensive, original independent project under the guidance of a faculty member as the culmination of their undergraduate studies. We recommend that students choose topics on which they have already done some academic study. The Honors thesis may take a variety of forms, for example, a research project, a critical or interpretive project, or a creative or performance piece. Creative and community-based projects should include a substantive introductory essay that sets forth the premises, aims, and cultural/intellectual contexts of the student's undertaking. Honors requirements consist of regular American Culture or Latina/o Studies requirements plus the Honors requirements.

American Culture and Latina/o Studies concentrators with an overall grade-point average of 3.5 or higher may apply for an Honors concentration. The Program spans three terms. Students usually apply in the fall term of their junior year. Though the program occasionally accepts a few late applicants in the Winter or Spring/Summer terms, students' chances of success are greatest if they apply in the fall of the junior year and if they have begun thinking about a possible focus.

The application process has three stages:

1. In the first term of his or her junior year, the student must consult with the American Culture undergraduate advisor to gain permis-

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sion to enroll in AMCULT 398, the Junior Honors Writing Workshop (three credits).

- 2. In the second term of the junior year, the student must successfully complete AMCULT 398, which involves preparing a thesis prospectus and bibliography and identifying a supervising faculty advisor and a second reader.
- 3. At the end of the second term of the junior year, the student will submit the prospectus and a letter of agreement from the faculty advisor. The student will then meet with the director of the Program in American Culture to discuss the prospectus and be accepted into the Honors concentration.

The application consists of a cover sheet, transcript, and prospectus.

In both terms of the senior year, the student will enroll in AMCULT 493 (3 credits per term) to research and write the thesis.

In addition, effective in Fall 2010, as part of AMCULT 493, students in the Honors program will participate in three Friday colloquia. The colloquia are also open to Latina/o Studies concentrators pursuing Honors. The colloquia will focus on peer response to work in progress, as well as on topics of particular usefulness to a given cohort of students. The series will be facilitated by the Director of Undergraduate Studies and is intended to provide seniors with ongoing mentoring.

Early selection of an appropriate thesis advisor is crucial to the success of the Honors thesis. Only tenure track faculty members in the Program in American Culture and the Ethnic Studies Programs may serve as Honors thesis advisors. Exceptions to this policy may be made in consultation with the Director of Undergraduate Studies. Faculty are listed on the Program's web site.

The second reader is a faculty member chosen jointly by the student and the thesis advisor by the end of the fall term of the senior year. The second reader need not be affiliated with the Program, but her or his area of expertise should be relevant to the thesis topic. The student should consult with the second reader throughout the writing process, and the second reader should comment on thesis drafts as well as contribute to the final evaluation of the thesis.

Submission of Thesis

Students should submit one copy to their primary faculty advisor, one copy to the second reader, and one copy to the Undergraduate Program Assistant in the Program Office. The copy submitted to the office should include a cover sheet (providing the student's name, email, and telephone number; thesis title; and the names of the primary advisor and second reader). The primary advisor and the second reader determine the designation of Honors (Honors, High Honors, Highest Honors).

Graduating seniors should also complete an *Honors Concentration Release* with the AC academic advisor, an *Honors Thesis Card* through Honors, an application for graduation online, and a distribution worksheet with an Honors advisor.

Arab American Studies

Not a concentration program

Courses in Arab American Studies provide an interdisciplinary study of Arab American histories, literatures, and cultures. We address the historical and current experiences of Arab Americans in the United States and the relevance of those experiences for understanding race and ethnicity in the U.S. and globally. Courses explore themes such as immigration history; racism and discrimination; gender and sexuality; media representations; the local and global impacts of war and violence on Arabs and Arab Americans; intellectual, artistic, and cultural contributions; and relationships with other racial and ethnic groups. This curriculum provides knowledge vital for a critical understanding of the contemporary United States in a global context. The Program in American Culture offers the following courses in Arab American Studies: "Why do they Hate Us?: Perspectives on 9/11", "Arab American Literature", "Introduction to Arab American Studies," "Muslim Americans," "Arab Women: Homelands and Diasporas," "Immigrant and Racial Politics after September 11th," "Representing the Middle East in Hollywood Cinema." Courses also may be offered in other departments or crosslisted in American Culture.

Faculty members teaching in this area include Nadine Naber and Evelyn Alsultany.

Students interested in pursuing a course of study in the field should contact the Program in American Culture's designated advisor. Appointments are scheduled online at: www.lsa.umich.edu/ac/undergrad.

Asian/Pacific Islander American Studies

3700 Haven Hall 505 South State Street www.lsa.umich.edu/ac/apia

Not a concentration program

The Asian/Pacific Islander American Studies (A/PIA) program within American Culture offers interdisciplinary graduate and undergraduate courses focusing on Asian American and Pacific Islander communities and experiences. The solidus (or slash) in the title (Asian/Pacific) marks the categories of Asian American and Pacific Islander as distinct subjects and fields of studies, which at UM have been conjoined strategically for comparative purposes. In addition to marking the distinctions, A/PIA studies at U-M also includes the interdisciplinary study of the Pacific Islands. Thus, A/PIA is a focal point for university research and teaching on issues concerning Asian American and Pacific Islanders, providing resources for their understanding. The unique historical and political circumstances surrounding the incorporation of Asian immigrants and Pacific Islanders into American society, and the broad range of stratification spanning such communities, underscores the richness and theoretical importance of studying A/PIA communities alongside - and often in contrast to - that of other groups in the United States. Students may take a full range of courses examining the historical, political, economic, literary, artistic, cultural, and psychological forces, which have shaped and continue to shape the lives and communities of Asian Americans and Pacific Islanders.

Students interested in pursuing a course of study in A/PIA should contact Vicente Diaz, Director of Asian/Pacific Islander American Studies.

Fulltime Program faculty are: Matthew Briones, Vicente Diaz, Scott Kurashige, Emily Lawsin, Susan Najita, Damon Salesa, Sarita See, and Amy Stillman. A/PIA teaching and research is also supported by adjunct and affiliated faculty, and community members located in numerous programs and units across UM and off campus.

Latina/o Studies

3700 Haven Hall 505 South State Street (734) 763-1460 www.lsa.umich.edu/ac/latina

May be elected as an area concentration program

A component of the Program in American Culture, Latina/o Studies is designed to give students an opportunity to develop cultural competence on the diverse groups that comprise the U.S. Latina/o populations, that is, Mexican-Americans or Chicano/as, Puerto Ricans, Cuban-Americans, Central Americans, and other peoples of Spanish, Indian and African descent. Soon to become the largest minority group in this country, Latinas/os have not only made contributions to U.S. society with their work, values, cultural traditions and linguistic heritage, they have also participated in the making of this country's history. As such, no understanding of the United States can be complete without accounting for the roles Latinos/as played. On the other hand, to understand the diverse Latina/o experiences in the United States, it is essential to have knowledge of the Latin American cultural, social, and political context that has fueled Latina/o migration to the United States. In this sense, the Latina/o Studies Program offers a variety of courses, some focusing on particular national groups, others based on a particular discipline, and many others organized around specific comparative topics or issues. Examples of courses in Latina/o Studies include: "History of U.S. Latinos," "Latinas in the United States," "American Immigration," "The Politics of Language and Cultural Identity," "Schooling and Community," "Latino Performance Arts," "Latinos in the Media"," "Empowering Latino Families and Communities," "Migrant Bodies," "Hybrid Texts," "Puerto Rican Literatures: The Island and the Mainland," "Cuba and Its Diaspora," and others.

Prerequisites to the Concentration. AMCULT 213 "Introduction to Latino Studies" (4 credits) and the Language Requirement (see below).

Concentration Program. An interdisciplinary degree, the Latina/o Studies concentration consists of 30 credits beyond the introductory prerequisite and language requirements. The objective of this concentration program is to engage students in a diversity of disciplinary approaches to the study of U.S. Latinas/os as well as to introduce them to the central intellectual questions and topics that have emerged in this field of inquiry. Given the interdisciplinary nature of Latino Studies, students interested in pursuing graduate study in a particular discipline should double concentrate in the respective department in order to have the needed background to enter graduate school. The concentration consists of:

1. Language Requirement. Latina/o Studies concentrators must prove competency in Spanish. They can do this either by enrolling in SPANISH 290 / AMCULT 224, "Spanish for U.S. Latina/os," (4 credits) or by proving equivalency at the SPANISH 275/276 level; or equivalency in PORTUG 232 or 415. Spanish native speakers who have enrolled in upper-level Spanish courses and complete them successfully may have this requirement waived by passing a proficiency interview and having a waiver form signed.

2. Required Courses:

- a. AMCULT 312 or 315, "History of U.S. Latinos"
- b. AMCULT 243, "Latinas in the United States".
- c. AMCULT 327, "Latino/Latina Literature in the United States"
- d. AMCULT 381, "Latinas/os and the Media"
- e. One course that focuses on race and racialization in the Americas: AMCULT 399, 498, or 351
- f. Three credits of community-service learning in a Latino context. Courses may be chosen from among the following: AMCULT 309, 219, 404, 425; SOC 404, 389; PSYCH 401; or WOMENSTD 425.
- 3. Electives. Two 300- 400-level courses in Latina/o Studies.
- 4. Cognates. Two courses outside the Latina/o Studies Curriculum including advisor-approved courses offered by other departments, one each from the following areas:
 - Latin American culture, history, literature (may include courses in Latin American and Caribbean Studies, Romance Languages and Literatures, Anthropology, History, Sociology, Political Science);
 - Asian Pacific Islander American Studies; African American Studies (may include courses offered through CAAS); Native American Studies; or Arab American Studies

Advising. Students are encouraged to consult with the Director of the Latina/o Studies Program who serves as concentration advisor. For appointments regarding the concentration program, please visit www.lsa.umich.edu/ac/undergrad

Native American Studies

3700 Haven Hall 505 South State Street www.lsa.umich.edu/ac/native

Not a concentration program

The Native American Studies Program was established within American Culture in 1995. It is one of five subprograms in Ethnic Studies (Asian/Pacific Islander American, Arab American, African American, Latina/o, and Native American Studies) in the Program in American Culture. During its first four years, it offered undergraduate and graduate courses in the field with an emphasis on Native American literature. With the addition of new faculty over the last several years, its curriculum has expanded to include an undergraduate minor and graduate courses organized around multiple disciplines in the humanities and social sciences.

Students interested in pursuing an academic minor in NAS should contact Tiya Miles (American Culture/Afroamerican and African Studies/History), Director of Native American Studies.

Additional faculty and instructors affiliated with the program include: Philip Deloria (American Culture/History), Gregory Dowd (American Culture/History), Joseph Gone (American Culture/Psychology), Gustavo Verdesio (American Culture/Romance Languages and Literatures), Michael Witgen (American Culture/History), Barbara Meek (Anthropology), Lincoln Faller (English), Margaret Noori (Ojibwe language), Howard Kimewon (Ojibwe language).

Ojibwe Language & Literature Program www.umich.edu/~ojibwe

The Ojibwe Program was started at U-M in the early 1970s and is one of the strongest in the country. The Program in American Culture is pleased to serve as the home unit for instruction in the Ojibwe (Anishnaabemowin) language and culture at U-M. Students interested in learning this endangered language have the opportunity to do so through a six-course sequence that also educates participants on the rich cultural history of these people:

- AMCULT 222/223: Elementary Ojibwe
- AMCULT 322/323: Intermediate Ojibwe
- AMCULT 422/423: Advanced Ojibwe

We also offer a course that focuses on the literature of the Anishnaabemowin tribe.

Noongwa e-Anishinaabemjig (Ojibwe Table). Anyone interested in the Ojibwe language can join our group, "Noongwa e-Anishinaabemjig" which meets each Thursday evenings from 6:30 - 8:30 PM, 3512 Haven Hall. Our group follows the language "nest" model which encourages communities to create a place where language is protected and nurtured.

American Culture Academic Minors

Students wishing to pursue an American Culture academic minor must develop a specific plan for its completion in consultation with the Program's designated advisor. Appointments are scheduled online at: www.lsa.umich.edu/ac/undergrad.

Asian/Pacific Islander American Studies

An academic minor in Asian/Pacific Islander American Studies is not open to students with any concentration or academic minor in the Program in American Culture.

The academic minor in Asian/Pacific Islander American Studies is intended for students who wish to develop a coherent understanding of the contributions of the Asian/Pacific Islander American presence in American life, history, and thought.

Prerequisites to the Academic Minor: none.

Academic Minor Program: At least 15 credits.

- 1. AMCULT 214: Introduction to Asian/Pacific American Studies
- 2. **Core:** 4 courses, with a minimum of 12 credits. These courses may be taken from within, or from across, any of the 3 areas of specialty listed below that are regularly offered in A/PIA, as well as other 200 and 300 level courses occasionally offered in A/PIA. one of these four courses may be a 100-level course (*e.g.*, Freshman Seminar on an A/PIA topic), while 200 and 300 level courses with A/PIA content offered in other departments can count if approved by the A/PIA Director:
 - a. *Historical Experience:* AMCULT 314, 317, and appropriate sections of AMCULT 310 or 496 chosen in consultation with, and approved by, the advisor.
 - b. *Cultural Expression:* AMCULT 324, 325, and appropriate sections of AMCULT 311 or 498 chosen in consultation with, and approved by, the advisor.
 - c. *Contemporary Communities:* AMCULT 305, 346, 347, and appropriate sections of AMCULT 301 or 310 chosen in consultation with, and approved by, the advisor.

Latina/o Studies

An academic minor in Latina/o American Studies is not open to students with any concentration or academic minor in the Program in American Culture.

The academic minor in Latina/o Studies is intended for students who wish to develop a coherent understanding of the contributions of the Latina/o presence in American culture, history, and society. The academic minor supplements concentrations in traditional humanities and social science disciplines by providing content knowledge of Latina/o communities. The academic minor will also benefit students pursuing degrees in the professional world in areas such as public health, social work, business, and pre-law thus better preparing them for work in their chosen field.

Prerequisites to the Academic Minor (must be taken for a letter grade): AMCULT 213: Introduction to Latina/o Studies.

Academic Minor Program: At least 15 credits (must be taken for letter grade):

1. Two courses may be chosen from any of the following:

- AMCULT 315/HISTORY 377. History of Latinos in the United States.
- AMCULT 327/ENGLISH 387/SPANISH 327. Latino/Latina Literature of the United States
- AMCULT 381/SAC 381. Latinas/Latinos and the Media
- AMCULT 243/WOMENSTD 243. Introduction to Study of Latinas in the United States
- 2. Electives: Three courses (minimum of 9 credits) of elective courses on Latina/o Studies, at least one of which must be at the 400 level. One course below the 300-level (including a first-year seminar on Latina/o Studies topic) may be used to satisfy this requirement. Courses that a student did not use in Requirement 1, can be used to satisfy electives. Students may elect a comparative ethnic studies course that includes a Latina/o component.

Native American Studies

An academic minor in Native American Studies is not open to students with any concentration or academic minor in the Program in American Culture. The academic minor in Native American Studies permits students to explore the North American Indian experience in an interdisciplinary manner. The goal of the academic minor is to assist students in coherently planning a curriculum that will enable them to grapple intelligently and in an informed manner with the history, experience, and contributions of Native American in the United States and Canada. Courses in language, literature, the social sciences, and the humanities form the main areas of study, but students may occasionally have an opportunity to explore Native American arts, historic and contemporary.

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 5 courses totaling 15 credits, at the 200-level or above. At least two courses (6 credits) must be elected at the 300-level or above.

- 1. General Surveys: One course chosen from:
 - a. AMCULT 216. Introduction to Native American Studies Social Science
 - b. AMCULT 217. Introduction to Native American Studies Humanities
 - c. AMCULT 316 / ANTHRCUL 315. Native American Peoples of North America
 - d. AMCULT 367 / HISTORY 367. American Indian History
- 2. **Electives:** Additional credits in Native American Studies to bring academic minor total to 15. Electives may be chosen from the following list:

Courses from Requirement 1 may not be used to meet Requirement 2.

- AMCULT 262 / RELIGION 262. Introductory Study of Native Religious Traditions
- AMCULT 301, section subtitled "Native American Feminism"
- AMCULT 310, section subtitled "Blacks, Indians, and the Making of America"
- AMCULT 322. Intermediate Ojibwe
- AMCULT 323. Intermediate Ojibwe
- AMCULT 328 / ENGLISH 382. Native American Literature

AMCULT 422. Advanced Ojibwe

- AMCULT 423. Advanced Ojibwe
- AMCULT 428. Native American Literature
- AMCULT 461 / ANTHRCUL 461 / LING 461. Language, Culture, and Society in Native North America
- AMCULT 496, section subtitled "Native American Mental Health"
- AMCULT 498, sections subtitled "Native American Autobiography," "African American and Native American Women Writers"
- ANTHRCUL 461 / AMCULT 461 / LING 461. Language, Culture, and Society in Native North America
- ENGLISH 382 / AMCULT 328. Native American Literature
- ENGLISH 417, section subtitled "Contemporary Native American Women Writers"
- LING 461 / ANTHRCUL 461 / AMCULT 461. Language, Culture, and Society in Native North America
- RELIGION 262 / AMCULT 262. Introductory Study of Native Religious Traditions

Other courses, such as courses in other departments and special topics courses not listed above, may be taken with the approval of the Director of Native American Studies. These may include "Histories of Native American Women," "19th-Century Native American Literature," "Contemporary Native American Literature," "Contemporary Literature by Native Americans."

COURSES IN AMERICAN CULTURE (AMCULT)

Unless otherwise stated, the permission required for the repetition for credit of specifically designated courses is that of the student's concentration or BGS advisor.

AMCULT 100. Rethinking American Culture (4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

AMCULT 102. First Year Seminar in American Studies

Enrollment restricted to first-year students, including those with sophomore standing. (3). (S3). May not be repeated for credit.

AMCULT 103. First Year Seminar in American Studies Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit.

AMCULT 200 / COMM 200 / PSYCH 208 / SOC 200 / UC 200. The Academic Paradox (3). (ID). May not be repeated for credit. Does not count toward concentrations in American Culture, Communication Studies, or Psychology.

AMCULT 201. American Values

(4; 3 in the half-term). (HU). May not be repeated for credit.

AMCULT 203. Periods in American Culture (3). (HU). May be elected twice for credit. May be elected more than once in the same

term.

AMCULT 204. Themes in American Culture (3). (HU). May be elected twice for credit. May be elected more than once in the same term.

AMCULT 205. American Cultures (3). (HU). May not be repeated for credit.

AMCULT 206. Themes in American Culture

(3). (SS). May be elected twice for credit. May be elected more than once in the same term.

AMCULT 207. Periods in American Culture

(3). (SS). May be elected twice for credit. May be elected more than once in the same term.

AMCULT 208. Post World War II American Sub-Cultural Movements: Beatniks, Hippies, and Punks

(3). (SS). May not be repeated for credit.

AMCULT 209. History of American Popular Music (3). (HU). May not be repeated for credit.

AMCULT 210. Introduction to Ethnic Studies (3). (SS). May be repeated for a maximum of 6 credits.

AMCULT 211. Introduction to Ethnic Studies (3). (HU). May be repeated for a maximum of 6 credits.

AMCULT 213. Introduction to Latina/o Studies (4; 3 in the half-term). (ID). (R&E). May not be repeated for credit.

AMCULT 214. Introduction to Asian/Pacific American Studies

(4). (ID). (R&E). May not be repeated for credit. AMCULT 215 / AAPTIS 210. Introduction to Arab-American Studies (4). (HU). (R&E). May not be repeated for credit.

AMCULT 217. Introduction to Native American Studies - Humanities

(3). (HU). May not be repeated for credit.

AMCULT 219. Survey of American Folklore (3). (HU). May not be repeated for credit.

AMCULT 220. American Humor

(4). (HU). May not be repeated for credit.

AMCULT 222. Elementary Ojibwe I

(3; 2 in the half-term). May not be repeated for credit. May not be included in an academic minor in Native American Studies. F.

AMCULT 223. Elementary Ojibwe II

AMCULT 222 with a C- or better. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit. May not be included in an academic minor in Native American Studies. W.

AMCULT 226 / HISTORY 226. The Latin Tinge: Latin Music in Social Context in Latin America and the U.S.

(4; 3 in the half-term). (HU). May not be repeated for credit.

AMCULT 231. Visual & Material Culture Studies (3 - 4; 3 in the half-term). (HU). May not be repeated for credit.

AMCULT 235 / WOMENSTD 235. From Harems to Terrorists: Representing the Middle East in Hollywood Cinema

(4). (HU). (R&E). May not be repeated for credit.

AMCULT 240 / WOMENSTD 240. Introduction to Women's Studies (4; 3 in the half-term). (HU). (R&E). May not be repeated for credit.

AMCULT 243 / WOMENSTD 243. Introduction to Study of Latinas in the U.S. (3). (HU). May not be repeated for credit.

AMCULT 250. American Magazines

(3). (HU). May not be repeated for credit.

AMCULT 262 / RELIGION 267. Introductory Study of Native Religious Traditions (3). (HU). May not be repeated for credit.

AMCULT 270 / HISTORY 270. Religion in America (4). (HU). May not be repeated for credit.

AMCULT 293 / WOMENSTD 293. 20th Century Writing by Women of Color (3). (HU). May not be repeated for credit.

AMCULT 295 / WOMENSTD 295. Sexuality in Western Culture (4). (SS). May not be repeated for credit.

AMCULT 301. Topics in American Culture (1 - 4). May be elected twice for credit. May be elected more than once in the same term.

AMCULT 304 / SOC 304. American Immigration (4). (SS). May not be repeated for credit.

AMCULT 305. Asian Pacific American Community Service and Learning (3). May be elected twice for credit.

AMCULT 306 / PSYCH 317. Community Research One of the following: PSYCH 111, 112, 114, or 115. (4). May not be repeated for credit.

AMCULT 307. Baseball and American Society, 1840-Present AMCULT 201, 213, 214, and/or 217. (4). May not be repeated for credit.

AMCULT 310. Topics in Ethnic Studies (3). (SS). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

AMCULT 311. Topics in Ethnic Studies (3). (HU). May be elected twice for credit. May be elected more than once in the same term. F.

AMCULT 313 / ANTHRCUL 314. Cuba and its Diaspora (4). May not be repeated for credit. F.

AMCULT 314 / HISTORY 378. History of Asian Americans in the U.S. (4; 3 in the half-term). (SS). May not be repeated for credit.

AMCULT 315 / HISTORY 377. History of Latinos in the U.S. (4). (R&E). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AMCULT/HISTORY 312.

AMCULT 316 / ANTHRCUL 315. Native American Peoples of North America (4). (SS). (R&E). May not be repeated for credit.

AMCULT 317 / HISTORY 304. History of the Pacific Islands (3). May not be repeated for credit.

AMCULT 318 / MODGREEK 318. Greek-American Culture (3). (R&E). May not be repeated for credit.

AMCULT 319 / PSYCH 319. Empowering Families and Communities One of the following: PSYCH 111, 112, 114, or 115. (4). May not be repeated for credit.

AMCULT 321 / PSYCH 325. Practicum in the Multicultural Community One of the following: PSYCH 111, 112, 114, or 115. (1 - 4). (EXPERIENTIAL). May not be repeated for credit. A total of six credits of PSYCH letter-graded experiential courses may be counted for the Psychology concentration. PSYCH 325 must be taken for at least three credits to count as an experiential lab in the Psychology concentration.

AMCULT 322. Intermediate Ojibwe I AMCULT 223 with a C- or better. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit. F.

AMCULT 323. Intermediate Ojibwe II AMCULT 322 with a C- or better. (Prerequisites enforced at registration.) (3; 2 in the half-term). (Lang Reg). May not be repeated for credit. W.

AMCULT 324 / ENGLISH 381. Asian American Literature (3). (HU). May not be repeated for credit.

AMCULT 325 / ENGLISH 388. Pacific Literary and Cultural Studies (3). (HU). May not be repeated for credit.

AMCULT 327 / ENGLISH 387 / SPANISH 327. Latino/Latina Literature of the U.S. (3). (HU). May not be repeated for credit. Taught in English.

AMCULT 328 / ENGLISH 382. Native American Literature (3; 2 in the half-term). (HU). May not be repeated for credit.

AMCULT 329 / WOMENSTD 329. Native American Feminisms One course in WOMENSTD and AMCULT. (3). May not be repeated for credit.

AMCULT 335. Arts and Culture in American Life (3). (HU). May not be repeated for credit. F.

AMCULT 336 / CAAS 334 / HISTORY 365. Popular Culture in Contemporary Black America

CAAS 201. (3). (HU). May not be repeated for credit.

AMCULT 337. American Blues Music: Content and Context (3). (HU). May not be repeated for credit.

AMCULT 338 / HISTORY 338. American Indians in the 20th Century

(4; 3 in the half-term). (HU). May not be repeated for credit.

AMCULT 340 / CAAS 340. A History of Blacks in American Film CAAS 201. (3). May not be repeated for credit.

AMCULT 341 / WOMENSTD 330. Feminist Thought

AMCULT 240 or WOMENSTD 240, and one additional WOMENSTD course. (3). May not be repeated for credit.

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AMCULT 342 / HISTORY 368 / WOMENSTD 360. History of the Family in the U.S. (4; 3 in the half-term). (ID). May not be repeated for credit.

AMCULT 343 / JUDAIC 343. American Jews and Media Industries (3). May not be repeated for credit.

AMCULT 344 / JUDAIC 344. Passing: Race, Religion and Getting By (3). May not be repeated for credit.

AMCULT 345. American Politics and Society (3). (SS). May not be repeated for credit.

AMCULT 348 / HISTORY 346. History of American Radicalism (4; 3 in the half-term). (SS). May not be repeated for credit.

AMCULT 350. Approaches to American Culture

American Culture concentrators. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

AMCULT 353 / HISTORY 353. Asians in American Film and Television (4; 3 in the half-term). (ID). (R&E). May not be repeated for credit.

AMCULT 355. Topics in American Creative Expression

(1 - 3). (CE). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

AMCULT 356 / HISTORY 356. World War Two in the Pacific (4; 3 in the half-term). May not be repeated for credit.

AMCULT 357. Performance Studies: Context, Content, and Analysis AMCULT 209 with minimum grade of C. (Prerequisites enforced at registration.) At least one course in gender or ethnic studies, e.g. AMCULT 233, 240, 243, 210, 213, 214, 216, 226, 310, 312, 314, 316, or 340. (3). (HU). May not be repeated for credit.

AMCULT 363 / WOMENSTD 363. Asian/Pacific American Women

(3). May not be repeated for credit.

AMCULT 367 / HISTORY 367. American Indian History

(4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

AMCULT 368 / AAPTIS 368 / WOMENSTD 368. Women and War in the Middle East (3). May not be repeated for credit.

AMCULT 369 / HISTORY 369. The History of U.S. Mass Culture From Minstrelsy to Нір Нор

(4; 3 in the half-term). May not be repeated for credit.

AMCULT 371 / HISTORY 371 / WOMENSTD 371. Women in American History Since 1870

(4). (R&E). May not be repeated for credit.

AMCULT 373 / HISTORY 373. History of the U.S. West

(4; 3 in the half-term). (HU). May not be repeated for credit.

AMCULT 374 / HISTORY 374. The Politics and Culture of the "Sixties" (4; 3 in the half-term). (SS). May not be repeated for credit.

AMCULT 380 / SAC 380 / SPANISH 380. Studies in Transnational Media

Prior coursework in Screen Arts & Cultures, Communications (TV), or Latino Studies. Knowledge of Spanish is not required. (3). May not be repeated for credit. Taught in English.

AMCULT 381 / SAC 381. Latinas/Latinos and the Media

Consent of department required. AMCULT 213 or SAC 236 (FILMVID 236) or AMCULT 380/SAC 380 (FILMVID 380) or SPANISH 380. (3). (HU). May not be repeated for credit.

AMCULT 383. Junior Honors Reading and Thesis Consent of instructor required. JR.ONLY. (3; 2 in the half-term). (INDEPENDENT). May not be repeated for credit. F, W, Sp/Su, Sp, Su.

AMCULT 387 / HISTORY 387 / JUDAIC 387. History of American Jews (4; 3 in the half-term). May not be repeated for credit.

AMCULT 388. Field Study

Consent of instructor required. Sophomore standing. (1 - 4). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

AMCULT 389. Reading Course in American Culture

Consent of instructor required. PER. INSTR. (1 - 4). (INDEPENDENT). May not be repeated for credit. F, W, Sp/Su, Sp, Su.

AMCULT 390. Internship in Arab American Studies Consent of instructor required. (2 - 4; 1 - 4 in the half-term). (EXPERIENTIAL). May be elected twice for credit. Offered mandatory credit/no credit.

AMCULT 398. Junior Honors Writing Workshop

Consent of instructor required. Permission of a concentration advisor in American Culture. (1 - 3). May not be repeated for credit.

AMCULT 399. Race, Racism, and Ethnicity

(4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

AMCULT 405. Topics in American Culture (1 - 4). May be elected twice for credit. May be elected more than once in the same term.

AMCULT 406 / CAAS 384 / ENGLISH 384. Caribbean Literature CAAS 202. (3). May be repeated for a maximum of 6 credits.

AMCULT 411 / WOMENSTD 411. Rednecks, Queers, and Country Music

One course in Women's Studies or American Culture. (3). May not be repeated for credit.

AMCULT 416 / PSYCH 416. Psychology of Asian Americans

One introduction to psychology course. (3). May not be repeated for credit.

AMCULT 420 / SPANISH 420. Latin American & Latino/a Film Studies

Three courses chosen from: SPANISH 300 and higher (excluding 308) or study abroad equivalent; up to two RCLANG 324 elections may count for this prerequisite. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

AMCULT 421 / SOC 423. Social Stratification (3). May not be repeated for credit.

AMCULT 422. Advanced Ojibwe I

AMCULT 422 with a C- or better; or Graduate Standing. Consent of instructor required. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit. F.

AMCULT 423. Advanced Ojibwe II

AMCULT 422 with a C- or better; or Graduate Standing. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit. W.

AMCULT 425 / WOMENSTD 425. Feminist Practice of Oral History

One course in WOMENSTD or AMCULT. (3). May not be repeated for credit. Rackham credit requires additional work.

AMCULT 432 / HISTART 420. National Identity in American Art

Upperclass standing, and any prior coursework in History of Art, American Culture, or American History. (3). May not be repeated for credit.

AMCULT 461 / ANTHRCUL 461 / LING 461. Language, Culture, and Society in Native North America

(3). May not be repeated for credit.

AMCULT 464 / HISTORY 464. Race, Culture, and Politics in the Era of Civil War and Reconstruction

(3). (R&E). May not be repeated for credit.

AMCULT 489. Senior Essay

Consent of instructor required. Senior concentrators and AMCULT 350. (3). (INDEPEN-DENT). May not be repeated for credit.

AMCULT 491 / CAAS 491. The Culture of Jazz

CAAS 111 and 201. (3). May not be repeated for credit.

AMCULT 493. Honors Readings and Thesis

Consent of instructor required. Senior standing and a grade point average of at least 3.5 in Honors concentration. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of AMCULT 493, the final grade is posted for both term's elections. F, W, Sp/Su, Sp, Su.

AMCULT 496. Social Science Approaches to American Culture

(3 - 4; 3 in the half-term). May be elected twice for credit. May be elected more than once in the same term.

AMCULT 498. Humanities Approaches to American Culture

(3 - 4; 3 in the half-term). May be elected twice for credit. May be elected more than once in the same term.

Anthropology

101 West Hall 1085 South University Avenue (734) 764-7274 (phone) (734) 763-6077 (fax) www.lsa.umich.edu/anthro Professor Thomas E. Fricke, Chair Professor John Mitani, Associate Chair

Professors

- Ruth Behar, Cultural Criticism, Ethnographic Writing, Life Stories, Feminist Ethnography, Visual Anthropology, Religion; Spain, Mexico, Cuba, U.S. Latinos
- Gillian Feeley-Harnik (Kathleen Gough Collegiate Professor of Anthropology), Kinship, Gender, and Reproductive Health Care; Religion; Phenomenology; Political Ecology; Anthropology of Development; Madagascar, Africa, United States; Historical and Contemporary Judaism and Christianity

- Kent Flannery (James B. Griffin Professor), Archaeology, Cultural Ecology: Near East, Middle America
- Thomas E. Fricke (Sociocultural Anthropology), cultural demography, culture and agriculture, kinship, work, morality, field methods, documentary writing; Nepal, South Asia, U.S.
- Philip Gingerich (Ermine Cowles Case Collegiate Professor of Paleontology), *Primate Paleontology and Evolution*
- Judith Irvine (Edward Sapir Collegiate Professor of Linguistic Anthropology), *Linguistic Anthropology, Language ideology, language and political economy, performance, colonial and historical linguistics, social organization, Africa*
- Webb Keane (Sociocultural Anthropology), Social and Cultural Theory, Semiotics, Ritual and Religion, Exchange, Material Culture, History and Historical Consciousness; Language and Discourse, Indonesia, Oceania
- Conrad P. Kottak (General and Sociocultural Anthropology), Brazil, Madagascar, U.S.
- Laura Lein (Dean and Collegiate Professor, School of Social Work; Professor, Anthropology), *Poverty and poverty programs in the United States, homeless and dislocated populations, child care, health care, and non-governmental organizations*
- Bruce Mannheim (Linguistic Anthropology), the politics of language use, social theory, poetics and narrative, historical ethnography; Andean South America
- Joyce Marcus (Robert R. Carneiro Distinguished University Professor of Social Evolution), *Latin American ethnohistory and archaeology, ancient writing systems, early complex societies; Mexico, Central America, South America*
- John Mitani (James N. Spuhler Collegiate Professor of Anthropology), primate behavioral ecology, Chimpanzees
- John O'Shea, Prehistoric Economics, Archaeology, Method and Theory: Old World, North America, Great Lakes
- Maxwell Owusu, *Ethnography and History, Social Anthropology of Colonial and Postcolonial States, Comparative Legal and Political Systems, Democratization and Socioeconomic Development and Underdevelopment; Africa, Caribbean*
- Elisha Renne (Anthropology and Center for Afro-American and African Studies), (Sociocultural Anthropology), demographic/medical anthropology, material culture; Nigeria, West Africa
- Jennifer Robertson (Sociocultural Anthropology), Ethnography, art and visual culture, colonialism/imperialism, historical anthropology, mass/popular culture, performance and theatre, sex / gender / sexuality, urban anthropology, eugenics and bioethics, humanoid robots and cyberculture; Japan, Israel, Asia
- Carla Sinopoli, Archaeology, Complex societies craft specialization, ceramics. Political economy of early states and empires; archaeology and history; material culture – use, technology, and social meaning, ethnoarchaeology, gender; South Asia
- John Speth (Arthur F. Thurnau Professor, Anthropology), *Archaeology, hunters and gatherers, cultural ecology, diet and subsistence, Paleolithic and PaleoIndian studies; North America*
- Thomas Trautmann (Mary Fair Croushore Professor of Humanities, Marshall Sahlins Professor of History and Anthropology), *Kinship, History of Anthropology, India*
- Robert Whallon, Archaeology, Ecology and evolution of huntergatherers, quantitative methods, prehistory; Europe, Middle East
- Melvin D. Williams, *Macroanthropology, Religion, African-Americans,* Contemporary American Society, Global Village
- Milford Wolpoff, *Paleoanthropology, multiregional evolution, human paleontology, biomechanics, genetic modeling; Europe, Africa, Asia, Australia*
- Henry Wright, Archaeology, origins of the state, political and economic operation of developed chiefdoms and archaic states; Middle East, Africa, Indian Ocean, Eastern USA
- Norman Yoffee, Assyriology, Mesopotamian culture, languages, history; Near Eastern archaeology; late prehistoric and early historic periods; comparative early civilizations; legal anthropology

Associate Professors

- Kelly Askew (Anthropology and Center for Afro-American and African Studies), (Sociocultural Anthropology), cultural politics, ethnomusicology, nationalism, media, performance, Swahili studies, East Africa
- Janet Hart (Sociocultural Anthropology), oral history and narrative theory and methods; anthropology of Europe; urban ethnography; postcolonialism and diaspora in Paris, France; gender and nationalism; comparative social movements and cultures of activism; political prisons and prisoners
- Stuart Kirsch (Sociocultural Anthropology), Ritual, indigenous movements, mining ethnography, NGOs, political ecology, cultural property; Melanesia, Oceania
- Alaina Lemon (Sociocultural Anthropology), Sociocultural, performance and language, historical narrative, racial and national ideologies, visual culture and visual anthropology; Russia, Romani (Gypsy) diaspora, post-socialist states
- Laura MacLatchy (Biological Anthropology), Postcranial functional morphology, primate locomotion, vertebrate paleontology, Miocene hominoids, bone biomechanics; Uganda, Ecuador
- Barbra Meek (Linguistic Anthropology), Child language socialization and acquisition, endangered and/or dormant language issues, linguistic theory and Athabaskan linguistics; North America
- Erik Mueggler (Sociocultural Anthropology), Religion, Ritual, Memory, Ideology, State Power, Gender; China
- Andrew Shryock (Arthur F. Thurnau Professor), Anthropology, Modernity, historical ethnography, oral tradition, tribe-state relations, identity politics, (trans)nationalism; Middle East and Middle Eastern communities in North America
- Beverly Strassmann (Biological Anthropology), Human evolutionary ecology, life history, theory, culture, endocrinology, reproduction, genetics of kinship; Dogon, West Africa

Assistant Professors

- Robin Beck (Anthropological Archaeology), Social organization of complex societies, social change, colonialism, archaeology and ethnohistory of eastern North America, Andes
- Jacinta C. Beehner (Anthropology and Psychology), (*Biological anthropology), behavioral endocrinology, evolution of social behavior, behavioral aggression, reproductive ecology, baboons* (Papio *spp.) and geladas* (Theropithecus)
- Krisztina Fehervary (Sociocultural Anthropology), Consumer and material culture, political economy, middle-class culture, built environment, domestic space, body, transformations, film and popular culture, Hungary, postsocialist states
- Matthew Hull (Sociocultural Anthropology), Semiotics, bureaucracy and governance, corporations, urban planning, material culture, science and technology, South Asia
- Michael Lempert (Linguistic Anthropology), interaction, semiotics, social theory, stance and affect, religion; Tibet, South Asia
- Julia Paley (Anthropology/Social Work), (Sociocultural Anthropology), political anthropology, democracy, urban studies, ethnographic methodology; Latin America
- Damani J. Partridge (Anthropology/Afro-American and African Studies), (Sociocultural Anthropology), race and displacement, citizenship and non-citizens, technologies of exclusion, gender and sexuality, critical visual anthropology, German studies, European studies, anthropology of the state, post-socialism
- Elizabeth F.S. Roberts (Anthropology, Residential College), (Sociocultural Anthropology/Medical Anthropology), Critical study of medicine, science and biotechnology, modernity, exchange, kinship, race, religion, Latin America, Ecuador
- Gayle Rubin (Anthropology and Women's Studies), (Sociocultural Anthropology), *Sexualities and genders, sexual populations, cities, sexological theory, durable inequalities, gay/lesbian ethnography, history of racial taxonomies; urban North America*

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Lecturers

- David Frye (Lecturer, Anthropology; Student Advisor; International Institute; Education Officer, LACS), *Ethnography and history of Mexico, the colonial construction of Indianness, religious movements in Mexico, Latin American societies and cultures; Latin America*
- Holly Peters-Golden (Lyle C. Roll Scholar for Humane Medicine, Department of Internal Medicine), (Sociocultural Anthropology), Medical anthropology, cancer, physician-patient interaction, explanatory models of illness, social construction of disease, medical education, illness narrative, North America
- Lisa C. Young (Lecturer, Department of Anthropology; Adjunct Assistant Research Scientist, Museum of Anthropology), *Archaeology, agricultural societies, American Southwest, settlement and subsistence, technology*

Adjunct Associate Professor

Amal Hassan Fadlalla (Associate Professor of Afroamerican and African Studies and Women's Studies), *Global perspectives on gender, health, and reproduction; and gender, diaspora, and transnationalism*

Adjunct Assistant Professors

- Nadine Naber (Assistant Professor, American Culture and Women's Studies), Arab American Studies; Feminist Transnational and Diaspora Studies, Feminist Post-colonial Studies, Women of Color Feminist Theory
- Mark Padilla (Assistant Professor, School of Public Health), *Applied medical anthropology, Latin America and the Caribbean, globaliza-tion/transnationalism, Latino health issues, gender and ethnic disparities in health, international sex work and HIV/AIDS, tourism and development studies, political economy of health*
- William Sanders (Assistant Research Scientist, Museum of Paleontology), Hominoid evolution and paleobiology, Proboscidean evolution and systematics, Evolution of Old World Cenozoic mammals, Taphonomy and paleoecology, Mammalian functional morphology

Professors Emeriti C. Loring Brace, Robbins Burling, David William Cohen, Fernando Coronil, Norma Diamond, Richard I. Ford, A. Roberto Frisancho, Ernst Goldschmidt, Peter Gosling, Sarah C. Humphreys, Raymond Kelly, William Lockwood, Jeffrey R. Parsons

Anthropology is a field of study that deals with both the biological and cultural aspects of humanity. Its basic concerns include the organic evolution of the human species; the origin, development, and integration of customs, techniques, social relationships, and beliefs that define a way of life (or culture) of human social groups; and the interrelations among these biological and cultural factors in human behavior.

The subject matter of anthropology is divided into four major areas of study: Anthropological Archaeology (ANTHRARC), Biological Anthropology (ANTHRBIO), Linguistic Anthropology, and Sociocultural Anthropology (ANTHRCUL).

Biological Anthropology considers human evolutionary history, the causes of present genetic diversity, and biological aspects of human behavior. It uses the evidence and concepts of paleontology, primate studies, population genetics, growth and nutrition, and ecology.

Anthropological Archaeology seeks to understand human behavior in the past, by examining the remains of human activity (such as settlements, tools, pottery) that have survived from earlier times. Through the analysis of material remains, archaeologists explore the cultural forms and social organization of human societies over the longest possible time span.

Sociocultural Anthropology describes, analyzes, and compares the widest possible range of human cultures and social institutions, with emphasis on the present day. While some sociocultural anthropologists concentrate on societies that differ from our own in scale or cultural history and way of life, others examine contemporary Euro-

pean and American societies with the wider perspective gained from looking at other cultures and societies.

Linguistic Anthropology views language as one of the most distinctive characteristics of human beings. It studies language in the context of human evolution, social relationships, and cultural forms, and it explores the role of languages and ways of speaking in cultural difference and social action.

Roster of Anthropology courses, by subgroup

Biological Anthropology: ANTHRBIO 161, 168, 169, 265, 297, 351, 360, 361, 362, 364, 365, 368, 450, 451, 452, 460, 461, 462, 464, 465, 467, 468, 469, 470, 472, 473, 474, 475, 477, 478, 479

Anthropological Archaeology: ANTHRARC 180, 282, 283, 284, 285, 286, 292, 296, 380, 381, 382, 383, 385, 386, 388, 390, 394, 407, 442, 481, 482, 483, 484, 485, 486, 488, 489, 490, 491, 492, 493, 495, 587, 589

Cultural Anthropology

- *Introductory Courses:* ANTHRCUL 101, 158, 222, 225, 226, 256, 272, 298, 299
- *Sociocultural Anthropology Regional Courses:* ANTHRCUL 202, 302, 305, 306, 309, 314, 315, 317, 319, 320, 323, 324, 346, 402, 403, 404, 405, 409, 410, 411, 412, 413, 414, 415, 417, 421, 422, 423
- Sociocultural Anthropology Theory/Method: ANTHRCUL 230, 327, 330, 331, 447, 532
- Sociocultural Anthropology Topical Courses: ANTHRCUL 232, 234, 246, 260, 310, 325, 326, 329, 332, 333, 334, 335, 336, 338, 339, 344, 345, 347, 349, 352, 355, 356, 357, 408, 416, 425, 427, 428, 429, 431, 436, 438, 439, 440, 445, 446, 450, 451, 453, 455, 457, 458, 459, 461, 462, 503, 538, 541, 543, 553
- *Linguistic Anthropology:* ANTHRCUL 272, 277, 299, 370, 371, 372, 373, 374, 375, 461, 464, 473, 474, 475, 477, 519, 572, 576, 577

Museum, Honors, Reading, Research, and Field Courses

ANTHRARC 258, 392, 398, 399, 400, 401, 480, 487, 494, 496, 497, 499

ANTHRBIO 371, 398, 399, 463, 471 ANTHRCUL 258, 300, 301, 398, 399, 499, 556

The Mischa Titiev Library. The Mischa Titiev Library, established in 1976, has an extensive collection of materials in all the subdisciplines for both reference and circulation. In addition, the Library has audio-visual equipment for anthropological research.

A.G. Ruthven Museums Library. The Museums library contains publications related especially to natural history and systematics. The anthropology section is housed in the Museum of Anthropology (on the fourth floor). Other sections of interest to anthropology students include a *Mammalogy Library* on living primates and a *Paleontology Library* containing works on fossil primates. These are housed on the second floor of the A.G. Ruthven Museum.

The Museum of Anthropology. This museum is a separate university unit administered by the Director of Museums. All members of the curatorial staff of the museum offer instruction and hold academic titles in the Anthropology Department. The collections and laboratory facilities of the museum are made available to gualified students in the Department of Anthropology for instruction and research. The Museum has extensive collections of material on the sociocultural anthropology and archaeology of the Great Lakes region and of the eastern United States. Other major collections include cultural materials from the American Southwest; materials from Japan, China, and Tibet; and considerable archaeological, cultural, and skeletal materials from the Philippines. There are smaller, representative collections from Africa, Oceania, Latin America, and Europe. While no formal program in museology is offered, two courses in Museum Techniques (ANTHRARC 496 and 497) provide an opportunity to learn museum research methodology and administration through individually supervised work.

The U-M Training Program in Archaeology. The U-M Training Program in Archaeology provides students with a unique opportunity to participate in original field research. Students receive training in basic methods of archaeological survey, excavation, artifact recording and analysis, while participating in ongoing research in the area chosen by the course director. Field training is integrated with lectures on archaeological method and theory, and the prehistory and ethnography of the area under study. Laboratory sessions introduce students to the analysis of archaeological artifacts, including stone tools, ceramics, animal bones, and plant remains. In addition to learning the basic technical skills of field archaeology, each student works together with the program director and staff to develop a small but original research problem, based on the archaeological data recovered and analyzed during the excavations. The results of this research are presented as a written paper at the end of the field season.

For the highly motivated Michigan student, each fall academic term following the field season the Department of Anthropology offers laboratory courses of independent research (ANTHRCUL 499 or ANTHRARC 496 and 499) that allow the student to continue the research he or she began in the field, refining the original research question, expanding the data base, and producing by the end of the term a more comprehensive and sophisticated research paper. Through independent research students also learn about the longterm curation in museums of archaeological materials. Research by the most dedicated and professionally motivated students may be developed into undergraduate Honors theses (ANTHRBIO 398, ANTHRCUL 398, or ANTHRARC 398).

Anthropology Club. The Anthropology Club is a group of anthropology concentrators who meet on a regular basis for a variety of activities. Some of the possible events are: informal talks with faculty members, movies, and field trips. It is organized by the students with the aid of the general anthropology advisor.

Concentration Programs. The department offers undergraduate concentration programs for a bachelor's degree in Anthropology and Evolutionary Anthropology.

Anthropology

May be elected as a departmental concentration program

The Undergraduate Anthropology Program emphasizes the commitment of this department to four-field anthropology, providing exposure to Anthropological Archaeology, Biological Anthropology, Linguistic Anthropology and Sociocultural Anthropology. This holistic approach serves Anthropology's intellectual goal to achieve a comprehensive and comparative understanding of humanity. An undergraduate concentration in Anthropology contributes to a liberal arts education, offering a disciplined awareness of human behavior and social institutions in different times and places.

Prerequisites to Concentration. ANTHRCUL 101 and ANTHRBIO 161 are recommended.

Concentration Program. Concentrators are expected to include at least one course in each of four subdivisions: *biological anthropology, anthropological archaeology, sociocultural anthropology,* and *linguistic anthropology.* At least 30 credits beyond the 100 level are required, 15 of which must be completed in residence at the University of Michigan unless approved by the undergraduate advisor. 15 of the required 30 credits must be completed in the department unless approved by an undergraduate advisor.

Please note that the following courses do not count toward the 30 credit requirement: ANTHRCUL 101, ANTHRBIO 161.

It is recommended that students also take at least two cognates that are selected in consultation with their concentration advisor. Students are strongly encouraged to elect at least one undergraduate seminar in anthropology and one theory course. A detailed description of the concentration program is available at the department office.

For students primarily interested in sociocultural anthropology, we recommend at least one course from each of the following categories: (1) regional courses; (2) topical courses; and (3) theory/method courses (Classes are divided by category under *Roster of Anthropology courses by subgroup*, listed above, or in the *Undergrad Courses by Sub-field* handout available in the department or on the department website).

For students primarily interested in anthropological archaeology, we strongly recommend taking the following sequence of courses: ANTHRARC 282, 385, and 386. The goal of these three courses is to give students a general introduction to anthropological archaeology and an overview of world prehistory. In addition to these three courses, students are encouraged to take at least two area courses: one that examines the archaeological record in the New World and on focused on the Old World.

Honors Concentration. Students interested in scholarly research are encouraged to consider the Honors concentration. Previous participation in the College Honors program is *not* a prerequisite. Seniors admitted to the Honors concentration normally elect a seminar in their special field of interest: biological anthropology (ANTHRBIO 398), archaeology (ANTHRARC 398) or sociocultural anthropology (ANTHRCUL 398). The seminars give students an opportunity for intensive training and research experience; the Honors concentration normally requires a senior thesis. Interested students should consult an Anthropology concentration advisor.

Teaching Certificate. Students interested in obtaining a secondary teaching certificate with a teaching minor in Anthropology should consult the "Teacher Certification Program" section in this *Bulletin* and the School of Education Teacher Education office.

Advising. All anthropology faculty members are available for informal discussion with students during scheduled office hours (check the department office for times). Concentration advisors are available to explain program objectives and requirements and to help with the planning of your concentration program.

Appointments are scheduled in the department office or online at: www.lsa.umich.edu/anthro/undergrad_students/index.htm.

Students who elect an anthropology concentration should develop (and file) a preliminary plan listing the courses they expect to take. This should be reviewed with the student's advisor or a concentration advisor each term.

Evolutionary Anthropology

May be elected as an interdepartmental concentration program

Evolutionary Anthropology is a joint concentration, with courses from the Anthropology, Ecology and Evolutionary Biology, Geological Sciences, Molecular and Cellular, and Developmental Biology, and Psychology Departments and the School of Natural Resources and the Environment. It combines anthropological and biological perspectives in the study of humans and related species. It is particularly appropriate for students planning to continue in the health sciences and for students interested in "whole organism" biology and ecology. Thus, many Evolutionary Anthropology concentrators are training for medical school, while others are planning to pursue careers in Natural Resource Management, Conservation, Animal Behavior, and other fields. Because evolutionary biology forms its primary theoretical basis, the concentration does not require courses in other subdisciplines of anthropology. Students who are interested in biological anthropology and seek broader training in anthropological archaeology, linguistic anthropology, and sociocultural anthropology may pursue a degree as an Anthropology concentrator. Students should contact the Undergraduate Advisor in the Department of Anthropology for further information.

Prerequisites to Concentration. BIOLOGY 171, 172, 173 and ANTHRBIO 161.

Concentration Program. Requires 32 credits distributed as follows:

- A. Anthropology. A minimum of four of the courses below, at least two of which must be at the 400-level or above and must represent two of the three groups:*
 - 1. *Evolution, paleontology, morphology:* ANTHRBIO 265, 351, 360, 365, 465, 474, 475, 477, 479.
 - 2. *Primatology, ecology, behavior:* ANTHRBIO 361, 368, 467, 472, 478, 560.
 - 3. *Genetics, growth, adaptation, race:* ANTHRBIO 362, 364, 450/451, 461, 462, 464, 473.

*Courses taken as ANTHRBIO 469 (Topics in Biological Anthropology) or graduate-level topics courses can be counted in the appropriate group.

- B. **Biology.** A minimum of three courses representing both of the groups below:
 - 1. Molecular, Cellular, and Developmental Biology:

ANAT 541 BIOLCHEM 415 BIOLOGY 207, 225/226, 305, 541 EEB 341, 490 MCDB 307/308, 310 or 311 PHYSIOL 201, 502, 541 PSYCH 438, 532

- Ecology, Evolution, and Behavior: BIOLOGY 252, 281
 EEB 315, 381, 390, 424, 451, 472, 476, 492, 496
 ENVIRON 281, 315, 415, 425, 451, 476
 GEOSCI 418/419, 437, 438, 439
 NRE 415, 425, 451, 476
 PSYCH 335, 530 (section titled Behavior of Dogs and Wolves)
- C. Any remaining credits required to complete the concentration may be selected, subject to approval by the program advisor, from other anthropology or biology courses or from courses in other departments relevant to the concentration.

Honors Concentration. The Honors concentration in Evolutionary Anthropology is individually arranged with the concentration advisor and requires a senior thesis. Recommendations for degrees with Honors are made by the concentration advisor after consultation with the Honors advisor in biological anthropology.

Advising. Appointments are scheduled in the department office, (734) 764-7274 or online at:

www.lsa.umich.edu/anthro/undergrad_students/index.htm.

Academic Minors in Anthropology

Academic minors in the Department of Anthropology are not open to students with any concentration or any other academic minor in the Department of Anthropology.

Anthropology at the University of Michigan emphasizes four-field training. Our concentrators gain anthropological understanding of the human condition through exposure to Sociocultural Anthropology, Biological Anthropology, Anthropological Archaeology, and Linguistic Anthropology and their many interrelationships. Many students, however, take our courses to supplement other concentrations or out of general interest and have less need for four-field training. Academic minors in anthropology may benefit these students, providing structure to their course elections, and allowing thoughtful integration of anthropology into their academic plans. The department offers three academic minors: Anthropology, Biological Anthropology, and Medical Anthropology.

Students wishing to pursue an academic minor in Anthropology should contact the undergraduate advisor with any questions. Appointments are scheduled by calling the department office at (734) 764-7274 or online at:

www.lsa.umich.edu/anthro/undergrad_students/index.htm.

Anthropology

The sub-disciplines of anthropology are natural complements to many concentrations. The academic minor in Anthropology allows students with particular regional or topical interests to add an anthropological perspective to their studies, whether sociocultural, linguistic or archeological. Students may choose a track that emphasizes Sociocultural Anthropology, Linguistic Anthropology, or Anthropological Archaeology.

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 16 credits in one "track" to be chosen from the following tracks, as described **below.**

1. Sociocultural Anthropology

- a. One general introduction to anthropology: ANTHRCUL 101 or 222.
- b. One upper-level course in anthropological theory from those listed under Sociocultural Anthropology-Theory/Method in the *LSA Bulletin* or under Course Info at:

www.lsa.umich.edu/anthro/undergrad_students/index.htm.

c. Three anthropology courses, chosen in consultation with the advisor. At least one must be at the 400-level, one must be a regional course.

2. Linguistic Anthropology

- a. One general introduction to anthropology; ANTHRCUL 101 is recommended.
- b. ANTHRCUL 272.
- c. At least three upper-level courses from those listed under Linguistic Anthropology in the *LSA Bulletin* or under Course Info at:

www.lsa.umich.edu/anthro/undergrad_students/index.htm.

3. Anthropological Archaeology

- a. ANTHRARC 282.
- b. ANTHRARC 385 or 386.
- c. Three additional regularly offered courses in anthropological archaeology, two of which must be 300-level or above, chosen from ANTHRARC 258, 285, 283, 284, 381, 382, 383, 385, 386, 392, 394, 407, 442, 482, 484, 490, or 495.
- d. Other less regularly taught courses in anthropological archaeology may also be used. Consult the undergraduate advisor for more information. Field courses (ANTHRARC 400 or 487) and Independent Reading and Research (ANTHRARC 499) may not be used toward the academic minor.

Biological Anthropology

The academic minor in Biological Anthropology allows students with interests in evolutionary biology or medicine to add an anthropological perspective to their studies. Many students are interested in specific topics covered by Biological Anthropology, such as Human Evolution, the Evolution of Human Behavior, Primatology, Nutrition and Adaptation, Human Genetics, *etc.* Thus, an academic minor in biological anthropology offers several "tracks" to students depending on their interests.

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 16 credits of courses, to be chosen from the following categories as stated:

- 1. ANTHRBIO 161.
- At least four upper-level courses in ANTHRBIO, chosen in consultation with an advisor, one of which must be at the 400-level or above.

Medical Anthropology

Not open to students electing the Science, Technology, and Society academic minor in the Residential College

The academic minor in Medical Anthropology allows students to focus on the social basis of illness and healing from different cultural perspectives. The academic minor might be elected by students interested in client-practitioner interactions, traditional and complementary medicine, the production of medical knowledge, body politics, bioethics, and reproductive health, among other topics. It might also be relevant for those students interested in adding anthropological perspective to their preparation for a career in medicine, public health, or other health sciences.

Prerequisites to the Academic Minor: ANTHRCUL 101 or 222 (recommended).

Academic Minor Program: At least 16 credits of courses, to be chosen from the following categories as stated:

- 1. ANTHRCUL 344, Medical Anthropology
- 2. Choose **four courses** from the following list of area and topical courses:
 - ANTHRBIO 364, Nutrition & Evolution; or
 - ANTHRCUL 232, Genes, Genealogies, Identities: Anthropological Perspectives;
 - ANTHRCUL 256, Culture, Adaptation and Environment;
 - ANTHRCUL 258, section subtitled "Culture & Medicine";
 - ANTHRCUL 325/WOMENSTD 324, Childbirth & Culture;
 - ANTHRCUL 352, Anthropology of the Body;
 - ANTHRCUL 357, Ethnographies of Medical Anthropology;
 - ANTHRCUL 408/CAAS 409, Maternal/Child Health & Environmental Pollution in Africa;
 - CAAS 365/WOMENSTD 365, Global Perspectives on Gender, Health, & Reproduction;
 - CAAS 458, section subtitled "Gender, Poverty, and Health";
 - HISTORY 355/CAAS 355, Health & Illness in African Worlds (3 credits);
 - WOMENSTD 483, section subtitled "Gender, Poverty, and Health"
- 3. or a course(s) approved by the Undergraduate Advisor.

The academic minor must include at least two courses at the 300-level or above.

COURSES IN ANTHROPOLOGY

ANTHROPOLOGICAL ARCHAEOLOGY (ANTHRARC)

ANTHRARC 282. Introduction to Prehistoric Archaeology

(4). (SS). May not be repeated for credit.

ANTHRARC 284. Aztec, Maya, and Inca Civilizations (4). (SS). May not be repeated for credit.

ANTHRARC 285. Frauds and Fantastic Claims in Archaeology (4). (SS). (R&E). May not be repeated for credit.

ANTHRARC 292. The Archaeology of Michigan (3). (SS). May not be repeated for credit.

ANTHRARC 296. Topics in Archaeology

(3). (SS). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

ANTHRARC 381 / ACABS 382 / HISTART 382. Introduction to Egyptian Archaeology (4; 3 in the half-term). (HU). May not be repeated for credit.

ANTHRARC 382. European Prehistory (3; 2 in the half-term). (SS). May not be repeated for credit.

ANTHRARC 383. Prehistory: Africans

Sophomore standing. (3). (SS). May not be repeated for credit.

ANTHRARC 384 / ACABS 324 / HISTORY 324. Ancient Mesopotamia: History and Culture

Junior standing. (4; 3 in the half-term). (ID). May not be repeated for credit.

ANTHRARC 385. The Archaeology of Early Humans Sophomore standing. (4). (SS). May not be repeated for credit.

ANTHRARC 386. Early Civilizations

Sophomore standing. (4; 2 in the half-term). (SS). May not be repeated for credit.

ANTHRARC 392. Archaeology Underwater

ANTHRARC 282. (3). (SS). May not be repeated for credit.

ANTHRARC 394. Undergraduate Seminar in Archaeology Consent of instructor required. ANTHRARC 282, concentration in Anthropology. (3). May not be repeated for credit.

ANTHRARC 398. Honors in Anthropological Archaeology

Senior standing. (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits.

ANTHRARC 399. Honors in Anthropological Archaeology

Senior standing and permission of instructor. (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits. W.

ANTHRARC 400 / CAAS 405. Field Studies

Junior standing. (8). May not be repeated for credit. May not be used toward the Anthropology academic minors. W in West Africa.

ANTHRARC 401 / CAAS 406. Archaeology Laboratory Studies

Junior standing; concurrent enrollment in ANTHRARC 400/CAAS 405. (6). May not be repeated for credit. W in West Africa.

ANTHRARC 480. Practica in Archaeological Research Techniques

Juniors and above or permission of instructor. (1 - 3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

ANTHRARC 482. Topics in Anthropological Archaeology

Consent of instructor required. Junior standing. (3). May be elected twice for credit. May be elected more than once in the same term.

ANTHRARC 483. Near Eastern Prehistory

Junior standing. (3). May not be repeated for credit.

ANTHRARC 484. Archaeology of Death and Burial One course in Anthropology. (3). May not be repeated for credit.

ANTHRARC 487. UM Training Program in Archaeology (6). May not be repeated for credit. May not be used toward the Anthropology aca-

demic minors.

ANTHRARC 490. Prehistory of North America

Sophomore & above/permission of instructor. (3). May not be repeated for credit. ANTHRARC 497. Museum Research Techniques

Consent of instructor required. Junior standing. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits. Credit is granted for a total of six credits elected through ANTHRARC 496 and 497.

ANTHRARC 499. Undergraduate Reading and Research in Anthropology

Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. May not be used toward the Anthropology academic minors.

BIOLOGICAL ANTHROPOLOGY (ANTHRBIO)

ANTHRBIO 161. Introduction to Biological Anthropology

(4). (NS). (BS). May not be repeated for credit. Does not count toward Anthropology concentration requirements. F, W, Su.

ANTHRBIO 169. Natural Selection

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit.

ANTHRBIO 265. Human Evolutionary Anatomy

LSA Honors. Background in biology or osteology helpful. (3). (NS). (BS). May not be repeated for credit.

ANTHRBIO 297. Topics in Biological Anthropology (3). (NS). (BS). May be repeated for a maximum of 12 credits.

ANTHRBIO 360. Race and Human Evolution Junior standing. (4). (NS). (BS). (R&E). May not be repeated for credit.

ANTHRBIO 361. Biology, Society, and Culture

Sophomore standing. (4). (NS). (BS). (R&E). May not be repeated for credit. ANTHRBIO 362. Problems of Race

Sophomore standing. (3). (NS). (BS). May not be repeated for credit. W.

ANTHRBIO 364. Nutrition and Evolution

Sophomore standing. (4; 3 in the half-term). (NS). (BS). May not be repeated for credit. ANTHRBIO 365. Human Evolution

Sophomore or Junior or Senior. (Prerequisites enforced at registration.) High school biology is assumed. (4). (NS). (BS). May not be repeated for credit.

ANTHRBIO 368 / PSYCH 338. Primate Social Behavior I

(4). (NS). (BS). May not be repeated for credit. F.

ANTHRBIO 371. Techniques in Biological Anthropology

Consent of instructor required. (1 - 3). (BS). May be repeated for a maximum of 6 credits. May not be included in a concentration plan in Anthropology.

ANTHRBIO 398. Honors in Biological and Evolutionary Anthropology

Seniors Only. Consent of instructor required. (Prerequisites enforced at registration.) (3). (BS). (INDEPENDENT). May be elected twice for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of ANTHRBIO 399, the final grade is posted for both term's elections. F.

ANTHRBIO 399. Honors in Biological and Evolutionary Anthropology

Seniors Only. Consent of instructor required. (Prerequisites enforced at registration.) Senior standing. (3). (BS). (INDEPENDENT). May be repeated for a maximum of 6 credits. W.

ANTHRBIO 452. Population Genetics and Anthropology

One course in Anthropology or Biology. (4). (BS). May not be repeated for credit. No credit granted to those who have completed EEB 490.

ANTHRBIO 460. Quantitative Field Methods

One course in introductory statistics is helpful, but not required. (3). (BS). May not be repeated for credit.

ANTHRBIO 465. Primate Functional Anatomy

ANTHRBIO 351, 365, 368 or 566. (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

ANTHRBIO 467. Human Behavioral Ecology

A strong background in the natural sciences is assumed, including any two of the following courses: ANTHRBIO 161, 368; BIOLOGY 162, 171, 172; MCDB 404; EEB 494. (4; 3 in the half-term). (BS). May not be repeated for credit.

ANTHRBIO 469. Topics in Biological Anthropology

Consent of instructor required. (2 - 4; 2 - 3 in the half-term). (BS). May not be repeated for credit.

ANTHRBIO 471. Undergraduate Reading and Research in Anthropology

Consent of instructor required. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits. A maximum of three credits of independent reading may be included in a concentration plan in anthropology. F, W, Sp/Su, Sp, Su.

ANTHRBIO 472. Human Nature

Consent of instructor required. ANTHRBIO 467. (2). (BS). May not be repeated for credit.

ANTHRBIO 473. Mechanisms of Human Adaptation

Senior standing. (4). (BS). May not be repeated for credit.

ANTHRBIO 474. Hominid Origins

ANTHRBIO 365. (4). (BS). May not be repeated for credit.

ANTHRBIO 475. Evolution of Genus Homo

ANTHRBIO 351 or 365. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit.

ANTHRBIO 477. Laboratory in Human Osteology

Consent of instructor required. (4; 2 in the half-term). (BS). May not be repeated for credit.

ANTHRBIO 478. Primate Behavioral Ecology and Sociobiology

Consent of instructor required. ANTHRBIO 368. (3). (BS). May not be repeated for credit.

ANTHRBIO 569. Hominoid Evolution

ANTHRBIO 161, 265, 365, 368 or 475; or permission of instructor. May not be repeated for credit. Non-Rackham Graduate credit.

CULTURAL ANTHROPOLOGY (ANTHRCUL)

ANTHRCUL 101. Introduction to Anthropology

(4). (SS). (R&E). May not be repeated for credit. Does not count toward Anthropology concentration requirements. F, W, Sp.

ANTHRCUL 158. First Year Seminar in Anthropology

Enrollment restricted to first-year students, including those with sophomore standing. (3). (SS). May not be repeated for credit. May not be included in an Anthropology concentration.

ANTHRCUL 202. Ethnic Diversity in Japan

(4). (SS). May not be repeated for credit.

ANTHRCUL 221 / HISTORY 271 / RELIGION 271. Religions of Latin America (3). (HU). May not be repeated for credit.

ANTHRCUL 222. The Comparative Study of Cultures (4; 2 in the half-term). (SS). May not be repeated for credit.

ANTHRCUL 226 / HISTORY 229. Introduction to Historical Anthropology (4). (SS). May not be repeated for credit.

ANTHRCUL 230. Fundamentals of Social Theory (4). (SS). May not be repeated for credit.

ANTHRCUL 232. Genes, Genealogies, Identities: Anthropological Perspectives (4). (SS). May not be repeated for credit.

ANTHRCUL 234. Anthropology and Development

(3). (SS). May not be repeated for credit.

ANTHRCUL 246 / RELIGION 246. Anthropology of Religion (4). May not be repeated for credit.

(3). (SS). May not be repeated for credit.

ANTHRCUL 258. Honors Seminar in Anthropology

LSA Honors. (Prerequisites enforced at registration.) Honors students with sophomore standing or above. (3). May not be repeated for credit.

ANTHRCUL 260. Folklore in Anthropological Perspective

ANTHRCUL 101. (3). (SS). May not be repeated for credit.

ANTHRCUL 272 / LING 272. Language in Society

Primarily for first- and second-year students. (4). (SS). (R&E). May not be repeated for credit. W.

ANTHRCUL 298. Topics in Sociocultural Anthropology

(3). (SS). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

ANTHRCUL 299. Topics in Linguistic Anthropology

(3). (SS). May be repeated for a maximum of 12 credits.

ANTHRCUL 300. Doing Ethnography in Havana and in Cuba Consent of instructor required. Spanish language and background required. (3). (EX-

PERIENTIAL). May not be repeated for credit.

ANTHRCUL 301. The Ethnographer's Craft Consent of instructor required. Spanish language background required. (3). (EXPE-RIENTIAL). May not be repeated for credit.

ANTHRCUL 302. Sex and Gender in Japan (4). (SS). May not be repeated for credit.

ANTHRCUL 305. Peoples and Cultures of the Himalaya One course in cultural anthropology. (3). May not be repeated for credit.

ANTHRCUL 306. Anthropology and Film: East Central Europe (3). (SS). May not be repeated for credit.

ANTHRCUL 309. Anthropology of Europe

Sophomore standing; introductory anthropology recommended. (3). (SS). May not be repeated for credit.

ANTHRCUL 314 / AMCULT 313. Cuba and its Diaspora (4). May not be repeated for credit. F.

ANTHRCUL 315 / AMCULT 316. Native American Peoples of North America

(4). (SS). (R&E). May not be repeated for credit.

ANTHRCUL 317 / REES 397. Eastern Europe in Transformation

(4). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in REES 396. May not be counted in a Slavic Department academic minor.

ANTHRCUL 319. Latin American Society and Culture (4). (SS). (R&E). May not be repeated for credit.

ANTHRCUL 320. Mexico: Culture and Society

(4). May not be repeated for credit. ANTHRCUL 325 / WOMENSTD 324. Childbirth & Culture

Sophomore standing. (4). (SS). May not be repeated for credit.

ANTHRCUL 326 / WOMENSTD 326. The Politics of Health and Social Suffering One course in WOMENSTD or ANTHRCUL. (3). (SS). May not be repeated for credit.

ANTHRCUL 327 / RCSSCI 327. Critical Theory in Medicine and Healing One course in ANTHRCUL or RCSSCI. (4). (SS). May not be repeated for credit.

ANTHRCUL 328. Globalizing Consumer Cultures (3). (SS). May not be repeated for credit.

ANTHRCUL 330. Culture, Thought, and Meaning (4). (HU). May not be repeated for credit.

ANTHRCUL 331. Kinship, Social Organization, and Society One course in Anthropology. (4). (SS). May not be repeated for credit.

ANTHRCUL 333. Non-Western Legal Systems, I Sophomore standing. (3). (SS). May not be repeated for credit. F.

ANTHRCUL 338. The Arts in Anthropological Perspective

ANTHRCUL 101 or 222 or sophomore standing. (4). May not be repeated for credit.

ANTHRCUL 344. Medical Anthropology

ANTHRCUL 101 or 222; or sophomore and above. (Prerequisites enforced at registration.) (4). (SS). May not be repeated for credit.

ANTHRCUL 346 / HISTORY 347. Latin America: The Colonial Period (4). (SS). May not be repeated for credit.

ANTHRCUL 347 / CAAS 420. Race and Ethnicity Junior standing. (3; 2 in the half-term). May not be repeated for credit.

ANTHRCUL 352. Anthropology of the Body (3). (SS). May not be repeated for credit.

ANTHRCUL 355 / CAAS 355 / HISTORY 355. Health and Illness in African Worlds (4; 3 in the half-term). (R&E). May not be repeated for credit.

ANTHRCUL 356. Topics in Sociocultural Anthropology

ANTHRCUL 101. (3). May be repeated for a maximum of 6 credits.

ANTHRCUL 357. Seminar in Sociocultural Anthropology

A course in cultural anthropology and junior standing. (3; 2 in the half-term). May not be repeated for credit.

ANTHRCUL 370 / LING 370. Language and Discrimination: Language as Social Statement

LING 210. (3). (SS). (R&E). May not be repeated for credit.

ANTHRCUL 374 / LING 374. Language and Culture

Sophomore standing. (4). (HU). May not be repeated for credit.

ANTHRCUL 375 / LING 362. Talking and Telling

One course in linguistics, anthropology, or a related field. (3). May not be repeated for credit.

ANTHRCUL 398. Honors in Sociocultural and Linguistic Anthropology

Seniors Only. Consent of instructor required. (Prerequisites enforced at registration.) (3). (INDEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of ANTHRCUL 399, the final grade is posted for both term's elections. F.

ANTHRCUL 399. Honors in Sociocultural and Linguistic Anthropology

Senior standing. Consent of instructor required. (Prerequisites enforced at registration.) (3). May not be repeated for credit. W.

ANTHRCUL 402. Chinese Society and Cultures

Junior standing. (3). May not be repeated for credit.

ANTHRCUL 404. Peoples and Cultures of Southeast Asia

ANTHRCUL 101 or 222. (3; 2 in the half-term). May not be repeated for credit.

ANTHRCUL 408 / CAAS 409. Maternal/Child Health and Environmental Pollution in Africa

Junior or above. (3). May not be repeated for credit. Rackham credit requires additional work.

ANTHRCUL 409. Peoples and Cultures of the Near East and North Africa Junior standing. (3; 2 in the half-term). May not be repeated for credit.

ANTHRCUL 411 / CAAS 422. African Culture

Junior standing and CAAS 200. (3; 2 in the half-term). May not be repeated for credit. ANTHRCUL 414 / CAAS 444. Introduction to Caribbean Societies and Cultures, I

Junior standing or above. (3). May not be repeated for credit.

ANTHRCUL 416 / HBEHED 516. Global Health: Anthropological Perspectives (3). May not be repeated for credit.

ANTHRCUL 427 / CAAS 427 / WOMENSTD 427. African Women

One course in African Studies, Anthropology, or Women's Studies. CAAS 200 recommended. Permission of instructor. (3). May not be repeated for credit.

ANTHRCUL 428 / RCSSCI 428 / WOMENSTD 428. Sex Panics in the US and UK since 1890

One course in WOMENSTD or ANTHRCUL or RCSSCI, SOC, or HISTORY. (3). May not be repeated for credit.

ANTHRCUL 429. Television, Society, and Culture (3). May not be repeated for credit.

ANTHRCUL 436 / WOMENSTD 436. Human Rights, Gender and Culture

One course in WOMENSTD or ANTHRCUL. (3). May not be repeated for credit. Rackham credit requires additional work.

ANTHRCUL 438. Urban Anthropology

ANTHRCUL 222/327. (3; 2 in the half-term). May not be repeated for credit.

ANTHRCUL 439. Economic Anthropology and Development

Junior standing or permission of instructor. (3; 2 in the half-term). May not be repeated for credit.

ANTHRCUL 446 / WOMENSTD 446. Sex and the City: Urban Geography and Sexual Locations

At least one course in Anthropology, History, Women's Studies, Sociology, LGBTQ Studies, or Urban Studies/Urban Planning. (3). May not be repeated for credit.

ANTHRCUL 447. Culture, Racism, and Human Nature (3). (*R&E*). May not be repeated for credit.

ANTHRCUL 451 / CAAS 459. African-American Religion

One introductory course in the social sciences. CAAS 201 recommended. (3). May not be repeated for credit.

ANTHRCUL 453 / CAAS 454. African-American Culture

One introductory course in the social sciences. CAAS 201 recommended. (3). May not be repeated for credit.

ANTHRCUL 458. Topics in Sociocultural and Linguistic Anthropology

Consent of instructor required. Junior and above. (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ANTHRCUL 461 / AMCULT 461 / LING 461. Language, Culture, and Society in Native North America

(3). May not be repeated for credit.

ANTHRCUL 464. Language, Culture, and Society in South Asia

Junior and above. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ANTHRCUL 499. Undergraduate Reading and Research in Anthropology

Consent of instructor required. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. A maximum of three credits of independent reading may be included in a concentration plan in Anthropology. F, W, Sp/Su, Sp, Su.

ANTHRCUL 519 / GERMAN 517 / LING 517. Principles and Methods of Historical Linguistics

Graduate standing, or permission of instructor. (3; 2 in the half-term). May not be repeated for credit.

ANTHRCUL 553. Blurred Genres: Autobiography, Fiction & Ethnography

400-level coursework in Anthropology, Graduate standing, and permission of instructor. (3). May not be repeated for credit.

ANTHRCUL 572 / LING 542. Introduction to Sociolinguistics

LING 411 or graduate standing. (3; 2 in the half-term). May not be repeated for credit.

Applied Physics

2071 Randall Laboratory 450 Church Street (734) 936-0653 (phone) (734) 764-2193 (fax) www-applied.physics.lsa.umich.edu e-mail: cyndia@umich.edu Professor Bradford Orr (Physics), Director

Not a concentration program

Professors James W. Allen (Physics), Pallab K. Bhattacharya (EECS), John C. Bilello (Materials Science & Engineering), Philip Bucksbaum (Physics), Roy Clarke (Physics), Steven Dierker (Physics), Roland Drayson (AOSS), Ronald Gilgenbach (Nuclear Engineering & Radiological Sciences), John L. Gland (Chemistry, Chemical Engineering), George Haddad (EECS), Mohammed Islam (EECS), Raoul Kopelman (Chemistry), Yue-Ying Lau (Nuclear Engineering & Radiological Sciences), Emmet Leith (EECS), Roberto D. Merlin (Physics), Gerard A. Mourou (EECS), Bradford Orr (Physics), Dimitris Pavlidis (EECS), Leonard M. Sander (Physics), Jasprit Singh (EECS), Duncan Steel (Physics, EECS), Ctirad Uher (Physics), Herbert G. Winful (EECS), Steve Yalisove (Materials Science & Engineering), Jens C. Zorn (Physics)

Associate Professors Michael Atzmon (Materials Science & Engineering, Nuclear Engineering & Radiological Sciences), Alec D. Gallimore (Aerospace Engineering), Marc M. Banaszak Holl (Chemistry), Franco Nori (Physics), Ted Norris (EECS), Xiaoqing Pan (Materials Science & Engineering), Donald Umstadter (Nuclear Engineering & Radiological Sciences, EECS), Kim Winick (EECS)

Assistant Professors Eitan Geva (Chemistry), Rachel Goldman (Materials Science & Engineering), Jay Guo (EECS), Çagliyan Kurdak (Physics), Joanna Mirecki-Millunchick (Materials Science & Engineering), Nils Walter (Chemistry)

Applied Physics is a graduate intercollegiate program with participating faculty in the College of Literature, Science, and the Arts, the College of Engineering, and the Medical School. It combines coursework in the fundamentals of physical theory, its applications to technology, and practical "hands-on" training in the research laboratories leading to the Ph.D. degree.

COURSES IN APPLIED PHYSICS (APPPHYS)

APPPHYS 672 / NERS 572. Plasma and Controlled Fusion II NERS 571. (3). (BS). May not be repeated for credit.

Arab American Studies (see American Culture)

Armenian Studies Program

1080 South University Avenue, Suite 2603 (734) 763-0622 (phone) (734) 763-4918 (fax) www.umich.edu/~iinet/asp e-mail: armenianstudies@umich.edu Professor Gerard Libaridian (History), Director

May be elected as an option in the concentration "Arabic, Armenian, Persian, Turkish, and Islamic Studies." See Near Eastern Studies departmental listing for further details.

Professors

Kevork Bardakjian (Near Eastern Studies) (Marie Manoogian Professor of Armenian Language and Literature), *Armenian language, literature, and culture*

Gerard Libaridian (History) (Alex Manoogian Chair in Modern Armenian History), Armenia and Caucasus history and politics

The Armenian Studies Program at the University of Michigan, Ann Arbor, began in 1976 with the introduction of courses in the Western

Armenian language and a survey of Armenian history. In 1981 the Alex Manoogian Chair in Modern Armenian History was established, thanks to the generous gift of Mr. and Mrs. Alex Manoogian. Six years later, the Marie Manoogian Chair in Armenian Language and Literature was created, making the University of Michigan–Ann Arbor a major center of Armenian Studies in the United States. The activities of the program were enhanced by more recent gifts by the Manoogian family and others.

Courses taught by Professors Bardakjian and Libaridian constitute the core of this program. Instruction in Armenian studies is supplemented by courses offered by Professor Ronald Suny, the Charles Tilly Collegiate Professor of Social and Political History at the University of Michigan, as well as by post-doctoral fellows and visiting scholars in a variety of fields. In addition, the program offers graduate and post-doctoral fellowships and an extensive list of outreach activities such as public lectures, conferences, and workshops.

COURSES IN ARMENIAN STUDIES (ARMENIAN)

ARMENIAN 171 / AAPTIS 171. Western Armenian, I

(4). May not be repeated for credit. No credit granted to those who have completed or

are enrolled in ARMENIAN 173/AAPTIS 173. ARMENIAN 172 / AAPTIS 172. Western Armenian, II

AAPTIS/ARMENIAN 171. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS/ARMENIAN 173.

ARMENIAN 271 / AAPTIS 271. Intermediate Western Armenian, I

AAPTIS/ARMENIAN 172 or 173, or equivalent. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ARMENIAN 273/AAPTIS 273.

ARMENIAN 272 / AAPTIS 272. Intermediate Western Armenian, II

AAPTIS/ARMENIAN 271 or equivalent. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ARMENIAN 273/AAPTIS 273.

ARMENIAN 274 / AAPTIS 274. Armenia: Culture and Ethnicity (3). (HU). May not be repeated for credit. Taught in English.

ARMENIAN 287 / HISTORY 287. Armenian History from Prehistoric Times to the Present

(3). May not be repeated for credit. Taught in English.

ARMENIAN 416 / AAPTIS 474. An Introduction to Modern Armenian Literature (3). May not be repeated for credit. Taught in English.

Art & Design

School of Art & Design (SOAD) 2038 Art & Architecture Building 2000 Bonisteel Boulevard (734) 764-0397 (phone) (734) 936-0469 (fax) www.art-design.umich.edu email: a&d@umich.edu Professor Bryan Rogers, Dean

Not a concentration program

The School of Art & Design (A&D) offers (1) an innovative media-rich and intellectually challenging bachelor of fine arts (BFA) degree that integrates traditional techniques with contemporary technologies and provides extensive opportunities for exhibition, community engagement, and international study; and (2) a bachelor of arts (BA) in Art & Design that is an appropriate degree for students who want a rigorous education in art and design with the flexibility of a liberal arts education. Joint degree programs with LSA provide opportunities for students whose educational goals include undergraduate degrees in both LSA and A&D [see "Art & Design (Joint Program in Liberal Arts and Art & Design)" under "Special Joint Degree Programs" in *Chapter V*.]

Dual Admit. The School of Art & Design offers dual admission to entering students who wish to pursue two degree programs. Dual admission allows students the freedom and ease to explore the educational opportunities of more than one discipline beginning in their first year of enrollment.

Cross-Campus Transfer. The School of Art & Design requires that prospective cross-campus transfers meet first with the Admissions Coordinator for the School and then with the Associate Dean for Academic Affairs and Undergraduate Education for a portfolio review. Successful applicants will also have earned a cumulative GPA of 2.0 and at least 30 credits of coursework.

Courses for non-majors. Fall and winter academic terms, A&D offers studio courses designated for non-majors, some on Central Campus, some in the A&D facilities on North Campus. *Art Design Perspectives* courses are academic courses that count for Humanities or Interdisciplinary LSA credit as indicated below and are open to non-major registration. In addition, all other A&D studio courses are open to non-major registration after the last day of scheduled Wolverine Access registration appointments.

Area Distribution Credit

Humanities (HU)

The following courses have Humanities distribution designation (Credits are counted as LSA courses):

ARTDES 150. Art Design Perspectives I: The Creators ARTDES 151. Art Design Perspectives II: Society

Interdisciplinary (ID)

The following course has Interdisciplinary distribution designation (Credits are counted as LSA courses):

ARTDES 250. Art Design Perspectives III: Technology and the Environment

Creative Expression (CE)

The following courses have Creative Expression distribution designation (Credits are counted as LSA courses):

- ARTDES 120. Tools, Materials, and Processes Studio I: Construction
- ARTDES 121. Tools, Materials, and Processes Studio II: Messages
- ARTDES 130. Concept Form and Concept Studio I: The Human Being – Being Human
- UARTS 250. Creative Process

The following courses have Creative Expression distribution designation (Credits are counted as Non-LSA):

ARTDES 110. Digital Studio I ARTDES 170. Drawing Studio I ARTDES 171. Printmaking for Non-Majors ARTDES 172. Painting for Non-Majors ARTDES 173. Digital Photography for Non-Majors ARTDES 174. Watercolor for Non-Majors ARTDES 175. Life Drawing for Non-Majors ARTDES 176. Graphic Imaging for Non-Majors ARTDES 177. Metals for Non-Majors ARTDES 178. Animation for Non-Majors ARTDES 179. Sculpture for Non-Majors ARTDES 181. Clay for Non-Majors ARTDES 182. Wood for Non-Majors ARTDES 220. Tools, Materials & Processes Studio III: Time ARTDES 230. Concept Form and Context Studio II ARTDES 231. Concept Form and Context Studio III

COURSES IN SCHOOL OF ART & DESIGN

Courses in the School of Art & Design are listed in the *Schedule of Classes* under the School of Art & Design. Descriptions may be found on the A&D web site www.art-design.umich.edu. The following courses count as LSA courses for LSA degree credit.

ART & DESIGN (ARTDES)

ARTDES 120. Tools, Materials and Processes I (3). (CE). May not be repeated for credit.

ARTDES 121. Tools, Materials, and Processes II (3). (CE). May not be repeated for credit.

ARTDES 130. Concept, Form and Context I (3). (CE). May not be repeated for credit.

ARTDES 150. Art-Design Perspective I: Creators (3). (HU). May not be repeated for credit. ARTDES 151. Art-Design Perspectives II

ARTDES 150. (3). (HU). May not be repeated for credit. ARTDES 250. Art-Design Perspectives III: Tech/Environment (3). (ID). May not be repeated for credit.

UNIVERSITY ARTS (UARTS)

UARTS 250. Creative Process (4). (CE). May be repeated for a maximum of 8 credits.

Asian Languages and Cultures (ALC)

6111 South Thayer Building 202 South Thayer Street (734) 764-8286 (phone) (734) 647-0157 (fax) www.lsa.umich.edu/asian e-mail: um-alc@umich.edu Professor Donald Lopez, Jr., Chair

Professors

Madhav Deshpande, *Sanskrit language, literature, & linguistics* Nancy K. Florida, *Indonesian and Javanese Studies*

- Ken K. Ito, Modern Japanese literature, particularly Meiji and Taisho fiction
- Shuen-fu Lin, Pre-modern Chinese literature, especially classical poetry and poetics
- Donald S. Lopez, Jr., (Arthur E. Link Distinguished University Professor of Buddhist Studies; Arthur F. Thurnau Professor), *Indian and Tibetan Buddhism*
- Abé Mark Nornes, Asian Cinema
- Esperanza Ramirez-Christensen, Pre-modern Japanese literature, particularly poetry, criticism, and Heian prose
- Xiaobing Tang (Helmut F. Stern Professor of Modern Chinese Studies), *Modern and contemporary Chinese literature and visual culture; realism and modernism*

Associate Professors

William H. Baxter, III (ALC/Linguistics), *Chinese language and linguistics*

Miranda Brown, Early Chinese culture

Christi Merrill, Modern South Asian literature

David Rolston, *Traditional Chinese fiction and drama, particularly traditional fiction criticism and Peking Opera* Jonathan Zwicker, *Modern Japanese literature*

Assistant Professors

Micah Auerback, *Japanese religions & Korean Buddhism* Benjamin Brose, *Chinese Buddhism* Deirdre de la Cruz, *Philippine Studies* Manishita Dass, *South Asian media studies* Maki Fukuoka, *Japanese humanities, history of photography & visual culture* Arvind-Pal S. Mandair (S.C.S.B. Assistant Professor of Sikh Studies), *Sikh Studies* Youngju Ryu, *Modern Korean literature* **Lecturers** Abhisheka, *Hindi language* Agustini, *Southeast and Korean Language Director* Ekhteyar Ali, *Urdu language* Qinghai Chen, *Chinese language director* Kenji Endo, *Japanese language*

Yang Ga, *Tibetan language*

Pinderjeet Gill, Punjabi, Hindi language

Laura Grande, *Chinese language*

Karen Gu, Chinese language

Insung Ko, Korean language

Junko Kondo, *Japanese language* Montatip Krishnamra, *Thai language*

linui Li *Chinana Languaga*

Jinyi Li, Chinese Language

68 / COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS

Wei Liu, *Chinese language* Mayumi Oka, *Japanese language director* Leticia Pagkalinawan, *Filipino language* Kyongmi Park, *Korean Language* Lingava N. Ramamoorthy, *Tamil language* Mohammad Tahsin Siddiqi, *South Asian language director* Le Tang, *Chinese language* Hilda Tao, *Chinese language* Shoko Watarai, *Japanese language* Haiqing Yin, *Chinese language* Qiuli Zhao, *Chinese Language*

Professors Emeriti Kenneth J. DeWoskin, Yi-tsi Feuerwerker, Luis O. Gómez, Peter Hook, Harriet C. Mills, Donald J. Munro

The department offers instruction in the languages, literatures, linguistics, and cultures of China, Japan, Korea, Tibet, South Asia and Southeast Asia, including courses in traditional and modern Chinese and Japanese literature, Chinese and Japanese civilization, Chinese philosophy, courses in the literatures and cultures of South & Southeast Asia, and a sequence of courses on Buddhism in China, India, Japan, and Tibet. The department offers an undergraduate concentration in Asian Studies as well as academic minors in Asian Studies and Asian Languages and Cultures. Undergraduates are encouraged to consult departmental advisors about appropriate electives, about introducing an Asian component into a concentration plan focused in another department, as well as about developing a plan of study leading to a concentration in Asian Studies.

The department's core courses in the modern languages of East, South and Southeast Asia are designed to develop proficiency in the basic skills of speaking, aural comprehension, reading, and writing. To speed students' progress toward a working knowledge of language, intensive work in Chinese and Japanese is usually offered during the summer (students must apply for admission to the summer program).

The faculty and staff in the department reserve the right to require students with previous background in an Asian language to take a placement test. Students will be placed in language classes according to the department's best assessment of the student's language skill and previous training. The department's first-year language courses are designed for students with minimal or no previous exposure to the language in question. Students having previous experience with a language may be required to begin study at a higher level of instruction.

Please Note: Undergraduates with native or near native ability in an Asian language taught in the department *(e.g.,* Chinese or Japanese) should not use that language to fulfill the language requirements for their sub-concentration if they decide to concentrate in Asian Studies. For information on these language requirements, see the description of the concentration in Asian Studies below.

Area Centers. The department is part of a larger network of teaching and scholarship on Asia at the University of Michigan. The Center for Chinese Studies, the Center for Japanese Studies, the Center for South Asian Studies, the Center for Southeast Asian Studies, and the Center for Korean Studies, bring together faculty in the department with Asian area specialists elsewhere on campus. The Centers, subsidized by the U.S. Department of Education, organize and sponsor numerous extra-curricular activities including informal talks, lectures and colloquia by visiting scholars, films, and exhibits.

Overseas Study. Numerous opportunities exist for overseas study of Asian languages and cultures. There may be some restrictions on the use of study abroad credits to meet concentration requirements. Please consult the concentration advisors.

The department offers a *Summer Study Abroad in Tibet*. This unique opportunity offers undergraduate students a comprehensive nine-week, six credit program for the study of Tibetan language, history and culture situated in Tibet. It combines two weeks in Tibet's capital Lhasa and neighboring urban areas, three weeks in various rural

areas on the high plateau of Central Tibet (the Tibetan Autonomous Region), and four weeks across the Eastern Tibetan region of Kham (Sichuan Province). Course topics range from Tibetan language, Buddhism, and traditional religious history to contemporary social, cultural, and political issues. The program makes use of leading Tibetan and Western experts residing in Lhasa, extended visits to central Tibetan religious and historical sites, and field-work projects in various settings. The first of its kind to be offered by any academic institution in the United States, the program traverses the breadth of Tibet's variegated landscapes and diverse cultures.

The University of Michigan is a co-sponsor of the Inter-University Program for Chinese Language Studies in Beijing at UC-Berkeley and the Inter-University Center for Japanese Language Studies in Yokohama at Stanford. Students may apply to these programs during their second year of coursework (or thereafter) in the appropriate language. Admission is based on national competition, and space is limited. Michigan students, however, have proven successful in gaining entrance to these programs. The overseas centers provide an opportunity to master spoken Chinese or Japanese and to improve reading and research skills. Limited financial aid is available from both the University and the overseas centers to students who are admitted. Application to admission and aid is made directly to the respective programs; however, the Michigan representatives to the respective programs are available to advise interested students. For information, contact the undergraduate advisor in Chinese or Japanese

The University of Michigan's Center for Southeast Asian Studies is a member of several Southeast Asian Language consortiums that offer advanced language training abroad in Indonesia, Thailand, the Philippines, and Vietnam. The University of Michigan also belongs to the *Consortium for International Educational Exchange* (CIEE) that offers possibilities for study abroad in Thailand and Vietnam. It is also a member of the *Southeast Asian Summer Studies Institute* (SEASSI) held each summer at the University of Wisconsin–Madison.

The Kyoto Consortium for Japanese Studies (KCJS) is an undergraduate academic year program in Kyoto co-sponsored by fourteen universities in the United States, including the University of Michigan. This center, developed in cooperation with Kyoto University, opened in September of 1989. The program provides a select group of undergraduates and graduating seniors with an academically challenging course of study in Japanese language and culture. Prerequisites: at least two years of prior enrollment in Japanese language courses at the college level (five hours per week minimum). A limited number of students may be admitted for single semester study in the fall or spring. Applications are available from the Center for Global and Intercultural Study (CGIS). KCJS also offers a six-week intensive summer program in advanced and classical Japanese for highly motivated undergraduate and graduate students who have completed three years of Japanese or equivalent. Application deadline: March 1. For more information and application, see kcjssummer.columbia.edu.

The Japan Center for Michigan Universities (JCMU) is an opportunity for undergraduates currently enrolled at the University of Michigan to study Japanese language, society, and culture in Japan. Located in Shiga Prefecture, on Lake Biwa (near Kyoto and Osaka), the JCMU offers academic courses and programs for university credit. The program is open to undergraduates from any of the fifteen statesupported universities in Michigan, as well as students from Shiga Prefecture. Prerequisites: applicants must have been enrolled fulltime for at least one year at one of the state-supported universities in Michigan. Applicants must apply through their home institution. Applications are available from the Center for Global and Intercultural Study (CGIS).

Charles and Myrl Hucker Prize in Asian Languages and Cultures is awarded annually for the best essay produced in an ALC course by an undergraduate or graduate student. The department's Curriculum Committee makes the nomination for the award.

Asian Studies

May be elected as a departmental concentration program

The Concentration in Asian Studies offers students an opportunity to pursue interests in the traditional and modern civilizations of Asia. The particular courses to be counted toward the concentration will depend on the individual student's subconcentration and field. Students choose a subconcentration and then focus on a field of study.

Sub-concentrations:	Suggested Fields of Study:	
Chinese Studies	Cultural Studies	Literature
Japanese Studies	Film	Performing Arts
Korean Studies	Gender Studies	Philosophy
South Asian Studies	History/Civilization	Religion
Southeast Asian Studies	Linguistics	Visual Culture

Prerequisites to Concentration. One year (or first-year proficiency) of an Asian language taught in the Department of Asian Languages and Cultures.

Concentration Program.

- Language Requirement. All concentrators must have fourthterm proficiency in an Asian language appropriate to their subconcentration. Concentrators are strongly encouraged to continue their language training beyond the second year requirement. This is particularly important, if not essential, for students contemplating a graduate program in an Asian field.
- Course Requirements. 30 credits at the 200-level and above, 15 of which must be at the 300-level or above. (At least 15 credits must be taken in residence at the University of Michigan.) The concentration plan is designed in consultation with, and approved by, a department advisor.
 - a. *Sub-concentration requirement.* At least 15 credits in courses in the student's sub-concentration *(e.g.,* South Asian Studies). Students are encouraged to plan their sub-concentration courses in relation to a chosen field of study. Up to 10 credits from language courses at the 300 level or above may be counted toward the sub-concentration requirement. 5 credits or more must be taken in Asian Studies in the student's subconcentration; classical languages (Sanskrit, Classical Japanese, Classical Chinese, Javanese, Old Tibetan) may be used to satisfy this portion of the requirement.
 - b. Breadth requirement. [9 credits]
 - (1) ASIAN 381, Junior/Senior Seminar for Concentrators.
 - (2) At least six credits from either or both of the following two categories:
 - (a). Courses exclusively focused on one of the subconcentrations outside the student's chosen subconcentration, (*e.g.*, a student in the Korean Studies sub-concentration could elect ASIAN 210, The Philippines: Culture and History), or
 - (b). Trans-regional courses focused on more than one of the sub-concentrations (which could include the student's sub-concentration) (*e.g.*, ASIAN 220, Introduction to the Study of Asian Religions, or ASIAN 367, Languages of Asia).
 - c. Cognate requirement. At least 6 credits elected outside the Department of Asian Languages and Cultures from either or both of the following categories:
 - (1) theory or methodology courses in the student's chosen field that are focused on a discipline rather than on Asia (*e.g.*, a student in the Japanese Studies sub-concentration whose field is linguistics could elect the course LING 210, Introduction to Linguistic Analysis), or
 - (2) courses in the student's chosen sub-concentration, but outside the student's chosen field *(e.g.,* the same student could elect the course HISTORY 451, Japan Since 1700).

Advising. Appointments are scheduled at the department's Student Services Office [(734) 764-8286]. Students who have a formal or informal interest in Asian Studies are encouraged to consult a department advisor.

Honors Concentration: Candidates for the Honors concentration must complete all regular requirements for the concentration, maintain a cumulative grade point average of at least 3.4 and at least 3.5 in courses elected as part of the concentration. They must also demonstrate the ability to do original work by writing an Honors thesis and must elect the appropriate Honors course(s). Recommendations for the designation of "Honors," "High Honors," and "Highest Honors" in Asian Studies are made on the basis of the student's performance in departmental Honors courses and the quality of the student's Honors thesis.

Academic Minors in Asian Languages and Cultures

An academic minor in the Department of Asian Languages and Cultures is not open to students with a concentration or other academic minor in the Department of Asian Languages and Cultures.

Students wishing to pursue an academic minor in the Department of Asian Languages and Cultures must develop a specific plan for its completion in consultation with a department advisor. Appointments are scheduled in the department.

Asian Languages and Cultures

The academic minor in Asian Languages and Cultures provides a means for concentrators in other departments to add to their undergraduate program a substantial and structured course of study in an Asian language, combined with a number of courses focused upon Asian culture. The academic minor offers guidance to students who want to acquire usable language skills and insures that the study of language is grounded in knowledge about the larger culture in which the language is historically produced and used. Undergraduates minoring in ALC will be equipped with specific linguistic capabilities and cultural knowledge they can apply to their inquiries within other disciplinary concentration. The academic minor can be elected in conjunction with any of the languages taught through the third year in ALC.

Prerequisites to the Academic Minor: Two years (fourth-term proficiency) in an Asian Language.

Academic Minor Program: At least 15 credits, chosen in consultation with and approved by a department advisor, in the following categories, as stated:

- 1. Two terms of an **Asian language**, taught in the Department of Asian Languages and Cultures, at the third-year level or above.
- Asian Studies: At least two courses on Asian culture that will familiarize the student with the contexts of the language the student has studied; one of these courses must be at the 300-level or above.

At least six of the credits must be elected at the University of Michigan or through an overseas program associated with the U-M.

Asian Studies

The academic minor in Asian Studies allows concentrators in other department to undertake a guided and coherent program in Asian Studies when extensive coursework in an Asian language is impractical for them. In contrast to the Asian Studies concentration, as well as the academic minor in Asian Languages and Cultures, this academic minor does not contain a language component, it is designed to give students the opportunity to plan a structured and articulated series of courses that will result in an intellectual engagement with the culture of at leas one Asian region.

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Prerequisites to the Academic Minor: None.

ASIAN 200 / HISTORY 203. Introduction to Japanese Civilization

Academic Minor Program: At least 15 non-language credits chosen in consultation with and approved by a department advisor:

At least three courses in Asian Studies offered though ALC within one of the regional areas: Chinese Studies, Japanese Studies, Korean Studies, South Asian Studies, or Southeast Asian Studies. Two courses must be elected at the 300-level or above.

An academic minor plan may also be organized around disciplines or lines of inquiry not necessarily defined by a region in consultation with and approved by a department advisor.

Twelve of the credits counted toward the academic minor must be elected at the University of Michigan or at an overseas program associated with U-M.

COURSES IN ASIAN LANGUAGES AND CULTURES

ASIAN STUDIES (ASIAN)

dit.

A knowledge of Japanese is not required. (4). (HU). May not be repeated for credit. ASIAN 204 / HISTORY 204. East Asia: Early Transformations (4; 3 in the half-term). (HU). May not be repeated for credit. ASIAN 205 / HISTORY 205. Modern East Asia (4; 3 in the half-term). (SS). May not be repeated for credit. ASIAN 206 / HISTORY 206. Indian Civilization (4; 3 in the half-term). (HU). May not be repeated for credit. ASIAN 207 / HISTORY 207. Southeast Asian Civilization (4; 3 in the half-term). (SS). May not be repeated for credit. ASIAN 210 / HISTORY 219. The Philippines: Culture and History (3). (HU). May not be repeated for credit. ASIAN 220 / RELIGION 202. Introduction to the Study of Asian Religions (4). (HU). May not be repeated for credit. ASIAN 221 / GTBOOKS 221. Great Books of China A knowledge of Chinese is not required. (4). (HU). May not be repeated for credit. Taught in English. W (in even years). ASIAN 223 / RELIGION 223. Bhagavad-Gita: The Activist View of Hinduism (3). (HU). May not be repeated for credit. ASIAN 225 / RELIGION 225. Introduction to Hinduism (3). (HU). May not be repeated for credit. ASIAN 230 / PHIL 230 / RELIGION 230. Introduction to Buddhism (4). (HU). May not be repeated for credit. May not be included in a concentration plan in Philosophy. ASIAN 231 / RELIGION 231. Introduction to Tibetan Buddhism (4). (HU). May not be repeated for credit. ASIAN 235. Introduction to the Study of Asian Cultures (4). (HU). May not be repeated for credit. Taught in English. ASIAN 241 / HISTORY 251. The Chinese Renaissance: Cultural Transformations in **Eleventh-Century China** (3). (ID). May not be repeated for credit. ASIAN 243 / HISTART 243. Introduction to South Asian Art (3). (HU). May not be repeated for credit. ASIAN 249 / HISTORY 249. Introduction to Korean Civilization (3). (HU). May not be repeated for credit. ASIAN 250. Undergraduate Seminar in Buddhist Studies No knowledge of an Asian language required. (3). (HU). May not be repeated for creries ASIAN 251. Undergraduate Seminar in Chinese Culture No knowledge of Chinese language is required. (3). (HU). May not be repeated for credit. ASIAN 252. Undergraduate Seminar in Japanese Culture No knowledge of Japanese language is required. (3). (HU). May be elected twice for credit. ASIAN 253. Undergraduate Seminar in South and Southeast Asian Culture No knowledge of any Asian language required. (3). (HU). May be elected twice for credit. ASIAN 254. Undergraduate Seminar in Korean Culture No knowledge of Korean language is required. (3). (HU). May be repeated for a maximum of 6 credits. ASIAN 255. Undergraduate Seminar in Asian Studies (3). (HU). May be elected twice for credit. May be elected more than once in the same term. ASIAN 259 / HISTORY 255. Gandhi's India (4; 3 in the half-term). (HU). (R&E). May not be repeated for credit. ASIAN 260 / HISTORY 252. Introduction to Chinese Civilization (4). (HU). (R&E). May not be repeated for credit. No assumed knowledge of Chinese history, culture, or language required. ASIAN 261. Introduction to Modern Chinese Culture No knowledge of Chinese required. (4). (HU). May not be repeated for credit. Taught in Enalish.

ASIAN 265 / HISTART 265 / PHIL 265 / RCHUMS 265. The Arts and Letters of China (4). (HU). May not be repeated for credit.

ASIAN 280. Topics in Asian Studies (3), (HU). May be elected twice for credit.

ASIAN 300. Love and Death in Japanese Culture

A knowledge of Japanese is not required. (4). (HU). May not be repeated for credit.

ASIAN 301 / WOMENSTD 301. Writing Japanese Women Knowledge of Japanese is not required. (3). (HU). May not be repeated for credit.

ASIAN 302. Rewriting Identities in Modern Japan

Knowledge of Japanese is not required. (3). (HU). May not be repeated for credit. ASIAN 303 / RELIGION 303. Warrior Saints: Introduction to Sikh Religion, Culture, and Ethnicity

(3). (HU). May not be repeated for credit.

ASIAN 305 / RELIGION 305. Religion and Violence in the Secular World (3). May not be repeated for credit.

ASIAN 308 / RCHUMS 308. Arts and Ideas of Modern South and Southeast Asia (3). (HU). May not be repeated for credit.

ASIAN 313. Modernism and Modernity in East Asian Fiction (3). May not be repeated for credit.

ASIAN 317. The Literature of Edo Japan: Poetry, Drama, and Fiction 1600-1900 (3). May not be repeated for credit.

ASIAN 324 / AAPTIS 325 / HISTORY 325 / RELIGION 325. The History of Islam in South Asia

(4). (HU). (R&E). May not be repeated for credit.

ASIAN 325 / RELIGION 323. Zen: History, Culture, and Critique (4). (HU). May not be repeated for credit.

ASIAN 330. Divided Loyalties, Divided Laughter: Understanding South Asia through Literary Humor

(3). (HU). May not be repeated for credit.

ASIAN 332. South Asian Identity: Writing Home from Away (3). (HU). May not be repeated for credit.

ASIAN 340 / AAPTIS 340 / HISTORY 340 / MENAS 340 / REES 340. From Genghis Khan to the Taliban: Modern Central Asia

(4; 3 - 4 in the half-term). (SS). (R&E). May not be repeated for credit.

ASIAN 341 / SAC 341. Bollywood and Beyond: An Introduction to Popular Indian Cinema

(4). (HU). May not be repeated for credit.

ASIAN 354 / HISTORY 354. Rebellion and Revolution in China Through Two Centu-

At least one course in HISTORY or Asian Studies. (4; 3 in the half-term). May not be repeated for credit.

ASIAN 360. Taoism: Historical and Contemporary Incarnations (3). (HU). May not be repeated for credit.

ASIAN 361. The Pursuit of Happiness in the Chinese Tradition (3). (HU). May not be repeated for credit

ASIAN 362 / RCHUMS 362. Writer and Society in Modern China No knowledge of Chinese is required. (4). (HU). May not be repeated for credit.

ASIAN 363. Chinese Drama and Theater

(3). (HU). May not be repeated for credit.

ASIAN 364. The Development of Chinese Fiction (3). (HU). May not be repeated for credit.

ASIAN 365 / HISTORY 339. Science in Premodern China (3). (HU). May not be repeated for credit.

ASIAN 367 / LING 367. Languages of Asia (3). (HU). May not be repeated for credit.

ASIAN 370. Acupuncture: Historical and Contemporary Transformations (3). May not be repeated for credit.

ASIAN 373 / RCHUMS 373. The Performing Arts in South and Southeast Asia (3). (HU). May not be repeated for credit.

ASIAN 380. Topics in Asian Studies

(3). May be repeated for a maximum of 6 credits.

ASIAN 381. Junior/Senior Colloquium for Concentrators

ASIAN 235 with at least a C-. (Prerequisites enforced at registration.) Junior or senior standing and concentration in Asian Studies. (3). May not be repeated for credit. W.

ASIAN 395. Honors Thesis

Consent of instructor required. Honors candidate in Asian Studies. (1 - 3). (INDEPEN-DENT). May be repeated for a maximum of 6 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

ASIAN 400 / HISTORY 422 / RELIGION 400. Indian Religions and Western Thought Junior and above. (3). May not be repeated for credit. Rackham credit requires additional work.

ASIAN 415 / HISTORY 415. Law and Society in Late Imperial and Modern China

Junior or senior standing. No prior knowledge of China or Chinese required. (3). May not be repeated for credit. Rackham credit requires additional work.

ASIAN 420. Korean Literature in Translation

(3). May not be repeated for credit. Taught in English.

ASIAN 428 / POLSCI 339. China's Evolution Under Communism

Upperclass standing. (4; 3 in the half-term). May not be repeated for credit.

ASIAN 460. Gender and Nationalism in Korea

(3). May not be repeated for credit. Rackham credit requires additional work.

ASIAN 461. Southeast Asian Literature

(3; 2 in the half-term). May be repeated for a maximum of 6 credits.

ASIAN 465 / HISTART 466. Sacred Image/Sacred Place in Japanese Art Some background knowledge in HISTART, Japanese, or RELIGION. (3). May not be repeated for credit. Rackham credit requires additional work.

ASIAN 466 / PHIL 456. Interpreting the Zhuangzi

ASIAN/PHIL 263 or another introductory philosophy course. (3). May not be repeated for credit.

ASIAN 480. Topics in Asian Studies

(3). May be elected four times for credit. May be elected more than once in the same term.

ASIAN 499. Independent Study-Directed Readings

Consent of instructor required. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. F, W, Sp/Su, Sp, Su.

ASIAN LANGUAGES (ASIANLAN)

ASIANLAN 101. First Year Chinese I

(5). May not be repeated for credit. Native or near-native speakers of Chinese are not eligible for this course. No credit granted to those who have completed or are enrolled in ASIANLAN 103.

ASIANLAN 102. First Year Chinese II

ASIANLAN 101. (Prerequisites enforced at registration.) (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 103.

ASIANLAN 103. Intensive First Year Chinese

Consent of instructor required. Permission of instructor. (10). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 101 and 102, or 104.

ASIANLAN 104. First Year Chinese for Mandarin Speakers

Consent of instructor required. Permission of instructor. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 101, 102, 103.

ASIANLAN 111. First Year Filipino I

(4). May not be repeated for credit.

ASIANLAN 112. First Year Filipino II

ASIANLAN 111. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 115. First Year Hindi I

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 117. Students with prior knowledge of Hindi are encouraged to take ASIANLAN 118.

ASIANLAN 116. First Year Hindi II

ASIANLAN 115. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 117.

ASIANLAN 118. Reading and Writing Hindi I

Permission of instructor. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 115.

ASIANLAN 119 / AAPTIS 119. Introductory Central Asian Language I

(4 - 5). May be elected three times for credit. May be elected more than once in the same term. AAPTIS 519.

ASIANLAN 121. First Year Indonesian I

(4). May not be repeated for credit.

ASIANLAN 122. First Year Indonesian II

ASIANLAN 121. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIAN LANGUAGES AND CULTURES (ALC) / 71

ASIANLAN 124. Accelerated Elementary Japanese

Students must pass the placement test given by the Japanese Language program. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ASIANLAN 125. First Year Japanese I

(5). May not be repeated for credit. Native or near-native speakers of Japanese are not eligible for this course. No credit granted to those who have completed or are enrolled in ASIANLAN 127 or 129.

ASIANLAN 126. First Year Japanese II

ASIANLAN 124 or 125. (Prerequisites enforced at registration.) (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 127 or 129.

ASIANLAN 127. Intensive First Year Japanese

Permission of instructor. (10). May not be repeated for credit. No credit granted to those who have competed or are enrolled in ASIANLAN 125, 126, or 129.

ASIANLAN 129 / RCLANG 196. Intensive Japanese I

Consent of instructor required. (10). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 125, 126, or 127.

ASIANLAN 135. First Year Korean I

(5). May not be repeated for credit. Native or near-native speakers of Korean are not eligible for this course. No credit granted to those who have completed or are enrolled in ASIANLAN 137.

ASIANLAN 136. First Year Korean II

ASIANLAN 135. (Prerequisites enforced at registration.) (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 137.

ASIANLAN 138. Reading and Writing Korean I

Consent of instructor required. (5). May not be repeated for credit. No credit granted for students who have completed or are enrolled in ASIANLAN 135, 136, or 137.

ASIANLAN 145. First Year Punjabi I

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SSEA 371.

ASIANLAN 146. First Year Punjabi II

ASIANLAN 145. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SSEA 371.

ASIANLAN 151. First Year Sanskrit I

(4). May not be repeated for credit.

ASIANLAN 152. First Year Sanskrit II

ASIANLAN 151. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SSEA 369.

ASIANLAN 155. First Year Tamil I

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 157.

ASIANLAN 156. First Year Tamil II

ASIANLAN 155. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 157.

ASIANLAN 161. First Year Thai I

(4). May not be repeated for credit.

ASIANLAN 162. First Year Thai II

ASIANLAN 161. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 165. First Year Tibetan I

(4). May not be repeated for credit. Graduate students should elect BUDDHST 501.

ASIANLAN 166. First Year Tibetan II

ASIANLAN 165. (Prerequisites enforced at registration.) (4). May not be repeated for credit. Graduate students should elect BUDDHST 502.

ASIANLAN 171. First Year Urdu I

(4). May not be repeated for credit.

ASIANLAN 172. First Year Urdu II

ASIANLAN 171. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 175. First Year Vietnamese I

(4). May not be repeated for credit.

ASIANLAN 176. First Year Vietnamese II

ASIANLAN 175. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 201. Second Year Chinese I

ASIANLAN 102 or 103. (Prerequisites enforced at registration.) Native or near-native speakers of Chinese are not eligible for this course. (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 203.

ASIANLAN 202. Second Year Chinese II

ASIANLAN 201. (Prerequisites enforced at registration.) (5). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 203.

ASIANLAN 203. Intensive Second Year Chinese

ASIANLAN 102 or 103. (Prerequisites enforced at registration.) (10). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 201 or 202.

ASIANLAN 204. Second Year Chinese for Mandarin Speakers

ASIANLAN 104. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 201, 202, or 203.

ASIANLAN 205. Mandarin Pronunciation

ASIANLAN 101. (2). May not be repeated for credit.

ASIANLAN 211. Second Year Filipino I

ASIANLAN 112. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 212. Second Year Filipino II

ASIANLAN 211. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit.

ASIANLAN 215. Second Year Hindi I

ASIANLAN 116, 117, or 118. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 217.

ASIANLAN 216. Second Year Hindi II

ASIANLAN 215. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 217.

ASIANLAN 221. Second Year Indonesian I

ASIANLAN 122. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 222. Second Year Indonesian II

ASIANLAN 221. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit.

ASIANLAN 225. Second Year Japanese I

ASIANLAN 126, 127 or 129. (Prerequisites enforced at registration.) Native or nearnative speakers of Japanese are not eligible for this course. (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 227 or 229.

ASIANLAN 226. Second Year Japanese II

ASIANLAN 225. (Prerequisites enforced at registration.) (5). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 227 or 229.

ASIANLAN 227. Intensive Second Year Japanese

ASIANLAN 126 or 127 or 129 or RCLANG 196. (Prerequisites enforced at registration.) (10). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 225, 226 or 229.

ASIANLAN 229 / RCLANG 296. Intensive Japanese II

Consent of instructor required. ASIANLAN 129 or RCLANG 196. (10). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 225, 226, and 227.

ASIANLAN 235. Second Year Korean I

ASIANLAN 136 or 137. (Prerequisites enforced at registration.) Native or near-native speakers of Korean are not eligible for this course. (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 237 or 238.

ASIANLAN 236. Second Year Korean II

ASIANLAN 235. (Prerequisites enforced at registration.) (5). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 237.

ASIANLAN 238. Reading and Writing Korean II

Consent of instructor required. ASIANLAN 138. (5). (Lang Req). May not be repeated for credit. No credit granted for students who have completed or are enrolled in ASIANLAN 235, 236, or 237.

ASIANLAN 245. Second Year Punjabi I

ASIANLAN 146. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SSEA 372.

ASIANLAN 246. Second Year Punjabi II

ASIANLAN 245. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SSEA 372.

ASIANLAN 251. Second Year Sanskrit I

ASIANLAN 152. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 252. Second Year Sanskrit II

ASIANLAN 251. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit.

ASIANLAN 255. Second Year Tamil I

ASIANLAN 156 or 157. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 257.

ASIANLAN 256. Second Year Tamil II

ASIANLAN 255. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 257.

ASIANLAN 261. Second Year Thai I

ASIANLAN 162. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 262. Second Year Thai II

ASIANLAN 261. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit.

ASIANLAN 265. Second Year Tibetan I

ASIANLAN 166. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 266. Second Year Tibetan II

ASIANLAN 265. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit.

ASIANLAN 271. Second Year Urdu I

ASIANLAN 172. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 272. Second Year Urdu II

ASIANLAN 271. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit.

ASIANLAN 275. Second Year Vietnamese I

ASIANLAN 176. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 276. Second Year Vietnamese II

ASIANLAN 275. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit.

ASIANLAN 285. Second Year Bengali I

ASIANLAN 186 or permission of instructor. (4). May not be repeated for credit. ASIANLAN 286. Second Year Bengali II

ASIANLAN 285 or permission of instructor. (4). (Lang Req). May not be repeated for credit.

ASIANLAN 301. Third Year Chinese I

ASIANLAN 202 or 203. (Prerequisites enforced at registration.) (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 303 or 304.

ASIANLAN 302. Third Year Chinese II

ASIANLAN 301. (Prerequisites enforced at registration.) (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 303 or 304.

ASIANLAN 304. Third Year Chinese for Mandarin Speakers

ASIANLAN 204. Conducted solely in Chinese. (4). May not be repeated for credit. Taught in Chinese.

ASIANLAN 305. Advanced Spoken Chinese I

ASIANLAN 202 or 203. (2). May be elected twice for credit.

ASIANLAN 306. Advanced Spoken Chinese II

Native or near-native speakers of Mandarin can not earn credit for this course. (2). May not be repeated for credit.

ASIANLAN 307. Mandarin for Cantonese Speakers I

ASIANLAN 302. (2). May not be repeated for credit.

ASIANLAN 308. Mandarin for Cantonese Speakers II

ASIANLAN 302 or 307 or permission of instructor. (2). May be repeated for a maximum of 4 credits.

ASIANLAN 309. Media Chinese I

ASIANLAN 301, 303, or 304. (4). May not be repeated for credit.

ASIANLAN 325. Third Year Japanese I

ASIANLAN 226, 227, or 229. (Prerequisites enforced at registration.) Native or nearnative speakers of Japanese are not eligible for this course. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 327.

ASIANLAN 326. Third Year Japanese II

ASIANLAN 325. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 327 (or JAPANESE 411).

ASIANLAN 335. Third Year Korean I

ASIANLAN 236, 238 or 237. (Prerequisites enforced at registration.) Native or nearnative speakers of Korean are not eligible for this course. (4). May not be repeated for credit.

ASIANLAN 336. Third Year Korean II

ASIANLAN 335. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 401. Fourth Year Chinese I

ASIANLAN 302, 303, or 304. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 402. Fourth-Year Chinese I

ASIANLAN 401. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 404. Reading and Writing Chinese IV

ASIANLAN 304 or equivalent. (4). May not be repeated for credit.

ASIANLAN 405. Chinese for Professions I

ASIANLAN 302, 303, or 304 or equivalent. (3). May not be repeated for credit. Rackham credit requires additional work.

ASIANLAN 406. Chinese for the Professions II

ASIANLAN 405. (Prerequisites enforced at registration.) ASIANLAN 302 or 303. (3). May not be repeated for credit.

ASIANLAN 407. Advanced Readings in Modern Chinese

ASIANLAN 402 or equivalent, or permission of instructor. (3). May not be repeated for credit.

ASIANLAN 408. Chinese Translation and Presentation

ASIANLAN 402, 405, 406, 407, or permission of instructor. (3). May not be repeated for credit.

ASIANLAN 409. Literary Chinese I

ASIANLAN 202 or 203. (3). May not be repeated for credit.

ASIANLAN 410. Literary Chinese II

ASIANLAN 202 or 203. (3). May not be repeated for credit.

ASIANLAN 411. Advanced Filipino I

ASIANLAN 212. (Prerequisites enforced at registration.) (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 412, Advanced Filipino I

ASIANLAN 411. (Prerequisites enforced at registration.) ASIANLAN 311. (3). May be elected twice for credit. Rackham credit requires additional work

ASIANLAN 414. Language and Narrative in Modern Japanese Fiction

ASIANLAN 326. (3). May not be repeated for credit. Rackham credit requires additional work.

ASIANLAN 417. Advanced Hindi I

ASIANLAN 216 or 217. (Prerequisites enforced at registration.) (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 418. Advanced Hindi II

ASIANLAN 417. (Prerequisites enforced at registration.) ASIANLAN 316. (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANI AN 419, Advanced Indonesian I

ASIANLAN 222. (Prerequisites enforced at registration.) (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 420. Advanced Indonesian II

ASIANLAN 419. (Prerequisites enforced at registration.) ASIANLAN 321. (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 423. Javanese I

Permission of instructor. (4). May not be repeated for credit.

ASIANLAN 424. Javanese II

ASIANLAN 423. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 425. Media Japanese I

ASIANLAN 326 or 327. (Prerequisites enforced at registration.) ASIANLAN 326 with Bor above or pass a placement test. (3). May not be repeated for credit.

ASIANLAN 426, Media Japanese II

ASIANLAN 425. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ASIANLAN 429. Japanese Through Business and Social Topics I

ASIANLAN 326 or 327. (Prerequisites enforced at registration.) ASIANLAN 326 with Bor above or pass a placement test. (3). May not be repeated for credit. Rackham credit requires additional work.

ASIANLAN 430. Japanese Through Business and Social Topics II

ASIANLAN 429. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ASIANLAN 432. Japanese Pedagogy for Beginners

4th year proficiency in Japanese Language. (3). May not be repeated for credit. Rackham credit requires additional work.

ASIANLAN 433. Classical Japanese I

ASIANLAN 226 or 227. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIAN LANGUAGES AND CULTURES (ALC) / 73

ASIANLAN 434. Classical Japanese II

ASIANLAN 433. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ASIANLAN 435. Readings in Modern Korean I

ASIANLAN 336. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ASIANLAN 436. Readings in Modern Korean II

ASIANLAN 435. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ASIANLAN 439. Academic Japanese I

ASIANLAN 326 with A- or above or pass a placement test. Students must also have mastery of over 1500 kanji and a solid foundation in grammar and reading. (2). May not be repeated for credit. Rackham credit requires additional work

ASIANLAN 440. Academic Japanese II

ASIANLAN 439 with A- or above. (2). May not be repeated for credit. Rackham credit requires additional work.

ASIANLAN 451. Advanced Sanskrit I

ASIANLAN 252 or equivalent, or permission of instructor. (3). May not be repeated for credit.

ASIANLAN 452. Advanced Sanskrit II

ASIANLAN 451 or equivalent, or permission of instructor. (3). May not be repeated for credit.

ASIANLAN 455. Advanced Tamil I

ASIANLAN 256 or 257. (Prerequisites enforced at registration.) (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 456. Advanced Tamil II

ASIANLAN 455. (Prerequisites enforced at registration.) ASIANLAN 355. (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 461, Advanced Thai I

ASIANLAN 262. (Prerequisites enforced at registration.) (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 462, Advanced Thai II

ASIANLAN 461. (Prerequisites enforced at registration.) ASIANLAN 361. (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 465. First Year Classical Tibetan I

(3). May not be repeated for credit.

ASIANLAN 466. First Year Classical Tibetan II ASIANLAN 465. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ASIANLAN 469. Advanced Classical Tibetan I

ASIANLAN 468. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ASIANLAN 470. Advanced Classical Tibetan II

ASIANLAN 469. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ASIANLAN 471. Advanced Urdu I

ASIANLAN 272. (Prerequisites enforced at registration.) (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 472. Advanced Urdu II

ASIANLAN 471. (Prerequisites enforced at registration.) ASIANLAN 371. (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 475. Advanced Vietnamese I

ASIANLAN 276. (Prerequisites enforced at registration.) (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 476. Advanced Vietnamese II

ASIANLAN 475. (Prerequisites enforced at registration.) (3). May be elected twice for credit. Rackham credit requires additional work.

ASIANLAN 499. Independent Language Study

Permission of Instructor. (1 - 5). (INDEPENDENT). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

Asian/Pacific Islander American Studies (see American Culture)

Astronomy

830 David M. Dennison Building 500 Church Street (734) 764-3440 (phone) (734) 763-6317 (fax) www.astro.lsa.umich.edu Professor Douglas O. Richstone, Chair

Professors

Hugh D. Aller (Ralph B. Baldwin Professor of Astronomy), Radio Astronomy, Active Extragalactic Objects, VLBI Joel N. Bregman (Heber D. Curtis Collegiate Professor of Astronomy), Interstellar Medium, Quasars, Fluid Dynamics Nuria Calvet, Star Formation, Accretion Disks

Lee Hartmann, Star Formation

Mario Mateo, Stellar Populations in Galaxies

Douglas O. Richstone (Lawrence H. Aller Collegiate Professor of Astronomy), *Galaxy Structure, Formation, and Evolution; Black Holes*

Associate Professor

Eric Bell, *Galaxy Formation and Extra-Galactic Astronomy*Ted Bergin, *Star Formation, Interstellar Chemistry*John D. Monnier, *Star Formation; Stellar Evolution, High-Resolution Imaging; Optical Interferometry*Sally Oey, *Star Formation and Galactic Structure*

Assistant Professors

Oleg Y. Gnedin, *Theoretical Astrophysics, Galaxies* Christopher J. Miller, *Cosmology, Extra-Galactic Astronomy* Jon Miller, *Black Holes, High Energy Astrophysics, Accretion* Mateusz Ruszkowski, *High Energy Astrophysics, Active Galactic Nuclei*

Marta Volonteri, Black Hole Formation, Cosmology

Professors Emeriti Charles R. Cowley, Guenther H. Elste, Gordon M. MacAlpine, Helen D. Prince, Richard G. Teske

Will the universe expand forever? Is there life on other planets? How do stars form, live, and die? These are some of the exciting questions confronting astronomers in the twenty-first century. Because of the awe-inspiring immensity of the subject, the study of astronomy has a strong fascination – poetic, philosophical, speculative – for many individuals. In the modern observatory, however, the urge to understand and discover what is happening in the universe finds expression in the scientific pursuit of the subject. To explore the dynamics of colliding galaxies and of interstellar gas in galaxies, to find the compositions of chemically peculiar stars and supernovae remnants, to explain radio-galaxy variations and atomic emissions of quasars – some of the active areas in the Michigan Department of Astronomy – requires patience and dedication, together with the curiosity and talent characteristic of all scientists.

The Astronomy curriculum is useful to students seeking a general knowledge of astronomy as part of a liberal arts education as well as to those preparing for a professional career in the field. The introductory sequences provide an understanding of the structure and evolution of the universe, introduce basic concepts of science, and acquaint students with scientific methods. These introductory courses (ASTRO 101 and 102; 104; 111 and 112; 130; 160) both stimulate and satisfy intellectual curiosity and lay the foundation for advanced work.

Astronomy has been pursued at the University of Michigan since 1856, and the historic Detroit Observatory still stands in its original location on Observatory Street as a reminder of the department's longevity, although astronomical research is no longer performed there. The department operates a planetarium, undergraduate laboratories, and small telescopes located on the top floor of Angell Hall. It operates four research telescopes at three different sites: a 26 meter Radio Observatory located minutes away from campus, a 0.6 meter Curtis Schmidt telescope on Cerro Tololo, Chile, and two telescopes of 1.3 and 2.4 meter aperture at MDM (Michigan-Dartmouth-MIT) Observatory located on Kitt Peak near Tucson, Arizona. Graduate students have access to all of these instruments.

Student Astronomical Society (SAS). SAS provides a forum, primarily for undergraduate students, where they can learn about the astronomical profession. To further this end SAS holds regular meetings, sponsors lectures, provides tutoring in Astronomy classes, participates in Inreach/Outreach programs for local primary and secondary school students, and holds Public Viewing Nights at the Angell Hall Observatory.

Honors Research Tutorials. Students participating in the Honors Science Program may elect HONORS 291 and 292 through the Astronomy Department during the sophomore year. Professor Bregman assigns students on the basis of interests and background to participating staff members.

Astronomy & Astrophysics

May be elected as a departmental concentration program

Prerequisites to Concentration. ASTRO 160 is preferred but ASTRO 101, 102, 111, 112, 120, 125, or 130 will be accepted; Mathematics through MATH 216; PHYSICS 140/141, 240/241 (or Honors equivalents), and 340/341.

Concentration Program. ASTRO 361, 399, 402, 404, and 429 form the core of the concentration program. All astronomy concentrators also must elect PHYSICS 390, 401, 405, 453, and one of the following mathematics courses: MATH 404, MATH 450, MATH 556, or PHYSICS 451. In addition, all astronomy concentrators are required to elect one of the following: ASTRO 401, 403, 405, or 406. Students are urged to complete the requirements in physics and mathematics as soon as possible. Students planning graduate work might benefit from knowledge of Spanish, but this is not essential.

Honors Concentration. Students who are interested in scholarly research in astronomy and have a cumulative grade point average of 3.5 are encouraged to consider Honors concentration. Students with a lower GPA may be admitted to the program at the discretion of the concentration advisor. The program requires writing a senior Honors thesis based on research done in collaboration with a faculty member. Interested students should consult with the concentration advisor by the beginning of their junior year.

Advising. The concentration advisor is Professor Bregman. Information about scheduling advising appointments is available from the department office.

Astronomy & Astrophysics Academic Minor

An academic minor in Astronomy and Astrophysics is not open to students with a concentration in Department of Astronomy.

This academic minor will give students a good understanding of the astrophysics of stars, galaxies, and the universe, as well as a broad introduction to the Solar system.

Students wishing to pursue an academic minor in Astronomy and Astrophysics must develop a specific plan for its completion in consultation with the department's designated advisor. Information about scheduling advising appointments is available from the department office.

Prerequisites to the Academic Minor: Mathematics through differential equations: MATH 216 or its equivalent, and PHYSICS 140/141, 240/241, 340/341, and 390.

Academic Minor Program: 15 credits of courses as follows:

- 1. No more than two Introductory Courses from this group
 - a. Introduction to Astronomy and Astrophysics: ASTRO 160 (preferred) or 102 or 112.
 - b. Introduction to the Solar System: ASTRO 101 or 111.
- Core Courses: at least two courses chosen from among: ASTRO 361, 402, 404.
- Electives: Remaining credits can be selected from ASTRO 399, 401, 403, 405, 406, 427.

COURSES IN ASTRONOMY (ASTRO)

ASTRO 101. Introductory Astronomy: The Solar System and the Search for Life Beyond Earth

A basic high school math and science background. (4). (NS). (BS). (QR/2). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASTRO 111 or 115. F, W.

ASTRO 102. Introductory Astronomy: Stars, Galaxies, and the Universe

A basic high school math and science background. (4). (NS). (BS). (QR/2). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASTRO 112, 120, 130, or 160. F, W.

ASTRO 103 / AOSS 101. Rocket Science

(3 in the half-term). (NS). (BS). May not be repeated for credit.

ASTRO 104. Alien Skies: A Tour Through the Universe

(3). (NS). (BS). (QR/2). May not be repeated for credit.

ASTRO 115. Introductory Astrobiology: The Search for Life in the Universe

Basic high school math and science background. (3). (NS). (BS). (QR/2). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASTRO 101 or 111.

ASTRO 120. Frontiers of Astronomy

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASTRO 102, 112, 125 or 160. F.

ASTRO 127. Naked Eye Astronomy

(1). (NS). (BS). May not be repeated for credit. No credit earned for students who are enrolled in or have completed ASTRO 188.

ASTRO 142. From the Big Bang to the Milky Way

(3). (NS). (BS). (QR/2). May not be repeated for credit. No credit granted to students who have completed or are enrolled in PHYSICS 112.

ASTRO 160. Introduction to Astrophysics

Calculus and physics at the high school or university level is strongly recommended. (4). (NS). (BS). (QR/2). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASTRO 102. F, W.

ASTRO 188. The Cosmos Through the Constellations

(3). (NS). (BS). (QR/2). May not be repeated for credit.

ASTRO 261 / NAVSCI 301. Navigation

(3). (BS). May not be repeated for credit. F.

ASTRO 361. Astronomical Techniques

ASTRO 160 or permission of instructor. (4). (BS). May not be repeated for credit. W.

ASTRO 389. Individual Studies in Astronomy

Consent of instructor required. Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for credit.

ASTRO 399. Introduction to Research

Consent of instructor required. Permission of instructor. (1 - 3). (BS). (INDEPENDENT). May be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

ASTRO 402. Stellar Astrophysics

MATH 216, and prior or concurrent enrollment in PHYSICS 340. (3). (BS). May not be repeated for credit. F.

ASTRO 403. Astrophysics of the Interstellar Medium

MATH 216 and prior or current enrollment in PHYSICS 340 (or 260) and 390. (3). (BS). May not be repeated for credit. F.

ASTRO 404. Galaxies and the Universe

MATH 216 and prior or concurrent enrollment in PHYSICS 340 and PHYSICS 390. (3). (BS). May not be repeated for credit. W.

ASTRO 405. High Energy Astrophysics

MATH 216 and prior or concurrent enrollment in PHYSICS 340 and PHYSICS 390. (3). (BS). May not be repeated for credit. F.

ASTRO 406. Computational Astrophysics

MATH 216, prior or concurrent enrollment in PHYSICS 240 (or 260), and some knowledge of programming. (3). (BS). May not be repeated for credit. W.

ASTRO 429. Senior Seminar

Senior Astronomy concentrators. ASTRO 402 and 404. (2). (BS). May not be repeated for credit. F.

Atmospheric, Oceanic and Space Sciences (AOSS)

Atmospheric, Oceanic and Space Sciences College of Engineering 2204 Space Research Building (734) 763-6234 (phone) (734) 763-0437 (fax) aoss.engin.umich.edu

Not an LSA concentration program

AOSS, a department in the College of Engineering, is the only one that combines science and engineering, offering an integrated view of Earth and space. The blending of atmospheric and space sciences with engineering puts AOSS at the forefront of the movement to understand the Earth, atmosphere, planets, solar system and space weather in a whole systemic view, rather than individual components. AOSS participates with the Department of Geological Sciences to sponsor the concentration in *Earth Systems Science* (see Geological Science's listing for a description of the program).

Although AOSS courses are offered through the College of Engineering, several courses are approved by LSA to earn LSA credits and some may be used to meet distribution requirements. Other Atmospheric, Oceanic, and Space Sciences courses are listed in the *College of Engineering Bulletin*, and in the *Schedule of Classes* as part of the offerings of the College of Engineering in the AOSS subsection and may be elected by LSA students as a part of non-LSA course work.

Students who have a serious professional interest in the field should consult the department.

COURSES IN ATMOSPHERIC, OCEANIC & SPACE SCIENCES (AOSS)

The following courses count as LSA courses for LSA degree credit.

AOSS 101 / ASTRO 103. Rocket Science (3 in the half-term). (NS). (BS). May not be repeated for credit.

AOSS 102 / ENVIRON 102 / GEOSCI 122. Extreme Weather

(3). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AOSS 202.

AOSS 105 / CHEM 105 / ENSCEN 105 / ENVIRON 105. Our Changing Atmosphere (3). (NS). (BS). May not be repeated for credit.

AOSS 171 / BIOLOGY 110 / ENSCEN 171 / ENVIRON 110 / GEOSCI 171. Introduction of Global Change: Physical Processes

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. Satisfies the geography requirement for State of Michigan certification for social studies teachers. F.

AOSS 172 / ENSCEN 172 / ENVIRON 111 / GEOG 111 / GEOSCI 172 / SOC 111. Introduction to Global Change: Human Impacts

(4). (SS). May not be repeated for credit. May not be included in a concentration plan. Satisfies the geography requirement for State of Michigan certification for social studies teachers. W.

AOSS 320 / GEOSCI 320. Earth Systems Evolution

MATH 116. (4). (BS). May not be repeated for credit.

AOSS 321 / GEOSCI 321. Earth Systems Dynamics

Preceded or accompanied by MATH 215 or 216. (4). (BS). May not be repeated for credit.

AOSS 323 / GEOSCI 323. Earth System Analysis

(4). (BS). May not be repeated for credit.

AOSS 350 / GEOSCI 350. Atmospheric Thermodynamics

MATH 216 or 256 or 286 or 316, with a C or better. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit.

AOSS 370 / GEOSCI 370. Solar-Terrestrial Relations

MATH 216 and PHYSICS 240. (4). (BS). May not be repeated for credit.

AOSS 380 / GEOSCI 381. Introduction to Atmospheric Radiation MATH 216 or 256 or 286 or 316, with a C or better. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit.

AOSS 401 / GEOSCI 401. Geophysical Fluid Dynamics PHYSICS 240, MATH 215, MATH 216, AOSS 323. (4). (BS). May not be repeated for credit.

AOSS 410 / GEOSCI 409. Earth System Modeling

GEOSCI 320 and 321; or AOSS 320 and 321. (4). (BS). May not be repeated for credit. AOSS 411 / GEOSCI 411. Cloud and Precipitation Processes

350, MATH 216. (3). (BS). May not be repeated for credit.

AOSS 414 / GEOSCI 414. Weather Systems

Biological Chemistry

U-M Medical School

(734) 764-8584 (phone)

(734) 763-4581 (fax)

1150 West Medical Center Drive

e-mail: umbiochem@umich.edu

Not a concentration program

repeated for a maximum of 4 credits.

BIOLCHEM 415. Introductory Biochemistry

www.biochem.med.umich.edu/biochem

Bulletin in Chapter VI under Chemistry.

AOSS 350, AOSS 401, AOSS 551. (3). (BS). May not be repeated for credit.

AOSS 422 / GEOSCI 423. Boundary Layer Meteorology *AOSS 350 or equivalent. (4). (BS). May not be repeated for credit.*

AOSS 440 / GEOSCI 454. Meteorological Analysis Laboratory AOSS 350, AOSS 401. (4). (BS). May not be repeated for credit.

AOSS 451 / ENSCEN 451 / GEOSCI 457. Atmospheric Dynamics I

AOSS 401 or MATH 450. (4). (BS). May not be repeated for credit.

5301 Medical Science Research Building III, Box 5606

COURSES IN BIOLOGICAL CHEMISTRY (BIOLCHEM)

The following count as LSA courses for LSA degree credit.

BIOLCHEM 398. Undergraduate Research in Biochemistry

The Department of Biological Chemistry is a participating unit in the

interdepartmental Biochemistry concentration program listed in this

Consent of instructor required. Junior standing and permission of the Biological Che-

Two terms of organic chemistry. (3). (BS). May not be repeated for credit. No credit

mistry Professor who will supervise the research. (1 - 4). (BS). (INDEPENDENT). May be

AOSS 467 / CHEM 467 / ENSCEN 467 / ENVIRON 467 / GEOSCI 465. Biogeochemical Cycles

MATH 116, CHEM 210, and PHYSICS 240 (or 260). (3). (BS). May not be repeated for credit. F, W.

AOSS 475 / ENSCEN 475 / GEOSCI 475. Earth System Interactions

Senior standing in science or engineering. (4). (BS). May not be repeated for credit.

Biological Chemistry

granted to those who have completed or are enrolled in BIOLOGY 310 or 311, MCDB 310 or 311, CHEM 451, or BIOLCHEM 451 or 515. F.

BIOLCHEM 416. Introductory Biochemistry Laboratory

Qualitative analysis; prior or concurrent election of BIOLCHEM 415 or 451/452 or CHEM 451/452. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in BIOLOGY 429 or BIOLCHEM 516. F.

BIOLCHEM 451 / CHEM 451. Advanced Biochemistry: Macromolecular Structure and Function

(4). (BS). May not be repeated for credit. F.

BIOLCHEM 452 / CHEM 452. Advanced Biochemistry: Cellular Processes Must have completed CHEM 351 or MCDB 310 or BIOLCHEM 415 with a grade of C- or better. Consent of instructor required. (Prerequisites enforced at registration.) (4).

(BS). May not be repeated for credit. W.

BIOLCHEM 499. Biochemical Research for Undergraduates: Laboratory Consent of instructor required. BIOLCHEM 415 or 451/452; permission of the course director. (1 - 6; 1 - 4 in the half-term). (BS). (INDEPENDENT). May be repeated for cre-

BIOLCHEM 673 / CHEM 673. Kinetics and Mechanism

BIOLCHEM 550, CHEMBIO 501, or equivalent, undergrad calculus. Physical Chemistry is recommended. (2). (BS). May not be repeated for credit.

BIOLCHEM 675 / CDB 675 / MICRBIOL 675. Advanced Topics in the Secretory-Endocytic Pathway: Current Issues in Protein and Membrane Assembly and Trafficking

CDB 530; Course in Cell Biology or graduate standing. (2). (BS). May not be repeated for credit.

Biological Station

dit. F. W. Sp/Su

Campus Address

2541 Chemistry Building 930 North University Avenue Ann Arbor, MI 48109-1055 (734) 763-4461 (phone) (734) 647-1952 (fax)

Douglas Lake Address

(May – August) 9133 East State Street Pellston, MI 49769-9133 (231) 539-8408 (phone) (231) 539-8785 (fax)

www.lsa.umich.edu/umbs

e-mail: umbs@umich.edu Professor Knute Nadelhoffer (Ecology and Evolutionary Biology), Director

Karie Slavik, Associate Director

The U-M Biological Station Coursework and Community

The University of Michigan Biological Station (UMBS), founded in 1909, is the world's largest inland field station for education and research in biological science. Surrounded by coniferous and deciduous forests, the Biological Station occupies a 10,000-acre tract between Burt and Douglas Lakes in lower Northern Michigan. It is an ideal setting for studying topics related to the natural environment.

The UMBS curriculum focuses on ecology, systematics, field biology, and environmental studies, and courses are taught during Spring and Summer half terms. Two courses of college biology are typically required for admission to UMBS courses, all of which are either upper level or graduate level. The station serves as a tight-knit community, where students, faculty, and researchers interact on a daily basis in classrooms, laboratories, at meal tables, and at various recreational activities. Many past participants call their time living and studying at the Biological Station a truly magical and life-changing experience.

Formal coursework is offered in both a four-week spring term and an eight-week summer term. Classes are taught by the Station's dedicated faculty, who concurrently carry out their own research projects. Enrolled students typically earn five credits in the spring and 10 credits in the summer, taking courses in all aspects of field biology such as limnology, entomology, parasitology, mammalogy, general ecology, evolution, ornithology, phycology, ichthyology, and aquatic sciences. Field work is supported by modern equipment, vehicles, boats, laboratories, and a library. There are typically about 150 students per season in these courses.

Be sure to request the most recent copy of the *UMBS Bulletin* for a complete list of courses. Meanwhile, please see below for an example of some of the courses typically offered at the station.

SPRING:

ANTHRARC 487 Field Training Course in Archaeology BIOLOGY 104 / RCNSCI 104 Introduction to Natural Sciences EEB 381 General Ecology EEB 455 Ethnobotany

SUMMER:

BIOLOGY 482 Limnology: Freshwater Ecology EEB 320 / ENVIRON 311 Rivers, Lakes, & Wetlands EEB 330 Biology of Birds EEB 348 / ENVIRON 348 Forest Ecosystems

- EEB 381 General Ecology
- EEB 390 Natural History & Evolution
- EEB 400 Advanced Research in Biology
- EEB 442 Biology of Insects
- EEB 453 Field Mammalogy (even years)
- EEB 457 Algae in Freshwater Ecosystems (even years)
- EEB 486 Biology and Ecology of Fishes (odd years)
- EEB 492 Behavioral Ecology (odd years)
- EEB 556 Field Botany of Northern Michigan
- EEB 700 Advanced Studies in Biology
- ENGLISH 317 & 328 or ENVIRON 377 & 300 Environmental Writing & Great Lakes Literature

Research Programs for Students

In addition to regular courses, the Biological Station offers a Research Experience for Undergraduates (REU) program. The REU program is an intensive eight-week program designed to provide hands-on experience and training in field biology and atmospheric science with all phases of research, including hypotheses formulation, data gathering, analysis, interpretation, and communication of scientific studies. Students receive a stipend.

Specialized Research Facilities

Specialized research facilities include a greenhouse and elevated carbon dioxide facility (open top chamber arrays for studying the responses of multiple trophic levels of terrestrial and aquatic ecosystems to elevated atmospheric CO_2), a soil biotron (a building built into the soil with 34 windows on the soil profile), an artificial stream facility on the east branch of the Maple River (water can be pumped out of the river to a concrete pad and distributed into small artificial streams in many ways), and stations for precipitation chemistry (NADP), ultraviolet monitoring (USDA UV-B), and mercury deposition.

A 31m tower was constructed in 1996 to study the atmospheric chemical and meteorological processes linked to tropospheric ozone and oxidant formation. Similarly in 1998 a 50m eddy flux tower was completed to study the movement of carbon dioxide and water in a forested ecosystem with continuous measurements of CO_2 and many environmental parameters. Specimen collections are available to researchers and are especially extensive in birds, fishes, insects, invertebrates and parasites, vascular plants, mosses and lichens.

Scholarships & Financial Assistance

The U-M Biological Station offers a wide range of scholarships and tuition support options to help qualified students who may need financial assistance. These include both merit-based and need-based awards.

We are committed to helping to make sure that young scientists wanting to study at the station have an opportunity to do so. Please visit the UMBS website to learn about financial support options, or call the office at (734) 763-4461.

Program in Biology

1111 E.H. Kraus Natural Science Building 830 North University Avenue (734) 764-2446 (phone) (734) 647-0884 (fax)

www.lsa.umich.edu/biology

Professors Barry M. OConnor (EEB) and Ken Cadigan (MCDB), Co-directors

Biology is an Interdepartmental Program administered jointly by the Department of Ecology and Evolutionary Biology (EEB) and the Department of Molecular, Cellular, and Developmental Biology (MCDB).

Concentrations and Academic Minors. The Biology Program administers concentrations in Biology, General Biology, and Plant Biology and it administers an academic minor in Biology and Plant Biology. Information on the Cell and Molecular Biology (CMB) concentration and the EEB concentration and academic minor is located under the listings for the Department of MCDB (CMB concentrations) or the Department of EEB (EEB concentration and academic minor) in this *Bulletin.*

Advising. Students will be advised by a combination of staff and faculty to discuss individual course selection based on the student's interests, as well as career counseling, and research opportunities. Students who are interested in the Biology concentration should consult a general advisor during the freshman year and are strongly encouraged to meet with a concentration advisor early in their academic career, but no later than the second term of their sophomore year. It is not necessary to complete every prerequisite before declaring a concentration. To make an appointment come in person to the Undergraduate Program Office located in 1111 Kraus Natural Sciences Building.

Teaching Certificate. Students interested in obtaining a secondary teaching certificate with a teaching major or minor in Biology should consult the "Teacher Certification Program" section in this *Bulletin* and the School of Education Teacher Education office.

Field of Concentration. For purposes of calculating grade point average, the term "field of concentration" (for all concentration programs) means the following:

- 1. All BIOLOGY, EEB, MCDB, and Biological Station courses, including cross-listed ones, at the 200-level and above.
- 2. All required cognate courses (if any).
- 3. All mandatory prerequisites.

Introductory Biology Credit Limitation: The maximum amount of credit that can be earned in introductory biology courses is 17 credits. Students interested in concentrating in Biology, General Biology, CMB, or Plant Biology must complete BIOLOGY 171, 172/174 and 173, or BIOLOGY 195 and 173, or equivalent.

Supporting Facilities. Modern teaching and research laboratories house electron microscopes, controlled environment rooms, analytical and preparative centrifuges, spectrophotometers, and other tools essential for modern research in all areas of the biological sciences. In addition, the Herbarium, the Museum of Paleontology, the Museum of Anthropology Ethnobotanical Laboratory, the Museum of Zoology, and the Matthaei Botanical Gardens supplement the instructional and research programs. University-owned research facilities in the vicinity of Ann Arbor include Saginaw Forest, Edwin S. George Reserve, Stinchfield Woods, and Mud Lake Bog. The Biological Station provides additional facilities for instruction and research. The University of Michigan is also a member of the Organization for Tropical Studies.

Biological Station. It is recommended that students with concentrations in Biology or General Biology give serious consideration to spending a summer at a field station, especially the University of Michigan Biological Station, or a marine laboratory. The training and experience provided by such facilities are particularly valuable for students interested in ecology, systematics, animal behavior, and evolutionary biology.

The curriculum at the Biological Station places a strong emphasis on ecology, systematics, field biology, and environmental studies. Courses are taught during the Spring and Summer Half-Terms (IIIa and IIIb) at the Biological Station on the shores of Douglas Lake in northern Lower Michigan. The Biological Station occupies a 10,000 acre tract between Burt and Douglas Lakes and is the world's largest inland field station for instruction and research in biological science.

Located in the transition zone between coniferous forests to the north and deciduous forests to the south, it is surrounded by a remarkable variety of natural communities.

The Biological Station offers students and faculty an opportunity to study together the biota of the regions with a full appreciation of the dynamics of the natural systems involved. The small community of students, faculty, and scientists shares knowledge during meal and recreation times as well as in the classroom, field, and laboratory. Many courses offered at the Biological Station can be used as part of a concentration plan in Biology or Plant Biology with approval from a concentration advisor.

Two courses in college biology are normally required for admission to Biological Station courses, all of which are either upper level or graduate level and are offered for five credits. A normal load at the Biological Station is two courses (ten credits). Each formal course occupies the entire days assigned to it. Field work is supported by modern equipment, vehicles, boats, laboratories, and a fine library.

The phone number for the campus office is (734) 763-4461.

Awards/Fellowships: *K.L. Jones Award.* Since 1977, this award has been given to the outstanding plant sciences undergraduate. The Kenneth L. Jones Undergraduate Award for excellence in botany was endowed by colleagues, friends, and alumni upon the retirement of Professor Jones and consists principally of a sum to enable the recipient to purchase books or equipment of his or her own choice.

J.T. Slater Award. Since 1983, this award has been given to systematic and/or field botanists from among upper-division students. Awards are made on the basis of excellence in classes as well as fieldwork, and are in the form of a check. The award was financed by Professor Slater of the University of Puget Sound, expert in field studies of northwestern ferns. Awardees may be in any school at the University of Michigan, so long as individuals selected excel in the targeted fields.

Underwood-Alger Scholarship. This scholarship program is based on merit and intended to provide support for students concentrating in the biological sciences. For this program, special consideration is given to applicants who are female and have financial need. A gift from Dr. Nelda E Alger provides funding for this scholarship.

Anne Rudo Memorial Award. The award is designated for a student with dual interests in the disciplines of biology and psychology, and superior academic achievement. Information is available in the Psychology Undergraduate Office, 1343 East Hall.

Biology

May be elected as an interdepartmental concentration program

Exclusions: Students who elect a concentration in Biology may not elect the following concentrations: General Biology; Cell and Molecular Biology; Ecology and Evolutionary Biology; Microbiology; Plant Biology; Biochemistry; or Neuroscience. They may also not elect an academic minor in Biology; Ecology and Evolutionary Biology; Plant Biology; Chemistry; or Biochemistry.

This concentration program develops an appreciation of the levels of organization of life, its diversity, and the processes by which life has achieved its present forms. The program is recommended for those who wish to study biology as part of a liberal education, to prepare for a teaching career in secondary schools, or to prepare for graduate study in biology or the health professions.

Prerequisites to Concentration.

- BIOLOGY 171, 172/174, and 173; or BIOLOGY 195 and 173; or BIOLOGY 162 or 163
- CHEM 210/211 and 215/216;
- MATH 115 and 116;
- PHYSICS 125/127 and 126/128; or PHYSICS 135/141 and 235/241; or PHYSICS 140/141 and 240/241.

Concentration Program. 30 credits (Students who have taken BIOLOGY 162 or 163 must take 33 credits to complete the concentration program):

- 1. Select at least one course from each of two groups I-II. (See Course Listings I-II for the available courses in each group.) Students should enroll in these courses as early as possible.
 - I. Molecular, Cellular, and Developmental Biology:

BIOLOGY 207*	(4) Introductory Microbiology
BIOLOGY 208	(3) Embryology
BIOLOGY 222	(3) Introduction to Neurobiology
BIOLOGY 225	(3) Animal Physiology
BIOLOGY 230	(3) Introduction to Plant Biology

Note: Students taking BIOLOGY 225 also are encouraged to take BIOLOGY 226* – Animal Physiology Laboratory (2 credits).

II. Ecology, Evolution, and Organismal Biology:

BIOLOGY 230	* (4) Introduction to Pl	ant Biology
BIOLOGY 252	* (4) Chordate Anatom	y/Phylogeny
BIOLOGY 255	* (4) Plant Diversity	
BIOLOGY 281	(3) General Ecology	
BIOLOGY 288	* (4) Animal Diversity	

Note: Students taking BIOLOGY 281 also are encouraged to take BIOLOGY 282* – General Ecology Lab (3 credits).

An asterisk (*) indicates a laboratory course or a lecture course with a laboratory component

- 2. Required courses in genetics, biochemistry, and evolution:
 - (a). Genetics: BIOLOGY 305;
 - (b). *Biochemistry:* one of MCDB 310, or BIOLCHEM 415, or CHEM 451 and 452, or BIOLCHEM 451 and 452;

(c). Evolution: EEB 390.

- 3. Select one course in EEB or MCDB at the 300- or 400-level (except EEB 302, MCDB 302 or 412).
- 4. Select additional Biology, EEB, or MCDB courses at the 200-level or above (except BIOLOGY 262, EEB 302, MCDB 302, or MCDB 412) to bring the concentration total to at least 30 credits (33 credits for students who have taken BIOLOGY 162 or 163). Two advisor-approved cognate courses may be used. A partial list of these may be obtained from the Biology Office, 1111 Natural Science, or from any concentration advisor.
- 5. A minimum of three laboratory courses. Library "research" and introductory biology laboratories do not qualify. Only three credits of any independent study course may count toward the concentration program. A maximum of three credits of independent research under the direct supervision of a faculty member (EEB 300 or 400, or MCDB 300 or 400), or, on approval of the concentration advisor, three credits of independent research under a faculty member of another University of Michigan department, may be used as one of the three laboratory experiences. Three credits of independent research must be completed in one term to satisfy a laboratory requirement.

General Biology

May be elected as an interdepartmental concentration program

Exclusions: Students who elect a concentration in General Biology may not elect the following concentrations: Biology; Cell and Molecular Biology; Ecology and Evolutionary Biology; Microbiology; Plant Biology; Biochemistry; or Neuroscience. They may also not elect an academic minor in Biology; Ecology and Evolutionary Biology; Plant Biology; Chemistry; or Biochemistry.

General Biology has many of the same aims as Biology, but it is not recommended for students who wish to pursue graduate work in biology. It is an appropriate preprofessional concentration. It differs from Biology in that it requires fewer credits, less laboratory work, and has more breadth, particularly in the form of a non-science cognate course (see below).

Prerequisites to Concentration.

- BIOLOGY 171, 172/174 and 173; or BIOLOGY 195 and 173;
- CHEM 210/211 and 215/216;
- MATH 115 and 116;
- PHYSICS 125/127 and 126/128; or PHYSICS 135/141 and 235/241; or PHYSICS 140/141 and 240/241.

Concentration Program. 24 credits in biology and cognate fields, including (Students who have taken BIOLOGY 162 or 163 must take 27 credits to complete the concentration program):

- 1. Select at least one course from each of two groups I-II. (See Course Listings I-II for the available courses in each group.) Students should enroll in these courses as early as possible.
 - I. Molecular, Cellular, and Developmental Biology:
 - BIOLOGY 207* (4) Introductory Microbiology
 - BIOLOGY 208 (3) Embryology

BIOLOGY 222 (3) Introduction to Neurobiology

BIOLOGY 225 (3) Animal Physiology

BIOLOGY 230 (3) Introduction to Plant Biology

Note: Students taking BIOLOGY 225 also are encouraged to take BIOLOGY 226* – Animal Physiology Laboratory (2 credits).

- II. Ecology, Evolution, and Organismal Biology:
 - BIOLOGY 230* (4) Introduction to Plant Biology
 - BIOLOGY 252* (4) Chordate Anatomy/Phylogeny
 - BIOLOGY 255* (4) Plant Diversity
 - BIOLOGY 281 (3) General Ecology
 - BIOLOGY 288* (4) Animal Diversity

Note: Students taking BIOLOGY 281 also are encouraged to take BIOLOGY 282* – General Ecology Lab (3 credits).

An asterisk (*) indicates a laboratory course or a lecture course with a laboratory component

- Required courses in genetics, biochemistry, and evolution: (a). *Genetics:* BIOLOGY 305;
 - (b). *Biochemistry:* one of MCDB 310, or BIOLCHEM 415, or CHEM 451 and 452, or BIOLCHEM 451 and 452;

(c). *Evolution:* EEB 390.

- 3. Two laboratory or field courses in Biology beyond the introductory level (EEB 300 or 400, or MCDB 300 or 400, independent study, elected for a minimum of 3 credits, may be used for one of the laboratory courses [Three credits of independent research must be completed in one term to satisfy a laboratory requirement.]).
- 4. One cognate course from the "General Biology Cognate List." This list, which is put together by the Biology Curriculum Committee, includes courses offered by non-natural science units that treat biology or natural science generally in the humanistic or social context. These are not science courses, but courses that treat science or scientific issues from a historical, cultural, ethical, or political perspective. A list of these may be obtained from the Biology Office, 1111 Natural Science.

5. Only three credits of any independent study course may count toward the concentration program.

Advising. Appointments with concentration advisors are scheduled in 1111 E.H. Kraus Natural Science Building. Office staff are also prepared to answer questions about various aspects of the program. Questions about content and appropriateness of course elections should be directed to individual instructors or advisors.

Plant Biology

May be elected as an interdepartmental concentration program

Exclusions: Students who elect a concentration in Plant Biology may not elect the following concentrations: Biology, General Biology; Cell and Molecular Biology; Ecology and Evolutionary Biology; Microbiology; or Neuroscience. They may also not elect an academic minor in Biology; Ecology and Evolutionary Biology; Plant Biology; Chemistry; or Biochemistry.

The Plant Biology concentration provides undergraduates with training in those areas of science that are essential to an understanding of modern plant sciences. Like the Biology concentration, this concentration deals with all of the major levels of biological organization (molecular, cellular, organismal, ecological, and evolutionary), but differs from the Biology concentration by its greater emphasis on the biology of plants. This program is well suited for those who wish to study biology as part of a liberal education, or to prepare for a teaching career in secondary schools. It also provides excellent preparation for graduate study in basic and applied areas of the plant sciences and related fields, such as ecology, genetics, microbiology, and biochemistry.

Prerequisites to Concentration.

- BIOLOGY 171, 172/174, and 173; or BIOLOGY 195 and 173; or BIOLOGY 162 or 163;
- CHEM 210/211 and 215/216;
- MATH 115 and 116;
- PHYSICS 125/127 and 126/128; or PHYSICS 135/141 and 235/241; or PHYSICS 140/141 and 240/241.

Concentration Program. A minimum of 30 credits (Students who took BIOLOGY 162 or 163, or have AP credit for BIOLOGY 162 must take 33 credits), including:

- 1. **General Courses.** Choose at least three of the following four courses (* indicates lab courses):
 - a. Genetics: BIOLOGY 305.
 - b. Biochemistry: MCDB 310, or BIOLCHEM 415.
 - c. Evolution: EEB 390.
 - d. Ecology and Evolution: BIOLOGY 281 [or EEB 381*].

2. Required Plant Biology Courses:

- a. Plant Biology: BIOLOGY 230*;
- b. Plant Diversity: BIOLOGY 255* [EEB 436* may be substituted];
- c. Plant Physiology: MCDB 321.
- 3. Choose at least two plant biology elective courses from the specialized course list (EEB 401, 420, 436*, 455*, 459*, 463*, 472, 489*; MCDB 322*, 401, 406, 413*, 430); at least one of these must be a lab course (indicated by *). Three credits of EEB 300/400 or MCDB 300/400 can be included as one of these elective courses, and will count for laboratory credit as well, as long as the research is conducted in a plant biology research lab. Only three credits (total) of independent research credits may count toward the concentration. "Library research" and introductory biology laboratories do not qualify.
- 4. Additional BIOLOGY, EEB, or MCDB courses at the 200-level or above (except BIOLOGY 200, BIOLOGY 262, EEB 302, MCDB 302, MCDB 412) to bring the concentration total to at least 30 credits (33 credits for students who took BIOLOGY 162 or 163, or have AP credit for BIOLOGY 162). One cognate course may be used here (e.g., advanced math, chemistry, physics courses; STATS 400; BIOSTAT 503) with advisor approval. You are strongly encouraged to elect at least two credits of independent research and to enroll for a summer session at the Biological Station. The fourth course, from the required general courses listed in the first category (above) may also be taken and will count as an elective in this category.

Advising. Advising appointments are scheduled at 1111 E.H. Kraus Natural Science Building. Office staff also are prepared to answer questions about various aspects of both programs. Questions about content and appropriateness of course elections should be directed to individual instructors or advisors.

Honors Program

The Honors Program trains students to conduct independent research in Biology. In addition to completing all the requirements for the Biology concentration, an Honors degree requires a concentration GPA of at least 3.4, and the completion of a significant piece of independent research that is reported in an Honors thesis and presented in a public forum.

Admission to the Honors Program. It is recommended that students discuss the Honors Program with a concentration advisor early in their undergraduate career, and to meet with a concentration advisor to declare their Honors no later than six months prior to submission of the thesis.

The Honors Program

1. *Research.* The student must identify a research mentor, preferably by the end of the sophomore year. The research mentor can be a member of the Departments of EEB or MCDB, or a life scientist holding a faculty appointment in another unit of the University, such as the Medical School or the School of Public Health. If the mentor is not a member of the EEB or MCDB Departments, the student must also identify a co-sponsor from within the EEB or MCDB Departments.

Students are encouraged to register for independent research (EEB 300 or 400, or MCDB 300 or 400) for at least two terms; most students register for three or four terms of independent research. Students working in labs outside of EEB or MCDB will usually register for EEB or MCDB 300 and 400 through their cosponsor's independent study number. It is permitted, however, to use the independent study number of another department if the co-sponsor approves it.

It is highly recommended that students arrange to work full time on their Honors thesis during the summer between their junior and senior years. A limited amount of funds are available from university fellowships, so in most cases, support will have to come from the sponsoring lab. For students working in areas of field biology, it is often necessary to arrange for two field seasons to complete a project. For this reason, students working on fieldbased topics are urged to contact faculty about the possibility of starting work during the summer between their sophomore and junior years.

- *Readers.* Prior to submitting the thesis, the student should identify three readers for the thesis, one of whom is the sponsor. At least two readers must be faculty members of the Departments of EEB or MCDB, unless the student receives the written approval of the Biology Honors Committee for an exception. Readers must agree to turn in their evaluations within ten days after the thesis is submitted.
- 3. The Honors Thesis. The thesis will be due on April 1, August 1, or December 1, depending on the anticipated graduation date. Based on the material presented in the Honors thesis and the student's overall record, the readers of the thesis will recommend a rating of "No Honors," "Honors," "High Honors," or "Highest Honors." Readers of Honors theses are expected to file their reports with the Biology Program Honors Committee within ten days after the thesis is submitted. The reports of all readers should address the quality of the science reported in the thesis, as well as the quality of the science report of the mentor should also address the role the student played in the design, execution, and interpretation of the experiments reported in the thesis, and should point out the role that others in the lab played.

The Biology Program Honors Committee will meet approximately two weeks after the due date of theses to review the recommendations of the readers and decide on the appropriate level of Honors. The committee will attempt to maintain uniform standards for Honors and is not constrained by the level of Honors recommended by the readers. The Honors Committee may decide to table discussion and request the student to revise the thesis if they believe that a revised version might merit a higher rating.

4. *Oral Presentation.* The student will present the research results in an advertised public forum, such as a class, poster session, or a departmental seminar. The mentor will declare in the thesis evaluation letter when and where the student has made such a presentation.

Academic Minors in the Program in Biology

Biology

The academic minor in biology offers students a coherent program of study and training in the biological sciences. It provides exposure to the fundamental principles of biology, including studies of the structure, organization, and diversity of life. The academic minor is well suited for students who wish to pursue a career that requires an understanding and appreciation of the life sciences, though it is not intended for students interested in graduate work in biology.

Exclusions: Students who elect an academic minor in Biology may not elect the following concentrations: Biology, General Biology, Plant Biology, Ecology and Evolutionary Biology, Cell & Molecular Biology, Microbiology, Neuroscience, or Biochemistry. They may also not elect an academic minor in Environmental Studies, Plant Biology, Ecology and Evolutionary Biology, or Global Change.

The academic minor in Biology is not intended for students interested in graduate work in the biological sciences.

Prerequisites to the Academic Minor. BIOLOGY 171, 172/174 and 173; or BIOLOGY 195 and 173; or BIOLOGY 162 or 163.

Academic Minor Program. Five courses totaling at least 15 credits in Biology at the 200-level and above (Students who took BIOLOGY 162 or 163, or have AP credit for BIOLOGY 162 must take 17 credits), distributed as follows:

- 1. Two courses chosen from among:
 - Ecology: BIOLOGY 281
 - Genetics: BIOLOGY 305
 - Biochemistry: MCDB 310, or BIOLCHEM 415
 - Evolution: EEB 390.
- One laboratory or field course in BIOLOGY, EEB, or MCDB at the 200-level or above (EEB 300 or 400, or MCDB 300 or 400, independent study, elected for a minimum of 3 credits, may be used as the laboratory course. [Three credits of independent research must be completed in one term to satisfy a laboratory requirement.]).
- 3. One additional BIOLOGY, EEB, or MCDB course at the 300-level or above (except EEB 302, MCDB 302, or MCDB 412). A third course from Group One not used to satisfy Group One requirements may be used to satisfy this requirement.
- 4. Elective courses in BIOLOGY, EEB, or MCDB to bring academic minor credits to at least 15 (17 for students who took BIOLOGY 162 or 163, or have AP credit for BIOLOGY 162).

Plant Biology

An academic minor in Plant Biology provides undergraduates with exposure to several areas of science that are essential to an understanding of modern Botany. This program is well suited for those who wish to study plant biology as part of a liberal arts education, to prepare for a teaching career in secondary schools, as additional breadth for pre-professional students, or who simply have an interest in learning more about plants. It is not intended to provide preparation for graduate study in basic and applied areas of the plant sciences and related fields, such as ecology, microbiology, and biochemistry.

Exclusions: Students who elect an academic minor in Plant Biology may not elect the following concentrations: Biology, General Biology, Plant Biology, Ecology and Evolutionary Biology, Cell & Molecular Biology, Microbiology, Neuroscience, or Biochemistry. They may also not elect an academic minor in Environmental Studies, Biology, Ecology and Evolutionary Biology, or Global Change.

The academic minor in Plant Biology is not recommended for students interested in graduate work in the biological sciences.

Prerequisites to the Academic Minor. BIOLOGY 171, 172/174, and 173; or BIOLOGY 195 and 173; or BIOLOGY 162 or 163.

Academic Minor Program. A minimum of 15 credits in Ecology and Evolutionary (EEB), Molecular, Cellular and Developmental Biology (MCDB) or Program in Biology (BIOLOGY) at the 200-level or above (Students who took BIOLOGY 162 or 163, or have AP credit for BIOLOGY 162 must take 17 credits), distributed as follows:

- 1. **Core courses** in ecology, evolution, biochemistry, and genetics. **Choose two** courses from the following:
 - (a). Ecology: BIOLOGY 281 [or EEB 381 at the University of Michigan Biological Station (UMBS)
 www.lsa.umich.edu/umbs]
 - (b). Evolution: EEB 390, offered in Ann Arbor or at the UMBS
 - (c). Genetics: BIOLOGY 305
 - (d). Biochemistry: MCDB 310 or BIOLCHEM 415.
- Select one plant biology core course from the following list BIOLOGY 230*; 255*; MCDB 321 (* indicates a lab course or course including a lab)
- 3. Select additional **plant biology academic minor electives** from the following list of courses encompassing plant ecology, biodiversity, evolution, structure and development, and physiology, to bring your credit hours to at least 17. At least one course must be a 300-or 400-level course. At least one lab course or course including a lab must be included (* indicates lab course or course including a lab):

BIOLOGY 230*, 255*; 282*; EEB 401, 412, 420, 436*, 459*, 463*; MCDB 321, 322*, 406, 413*, 430, 401 (section titled "Plant Biotechnology")

Advising. Advising appointments are scheduled at 1111 E.H. Kraus Natural Science Building. Office staff are also prepared to answer questions about various aspects of both programs. Questions about content and appropriateness of course elections should be directed to individual instructors or advisors.

COURSES IN BIOLOGY (BIOLOGY)

BIOLOGY 100. Biology for Nonscientists

Some exposure to biology and chemistry at the high school level is assumed. (4). (NS). (BS). May not be repeated for credit. Not open to those with Advanced Placement or "Departmental" credit in biology, nor to those concentrating in the biological sciences. Credit is granted for a combined total of 17 credits elected in introductory biology. F.

BIOLOGY 101. Energy, Food, and the Environment

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. F.

BIOLOGY 102. Practical Botany

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. W.

BIOLOGY 104 / RCNSCI 104. Introduction to the Natural Sciences

First- or second-year standing; written application to the Biological Station. (5 in the half-term). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. Does not meet prerequisites for any of the Biology concentration programs. Sp at the Biological Station.

BIOLOGY 105. Biology of Human Nutrition

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. F.

BIOLOGY 107. Evolution of Life

Some exposure to biology at the high school level is assumed. (3). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology.

BIOLOGY 108. Introduction to Animal Diversity

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. W.

BIOLOGY 109. Ecological Knowledge and Environmental Problem Solving

(3). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. W.

BIOLOGY 110 / AOSS 171 / ENSCEN 171 / ENVIRON 110 / GEOSCI 171. Introduction of Global Change: Physical Processes

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. Satisfies the geography requirement for State of Michigan certification for social studies teachers. F.

BIOLOGY 111. Investigative Biology Laboratory

Prior or concurrent enrollment in BIOLOGY 100 or another 100-level BIOLOGY course. (2). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology.

BIOLOGY 116. Biology of Sex

(3). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology.

BIOLOGY 118. AIDS and Other Health Crises

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. W.

BIOLOGY 120. First Year Seminar in Biology

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology.

BIOLOGY 125. Biotechnology and Society

A high school level course in biology. (3). (NS). (BS). May not be repeated for credit. No credit granted for students who have completed or are enrolled in RCNSCI 270. Credit is granted for a combined total of 17 credits elected in introductory biology.

BIOLOGY 130. Animal Behavior

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. F.

BIOLOGY 140. Genetics and Society

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. F.

BIOLOGY 171. Introductory Biology: Ecology and Evolution

(4). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed BIOLOGY 162 or 163 or 195. Credit is granted for a combined total of 17 credits elected in introductory biology.

BIOLOGY 172. Introductory Biology - Molecular, Cellular, and Developmental

Prior or concurrent enrollment in CHEM 130. (4). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in BIOLOGY 162, 163, 174, or 195. Credit is granted for a combined total of 17 credits elected in introductory biology.

BIOLOGY 173. Introductory Biology Laboratory

BIOLOGY 163 or 171 or 172 or 174 or 195. (Prerequisites enforced at registration.) Students should have completed one of the introductory lecture courses [either BIOL-OGY 171 or (172 or 174]] and be concurrently enrolled in the other. (2). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed BIOLOGY 162. Credit is granted for a combined total of 17 credits elected in introductory biology.

BIOLOGY 174. Introductory Molecular Biology for Engineers

Prior or concurrent enrollment in CHEM 130. (4). May not be repeated for credit. No credit granted for students who have completed or are enrolled in BIOLOGY 162, 163, 172, or 195. Credit is granted for a combined total of 17 credits elected in introductory biology.

BIOLOGY 200. Undergraduate Tutorial

Consent of instructor required. Permission of faculty member in biology. (2). (INDE-PENDENT). May be repeated for a maximum of 6 credits. F, W, Sp/Su, Sp, Su.

BIOLOGY 203 / ENVIRON 203 / GEOSCI 203. Introductory Ethnobotany

BIOLOGY 171. (3). (NS). (BS). May not be repeated for credit.

BIOLOGY 207. Introductory Microbiology

BIOLOGY 162 OR 163 OR [171 & 172 & 173] OR [BIOLOGY 195 & 173] AND CHEM 210. (Prerequisites enforced at registration.) (4). (NS). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement. F and W.

BIOLOGY 222. From Message to Mind: An Introduction to Neurobiology

BIOLOGY 162 or 163 or 172 or 174 or 195. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F, W.

BIOLOGY 225. Principles of Animal Physiology: Lecture

BIOLOGY 162 or 163 or [171 and (172 or 174)] or 195. (Prerequisites enforced at registration.) Prior or concurrent enrollment in CHEM 210. (3). (BS). May not be repeated for credit. F and W.

BIOLOGY 226. Animal Physiology Laboratory

BIOLOGY 162 or 173. (Prerequisites enforced at registration.) Prior or concurrent enrollment in BIOLOGY 225. (2). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement. F, W.

BIOLOGY 230. Introduction to Plant Biology

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. (4; 5 in the half-term). (NS). (BS). May not be repeated for credit. F; Sp/Su at the Biological Station. Satisfies a Biology laboratory requirement.

BIOLOGY 252. Chordate Anatomy and Phylogeny

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. (4). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement. F.

BIOLOGY 255 / ENVIRON 255. Plant Diversity

(4). (NS). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

BIOLOGY 281 / ENVIRON 281. General Ecology

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173 AND a laboratory course in CHEM. BIOLOGY 172 and 173 are strongly recommended. (3). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in EEB 381. F and W.

BIOLOGY 282 / ENVIRON 282. General Ecology Laboratory

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173 AND concurrent or prior enrollment in BIOLOGY 281/ENVIRON 281. (3). (BS). May not be repeated for credit. F. Satisfies a Biology laboratory requirement.

BIOLOGY 288. Animal Diversity

BIOLOGY 162. (4). (NS). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

BIOLOGY 305. Genetics

BIOLOGY 162 or 163 or [171 and (172 or 174)] or 195. (Prerequisites enforced at registration.) Prior or concurrent enrollment in CHEM 210. (3). (BS). May not be repeated for credit. F, W, Sp.

BIOLOGY 482. Limnology

Three laboratory courses in Biology. (5 in the half-term). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement. Su at the Biological Station.

BIOLOGY 541 / ANAT 541 / PHYSIOL 541 / PSYCH 532. Mammalian Reproductive Endocrinology

MCDB 310 or 311, or BIOLCHEM 415. (4). (BS). May not be repeated for credit. W.

Program in Biophysics

4028 Chemistry Building 930 North University Avenue (734) 763-6722 (phone) (734) 764-3323 (fax) biop.lsa.umich.edu e-mail: biophysics@umich.edu

Associate Professor Jens-Christian Meiners, Director

Professors Charles L. Brooks III (Warner-Lambert/Parke-Davis Professor of Chemistry and Biophysics), Ari Gafni (Biological Chemistry), Vincent Pecoraro (Chemistry), James Penner-Hahn (Chemistry and Biophysics), Ayyalusamy Ramamoorthy (Chemistry), Duncan Steel (EECS), Robert Zand (Biological Chemistry)

Associate Professors Hashim Al-Hashimi (Chemistry), Jens-Christian Meiners (Physics and Biophysics), Mark Saper (Biological Chemistry), Michal Zochowski (Physics)

Assistant Professor Jennifer Ogilvie (Physics), Sarah Veatch (Biophysics)

Professor Emeritus Sam Krimm (Physics)

Research Scientist Emeritus John P. Langmore

The goal of the biophysical sciences is to develop a quantitative understanding of the living world. They rely on the principles of physics, chemistry and biology, and find applications in medicine and engineering. The biophysical sciences range in scope from modeling biomolecular function to understanding cellular mechanics or brain function through the rigorous use of physical methods and concepts.

Research in Biophysics is highly interdisciplinary with strong ties to other disciplines in the natural sciences, the Medical School, and engineering. Students have the opportunity to participate in this kind of research through Independent Study and Thesis courses and dedicated summer programs.

Advising. The Program in Biophysics currently offers a B.S. degree in Biophysics and an academic minor in Biophysics. Students interested in either option are strongly encouraged to schedule an advising appointment by contacting Student Services at biophysics@umich.edu.

Biophysics (B.S.)

May be elected as a departmental concentration program

The biophysics concentration is designed for students with a strong interest in the natural sciences who intend to embark on a career as a biophysical or medical scientist. It is intended to satisfy the admission requirements of most combined MD/Ph.D. programs and provide a strong foundation for quantitative interdisciplinary work in the biophysical or biomedical sciences or related fields, such as biomedical engineering.

The concentration requires introductory courses in Mathematics, Physics, Chemistry and Biology, followed by specialized biophysics courses. In addition, participation in research is required, which allows students to explore cutting-edge biophysical research and gain valuable experience for a future career.

Gateway Courses. Recommended but not required: BIOPHYS 120, 290.

Prerequisites to Concentration.

- MATH 115, 116, 215, 216;
- CHEM 210 / 211, 215;
- PHYSICS 140/141 or 135/141, and 240/241 or 235/241;
- BIOLOGY 162 or 171 or 172.

Concentration Program: A concentration plan in biophysics must include:

- 1. Core: BIOPHYS 370, 417, 450, 454, 495
- 2. Outside Core: PHYSICS 340/341, BIOLOGY 305, CHEM 351
- 3. *Electives:* One elective such as BIOPHYS 430, 433, 435, MCDB 411 and MATH 463. Other electives may be approved by a concentration counselor.
- 4. *Cognate:* One cognate course from PHYSICS 406, CHEM 451 or BIOLCHEM 451, MCDB 427.
- Research: At least two credits of BIOPHYS 399. Students wishing to do research in a laboratory outside the Biophysics Program must identify a co-sponsor.

Honors Program: In addition to completing all the Biophysics concentration requirements, a concentration GPA of at least 3.4 and the completion of an Honors thesis (BIOPHYS 499), and a second Biophysics elective are required.

Biophysics Academic Minor

The academic minor in Biophysics is designed to give students in the natural sciences exposure and skills in quantitative, interdisciplinary work in the biophysical sciences.

Constraints: An academic minor in Biophysics not open to those electing a concentration in Biophysics

Prerequisites to the Academic Minor: None for the academic minor per se, although individual courses elected to meet the requirements of the academic minor may have course prerequisites.

COURSES IN BIOPHYSICS (BIOPHYS)

BIOPHYS 115. (In)organic Nutrition

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit.

BIOPHYS 116. Introduction to Medical Imaging

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit.

BIOPHYS 120. The Discovery of the DNA Double Helix and its Hidden Mysteries (3). (NS). (BS). May not be repeated for credit.

BIOPHYS 280. Biophysics Undergraduate Research (UROP)

(1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 8 credits. A maximum of eight credits may be elected through lower-division UROP research courses (UC 280, 281, BIOPHYS 280, ENGR 280, MOVESCI 280, SPTMGMTC 280, PHYSED 280).

BIOPHYS 290 / PHYSICS 290. Physics of the Body and Mind

[no change]. (Prerequisites enforced at registration.) MATH 115 or equivalent AP credits. (3). (NS). (BS). (QR/2). May not be repeated for credit.

BIOPHYS 370 / CHEM 370 / PHYSICS 370. Physical and Chemical Principles Behind **Biology and Medicine**

MATH 215 and PHYSICS 235 or 240. (Prerequisites enforced at registration.) CHEM 130 or placement in 210. (3). (NS). (BS). May not be repeated for credit. F, W.

BIOPHYS 399. Research in Biophysics

(1 - 4). (BS). (INDEPENDENT). May be repeated for a maximum of 8 credits.

BIOPHYS 415. Directed Study

(1 - 4). (BS). May be elected twice for credit. May be elected more than once in the same term

BIOPHYS 417 / CHEM 417 / PHYSICS 417. Dynamical Processes in Biophysics

MATH 216 or 256 or 286 or 316, and PHYSICS 340 or CHEM 463. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

BIOPHYS 430 / PHYSICS 430. Medical Physics

BIOPHYS 370 or PHYSICS 390. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

BIOPHYS 433 / PHYSICS 433. Biocomplexity

CHEM 417, or PHYSICS 417 or 406; or graduate standing. (Prerequisites enforced at

Academic Minor Program. The academic minor requires at least 15 credits from the following courses:

- 1. PHYSICS 340/341 or CHEM 210/211
- 2. BIOLOGY 305 or MCDB 310 or CHEM 451 (or BIOLCHEM 451)
- 3. BIOPHYS 290 or 430
- 4. BIOPHYS 370 or 417.

Students wishing to pursue this option are strongly encouraged to talk to an advisor as the LSA rules for double-counting courses towards a concentration and academic minor apply.

registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

BIOPHYS 435. Biophysical Modeling

BIOPHYS/PHYSICS 417 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

BIOPHYS 440 / CHEM 440. Biophysics of Diseases

BIOPHYS 370 or CHEM 370 or PHYSICS 370. (3). (BS). May not be repeated for credit. **BIOPHYS 450 / PHYSICS 450. Biophysics Laboratory**

BIOPHYS 370 or CHEM 370 or PHYSICS 370; or PHYSICS 390; or CHEM 452 or BIOL-

CHEM 452; or graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work

BIOPHYS 454 / CHEM 454. Biophysical Chemistry II: Macromolecular Structure and Dynamics

CHEM 453 or 463, and CHEM 451/452 or equivalent. (3). (BS). May not be repeated for credit. W.

BIOPHYS 463 / BIOINF 463 / MATH 463. Mathematical Modeling in Biology

MATH 214, 217, 417, or 419; and MATH 216, 256, 286, or 316. (3). (BS). May not be repeated for credit.

BIOPHYS 495. Senior Seminar in Biophysics

BIOPHYS 450 or Graduate Standing. (Prerequisites enforced at registration.) (2). (BS). May not be repeated for credit. Rackham credit requires additional work.

BIOPHYS 498. Senior Thesis

BIOPHYS 399. (1 - 4). (BS). (INDEPENDENT). May not be repeated for credit. **BIOPHYS 499. Honors Thesis**

BIOPHYS 399. (1 - 4). (BS). (INDEPENDENT). May not be repeated for credit.

BIOPHYS 520 / CHEM 520. Biophysical Chemistry I

CHEM 463, BIOLCHEM 415, or CHEM 420; permission of course director. (3). (BS). May not be repeated for credit. F.

BIOPHYS 521 / CHEM 521. Biophysical Chemistry II

CHEM 461, BIOLCHEM 415, and CHEM 430; and permission of course director. (3). (BS). May not be repeated for credit. W.

Chemistry

1500 Chemistry Building

930 North University Avenue

(734) 647-2857 or (734) 647-2858 (phone)

(734) 647-4865 (fax)

www.umich.edu/~michchem

e-mail: ChemUndergrad@umich.edu

Professor Carol Fierke, Chair

Professor Brian P. Coppola, Associate Chair for Curriculum and Faculty Affairs

Professors

Hashim Al-Hashimi, Biophysical Chemistry

- Philip C. Andrews, Biological Chemistry, Bioanalytical Chemistry, Bioinorganic Chemistry, Chemical Biology
- Mark M. Banaszak Holl, Synthetic and Mechanistic Solution, Surface, and Solid State Chemistry
- Charles L. Brooks III (Warner-Lambert/Parke-Davis Professor of Chemistry and Biophysics), Molecular Chemistry
- Mary Anne Carroll, Atmospheric Chemistry: Instrument development and application to field measurements of reactive nitrogen species
- Zhan Chen, Biomaterial and polymer surface, biocompatibility

Mary Sue Coleman (President of the University of Michigan)

- Brian P. Coppola (Arthur F. Thurnau Professor), Organic chemistry, Chemical Education
- Carol A. Fierke (Jerome and Isabella Karle Collegiate Professor of Chemistry), Biological Chemistry
- Anthony H. Francis (Arthur F. Thurnau Professor), Magnetic Resonance, Vibrational and Electronic Spectroscopy of Solids
- Eitan Geva, Theoretical and Computational chemistry
- Gary D. Glick (Werner E. Bachmann Professor of Chemistry), Bioorganic Chemistry, Molecular Recognition
- Theodore Goodson III (Richard Barry Bernstein Collegiate Professor of Chemistry), Physical Chemistry
- Robert T. Kennedy (Hobart H. Willard Professor), Analytical Chemistry, Chemical Biology, Bioanalytical Chemistry, Chemical Separations, Mass Spectrometry
- Raoul Kopelman (Kasimir Fajans Professor of Chemistry, Physics, & Applied Physics; Richard Smalley Distinguished University Professor of Chemistry), Analytical/Biophysical/Materials Chemistry Laser Spectroscopy, Nano-Imaging and Fiber Optic Chemical Nano-Sensors; Molecular Optics; Fractal Reaction Kinetics

Masato Koreeda, Natural Product Synthesis and Bioorganic Mechanisms

David Lubman, Biological Mass Spectrometry, Spectroscopy and Instrumentation

Anna K. Mapp, Organic chemistry, chemical biology, new synthetic methods

E. Neil G. Marsh, *Enzymes: structure mechanism and specificity; pro*tein engineering and molecular recognition

Adam J. Matzger, Organic, polymers/organic materials

Mark E. Meyerhoff (Philip J. Elving Collegiate Professorship in Chemistry), *Membrane Electrodes, Gas Sensors, Analytical Applications of Immobilized Bio-reagents, Enzyme-linked Competitive Binding Assays, New Stationary Phases for Liquid Chromatography*

John Montgomery, Organic Chemistry

Michael D. Morris, *Analytical Laser Spectroscopy and Imaging; Electrophoretic Separations*

Vincent L. Pecoraro, Synthetic Inorganic and Bioinorganic Chemistry

James Penner-Hahn (George A. Lindsay Collegiate Professor of Chemistry and Biophysics), *Biophysical Chemistry and Inorganic Spectroscopy. Investigation of Metal Site Structure in Bioinorganic Systems; X-ray, EPR and NMR Spectroscopy of Proteins*

Ayyalusamy Ramamoorthy, *Solid-State NMR Spectroscopy, Structural Biology of Membrane Proteins, Study of Polymers*

Melanie Sanford, Organometallic Chemistry

Roseanne Sension, Ultrafast Laser Spectroscopy and Chemical Reaction Dynamics

David Sherman, Medicinal Chemistry

Edwin Vedejs (Moses Gomberg Collegiate Professor of Chemistry), Organic Chemistry

Nils G. Walter, *Chemical biology; Folding and function of catalytic RNA; Biophysical Chemistry of nucleic acids*

Ronald W. Woodard, *Medicinal Chemistry*

Edward T. Zellers, *Microfabricated chemical sensors; interfacial chemistry; polymer-solvent interactions; occupational / environmental exposure assessment*

Associate Professors

Heather A. Carlson, *Computational Chemistry and Theoretical Bio-physics*

Kristina Hakansson (Dow Corning Assistant Professor), *Analytical Chemistry; State-of-the-art mass spectrometric techniques* John P. Wolfe, *Organic Chemistry*

Assistant Professors

Bart M. Bartlett, Inorganic, Materials

Julie S. Biteen, *Physical and Biophysical Chemistry; Single-molecule Imaging and Nanophotonics*

Barry D. Dunietz, Theoretical Physical Chemistry

Kevin J. Kubarych, Physical Chemistry

Kenichi Kuroda, Physical Chemistry

Nicolai Lehnert, Inorganic Chemistry

- Mi Hee Lim, *Bioinorganic Chemistry, Bioorganic Chemistry, Chemical Biology, Inorganic Chemistry*
- Stephen Maldonado, *Electrochemistry, Semiconductor Photoelectrochemistry, Materials Chemistry, Surface Science, Corrosion, Heterogeneous Electrocatalysis*

Anne J. McNeil, *Polymer Chemistry, Organic/Materials Chemistry* Pavel Nagorny, *Organic Chemistry*

- Brando T. Ruotolo, *Development of Hybrid Ion Mobility-Mass Spectrometry Instrumentation, Structural Biology of Macromolecular Multi-protein Complexes, Amyloid Formation*
- Matthew B. Soellner, Organic and Medicinal Chemistry of Protein Tyrosine Kinases

Nathaniel Szymczak, Inorganic Chemistry

Lecturers

Amy Gottfried, General Chemistry, Organic Chemistry Nancy Konigsberg Kerner, General Chemistry, Chemical Education

Kathleen Nolta, Organic Chemistry Jadwiga T. Sipowska, Physical Chemistry, General Chemistry

Professors Emeriti Arthur J. Ashe, III, Lawrence S. Bartell, S.M. Blinder, Dimitri Coucouvanis, James K. Coward, M. David Curtis, Thomas M. Dunn, Billy Joe Evans, John L. Gland, Adon A. Gordus, Henry C. Griffin, R.L. Kuczkowski, Richard G. Lawton, Lawrence L. Lohr, Daniel T. Longone, Christer E. Nordman, Paul G. Rasmussen, Robert R. Sharp, Peter A.S. Smith, Leroy B. Townsend, Edgar F. Westrum, Jr., John R. Wiseman, Charles F. Yocum

The curricula in Chemistry serve those preparing for careers in chemistry, biochemistry, medicine, chemical engineering, pharmacy, and allied fields as well as those seeking a general knowledge of chemistry as part of a liberal arts education. Beyond the first-year courses, there is an emphasis on development of technical knowledge and laboratory experience needed in chemistry and related scientific fields. The undergraduate concentration programs prepare students for work in research and testing laboratories, as well as for business positions in which a chemistry background is desirable. Graduate work is necessary for those planning to do college and university teaching or industrial research.

Introductory Courses. The Chemistry Department has three types of courses available to students starting toward careers in any of the sciences, engineering, or medicine. Students are placed into these courses according to the results of the tests in chemistry and mathematics that they take during orientation. Either CHEM 130 or 210/211 can be the starting point for students interested in the sciences, engineering, or medicine. CHEM 130 has a section reserved for students who would benefit from more frequent contact with faculty. Honors students with good preparation in high school chemistry and other students with good preparation in high school chemistry have the opportunity to start their study in chemistry with CHEM 210/211, which introduce the major concepts of chemistry in the context of organic chemistry. This curriculum allows students to progress more rapidly to advanced courses in CHEM and to be able to participate earlier in undergraduate research.

Special Departmental Policies. The department requires that a student earn a grade of at least C– in all CHEM courses and mathematics and physics courses which are prerequisite for subsequent elections. A concentration program grade point average of at least 2.0 is required; this includes chemistry courses, mathematics and physics prerequisites and advanced electives which are part of a concentration plan. Prerequisites must be taken for a grade. Students must request any change in a grade before the end of the next regular academic term.

Safety Regulations. No contact lenses will be allowed in any chemistry laboratory. In laboratory classes, students must wear either prescription or safety glasses at all times.

Student Associations. Chemistry and biochemistry concentrators are eligible to become student affiliates of the *American Chemical Society.* An active chapter exists in the Chemistry Department and provides opportunities for a variety of activities related to chemistry. In addition, *Alpha Chi Sigma* fraternity maintains a chapter house near campus. Men and women concentrating in chemistry, chemical engineering, and other related fields are eligible for membership.

Awards and Prizes. The department offers several undergraduate awards and prizes. The Undergraduate Awards Committee invites winners to attend the Undergraduate Awards Luncheon in April of each year.

Margaret and Herman Sokol Scholarship. Awards are given to freshmen with an interest in chemistry or biochemistry and with registration in a chemistry course; newly declared and declared chemistry and biochemistry students.

Summer Research Fellowships. Awards are given to students for ten weeks of full-time research with chemistry and biochemistry faculty. Students apply in February of each year. Awards are provided by the Alumni Fund, Seyhan Ege Undergraduate Research in Chemistry

Fund, Florence Fenwick Memorial Fund, Gomberg Undergraduate Scholarship Fund, James E. Harris Scholarship Fund, PPG, Margaret & Herman Sokol Endowment, Walter R Yates Fund, and the David W. Stewart Memorial Fund.

First-Year Chemistry Alumni Achievement Award. For first-year chemistry students who have demonstrated exceptional performance in laboratory and lecture work. Based on recommendations of instructors, graduate student instructors, and undergraduate advisors. Commended for outstanding promise as young scientists. Presented with a book, selected by instructor, that relates to the broad and interesting world of science.

Alpha Chi Sigma First Year Student Award. For a first-year student in Chemistry who has demonstrated an interest in chemistry, shown outstanding academic potential and has exhibited productive interaction with fellow students. Award determined by UG Awards Committee in consultation with professors and GSI's in the courses. Gift certificate at Borders for books to be chosen with national representative of Alpha Chi Sigma or departmental faculty member.

Florence Fenwick Memorial Scholarship for an undergraduate woman at any level (incoming junior or senior), 3.0 GPA, scholarship and/or financial need.

Outstanding Second Year Student. Book and bookstore credit awarded for outstanding academic and research work. \$100 total. Research advisor and student choose books for presentation.

American Chemical Society Analytical Chemistry Award. Subscription to *Analytical Chemistry* and monetary award to an outstanding junior. Must have completed CHEM 260/241/242 and be in or have taken CHEM 447.

American Institute of Chemists Award. Recognition of potential advancement of the chemical profession on the basis of a student's demonstrated record of ability, character, and scholastic achievement. Student Associate membership in AIC, subscription to "The Chemist" and monetary award from the Alumni Fund. One award for chemistry and one award for biochemistry.

Honors College Vanko Memorial Award. Recognition of well-rounded senior chemist or biochemist with monetary award.

Merck Index Award to Outstanding Seniors. Recognition of academic and research work. Complimentary Merck Indices.

Huron Valley Section of the American Chemical Society Outstanding Undergraduate Student Leadership Award. As presented in the citation, the award is designed to recognize the accomplishments of an individual who, in the mind of the selection committee, has represented the best interests of the Chemistry Department, and chemistry in general, in private and public forums over an extended period of time. Activities might include, and are not limited to, leadership in activities of undergraduate chemistry organizations (AXE, ACS affiliates), representing the chemistry department in local, alum, or national forums, and general professional service.

Seyhan N. Ege Award of the University of Michigan Women in Science and Engineering Program. As presented in the citation, the award is designed to recognize the accomplishments of an undergraduate woman or student of color who, in the mind of the selection committee, has represented the best interests of the chemistry department, and chemistry in general, and who signifies scholarship, leadership, and the participation of traditionally underrepresented groups in the chemical sciences.

Concentrations and Academic Minors. The Department of Chemistry offers programs leading to:

- (1).Academic minors in Biochemistry, Chemistry, Chemical Physics, Polymer Chemistry, and Chemical Measurement Science
- (2).a *Bachelor of Science* degree with a concentration in Chemistry (*B.S.* degree, 120 credits);
- (3).a *Bachelor of Science in Chemistry* degree (*B.S. Chem.* degree, 124 credits);

- (4).a *B.S. Chem.* degree with Honors in chemistry. The *Bachelor of Science in Chemistry (B.S. Chem.)* degree requires a more rigorous and more specialized program of study. The program leading to Honors in chemistry is available to qualified students.
- (5). The department participates in and administers an interdepartmental concentration "Biochemistry."

It is possible to incorporate a teaching certificate into any of these program options.

In addition there is a five-year joint degree program with the College of Engineering which leads to a *B.S. Chem.* and a *Bachelor of Science in Engineering (Chemical Engineering).*

Information about the program leading to the joint degree with the College of Engineering and *general* information about teaching certificate requirements are described elsewhere in this *Bulletin*; departmental requirements for these programs are described below.

It is strongly recommended that students who are thinking of degrees in chemistry should arrange an appointment with a Chemistry advisory via the online advising system as soon as possible, preferably before the end of the freshman year but certainly before the end of the sophomore year. The online appointment scheduling system can be found here:

www.umich.edu/~michchem/undergrad/index.html

Teaching Certificate. Those seeking a B.S. or B.S. Chem. degree with a teaching certificate in Chemistry must fulfill departmental as well as School of Education requirements. Students who plan to earn a teaching certificate with a teaching major or minor in Chemistry should contact the School of Education Teacher Education office.

Chemistry (B.S. or B.S. Chem.)

May be elected as a departmental concentration program

Prerequisites to Concentration for Either Program. CHEM courses through 215, 216, 241/242, and 260 or 370; PHYSICS [135 or 140]/141 and [235 or 240]/241; and MATH 115, 116, 215, 216, or an equivalent sequence are required for any concentration program in Chemistry. PHYSICS 240 or 235 and MATH 215 are prerequisites for CHEM 461 and students should, wherever possible, complete both of these before the junior year.

Bachelor of Science degree with a concentration in Chemistry (120 credits). Students can complete the B.S. degree with a concentration in Chemistry (120 credits) by taking CHEM 302 or 303, 312, 402, 447, 461, 462, 463, 480, and 485. Two credits of research (399) culminating in a written report may be substituted for the projects lab, CHEM 485.

Bachelor of Science in Chemistry (B.S. Chem.) (124 credits). The curriculum leading to a *Bachelor of Science in Chemistry (B.S. Chem.* degree) serves students who are interested in professional careers in chemistry, biochemistry, or related fields. Requirements include CHEM 302 or 303, 312, 402, 447, 461, 462, 463, 480, and four credits of CHEM 399 taken over at least two terms, as well as one advanced lecture course in chemistry.

Honors Concentration in Chemistry. The B.S. Chem. degree is the basis of the Honors degree in Chemistry. Maintenance of a satisfactory GPA (3.4) in concentration courses, including prerequisites, and satisfactory completion of an Honors thesis (CHEM 499) based on the research done in CHEM 399 are required for Honors. All students, whatever their program, who are interested in an Honors degree should see the Chemistry Honors advisor (Room 1500 Chemistry) for approval for participation in the Junior-Senior Honors Program in Chemistry.

Advising. Students develop a concentration plan in consultation with a program advisor. Those interested in a B.S. degree with a concentration in Chemistry (120 credits) or the specialized program leading to the *Bachelor of Science in Chemistry* (124 credits) are urged to consult a program advisor during the freshman and/or

sophomore years. Prospective concentrators are advised that further study in chemistry requires adequate performance in early chemistry courses (preferably B– or better) as well as in the mathematics and physics prerequisites. Students interested in an Honors degree should see the Chemistry Honors advisor. Appointments are scheduled online at

www.umich.edu/~michchem/undergrad/index.html

Students interested in the joint program with the College of Engineering should make an appointment with Chalmers Knight [Academic Advising Center, 1255 Angell Hall, (734) 764-0332] and then make an appointment online to see a chemistry concentration advisor.

Biochemistry (B.S.)

May be elected as an interdepartmental concentration program

Exclusions: Students who elect a concentration in Biochemistry may not elect the following concentrations: Biology, General Biology; Cell and Molecular Biology; CMB:Biomedical Engineering; Ecology and Evolutionary Biology; Microbiology; or Neuroscience. They may also not elect an academic minor in Biology, or any of the Chemistry academic minors.

The biochemistry concentration program is intended for students interested in the chemical basis of biological phenomena. The concentration program is intellectually demanding and is intended to prepare students for further education (graduate school or medicine). A B.S. degree in biochemistry is also a useful means of preparing for jobs in academic medical centers, the pharmaceutical industry, and in biotechnology companies. Because the concentration program is highly structured, it is essential that prospective concentrators follow the guidelines set forth below.

Prerequisites to Concentration:

- BIOLOGY 171 and 172
- CHEM 210/211, 215
- MATH 115, 116, 215 (or the equivalent)
- PHYSICS [135 or 140]/141 and [235 or 240]/241.

In cases where a student is transferring to Biochemistry from outside the University or is entering later, from another concentration, the student may be awarded an override for Genetics after completion of only one of either BIOLOGY 171 or 172, and where taking the other would be a burden for timely graduation. The override request must come from a Biochemistry concentration advisor along with the assurance that the student has been informed of the material from BIOLOGY 171 or 172 that he or she needs to review prior to enrolling in the Genetics course.

Concentration Program. Must include:

1. Core: BIOLOGY 305; CHEM 260, [241 or 302 or 303], [216 or 242], 351*, 352, 451, 452, 453.

*Students are strongly encouraged to take CHEM 351 but could substitute this course requirement with MCDB 310 or BIOLCHEM 415.

- 2. Electives: A total of at least six credits chosen from:
 - MCDB 417, 427, 428;
 - CHEM 419 or 420, 447, 454, 461, 485/500;
 - MEDCHEM 410;
 - BIOLCHEM 550, 576, 640, 650, 673, 675.
- 3. An advanced laboratory or undergraduate research course. Recommended options for the advanced laboratory course are MCDB 429, CHEM 480; or a total of four credits of undergraduate research elected as any combination of either CHEM 398 or BIOLCHEM 398, by permission of the concentration advisor. Students electing the undergraduate research option must execute an extended research project under the supervision of a faculty member who agrees to oversee the project.

Honors Concentration. Qualified students may elect an Honors concentration. This program requires a thesis which describes and analyzes independent experimental work. The research topic and advisor must be approved by the Honors advisor in Biochemistry. Students in this program are expected to maintain an overall grade point average above 3.4 and at least a 3.4 in the field of concentration, including prerequisite courses. CHEM 398 (4 credits) and the thesis course, CHEM 498, replaces the requirement for an upper-level laboratory course outlined above.

Advising. Appointments are scheduled online at Chemistry website.

Chemistry Academic Minors

An academic minor offered by the Chemistry department is not open to students with a concentration in Chemistry or Biochemistry.

Students wishing to pursue an academic minor offered by the Chemistry Department must develop a specific plan for its completion in consultation with the Department's designated advisor. Chemistry, Chemical Physics, Polymer Chemistry, and Chemical Measurement Science academic minors are arranged in consultation with any Chemistry concentration advisor, while Biochemistry academic minors are arranged in consultation with any Biochemistry advisor. Information about scheduling advising appointments is available from the Department's website.

Students electing an academic minor within the Department of Chemistry may only elect ONE of the five academic minors offered by the Department.

Chemistry Academic Minor

The Chemistry academic minor provides a broad and general exposure to the traditional areas of the chemical sciences.

Exclusions: The Chemistry Academic Minor is not open to students concentrating in Biochemistry, Chemistry, Cell and Molecular Biology, Biology, General Biology, Neuroscience, Ecology and Evolutionary Biology, Plant Biology, and Microbiology.

Prerequisite to the Academic Minor: MATH 115, or equivalent; PHYSICS 135, 140, or equivalent.

Academic Minor Program: at least 18 credits of courses as follows:

- 1. CHEM 130* & CHEM 210/211.
- Electives: CHEM 215/216, CHEM 241/242, CHEM 260, CHEM 302 or 303, CHEM 312 (2), CHEM 419 or 420, CHEM 402, CHEM 461.

*Students who do not place into CHEM 210 are strongly recommended to take CHEM 130. Neither CHEM 130, nor AP credits earned for CHEM 130, count toward the academic minor.

Biochemistry Academic Minor

The Biochemistry academic minor provides a broad and general exposure to biochemistry from a chemical sciences perspective.

Exclusions: The Biochemistry Academic Minor is not open to students concentrating in Biochemistry, Chemistry, Cell and Molecular Biology, Biology, General Biology, Neuroscience, Ecology and Evolutionary Biology, Plant Biology, and Microbiology.

Prerequisite to the Academic Minor: MATH 115, or equivalent; PHYSICS 135, 140, or equivalent; BIOLOGY 171.

Academic Minor Program: at least 18 credits of courses as follows:

- 1. CHEM 210/211, CHEM 215, CHEM 260 or CHEM 370, CHEM 351.
- 2. Electives: CHEM 451 and 452, CHEM 241/242, BIOLOGY 305.

*Students who have already taken any of the one-term biochemistry courses [MCDB 310 or BIOLCHEM 415] can not get credit for CHEM 451. The academic minor will accept these other one-term courses provided the student takes CHEM 451 or 452 as one of the electives.

Chemical Physics Academic Minor

The Chemical Physics academic minor provides a concentrated exposure to physical chemical principles.

Exclusions: The Chemical Physics Academic Minor is not open to students concentrating in Biochemistry, Biophysics, or Chemistry.

Prerequisite to the Academic Minor: MATH 215, or equivalent; PHYSICS 235, 240, or equivalent.

Academic Minor Program: at least 18 credits of courses as follows: CHEM 130,* CHEM 210/211, CHEM 260 or CHEM 370, CHEM 461, CHEM 462, CHEM 463 or 453.

*Students who do not place into CHEM 210 are strongly recommended to take CHEM 130. Neither CHEM 130, nor AP credits earned for CHEM 130, count toward the academic minor.

Polymer Chemistry Academic Minor

The Polymer Chemistry academic minor provides a concentrated exposure to a subspecialization within Materials Science from a chemical sciences perspective.

Exclusions: The Polymer Chemistry Academic Minor is not open to students concentrating in Biochemistry or Chemistry.

Prerequisite to the Academic Minor: MATH 115, or equivalent; PHYSICS 135, 140, or equivalent.

Academic Minor Program: at least 18 credits of courses as follows: CHEM 210/211, CHEM 215, CHEM 260 or 370, CHEM 302 or 303, CHEM 436, CHEM 538.

Chemical Measurement Science Academic Minor

The Chemical Measurement Science academic minor provides a concentrated exposure to analytical chemistry that is appropriate across a wide variety of scientific areas.

Exclusions: The Chemical Measurement Science Academic Minor is not open to students concentrating in Biochemistry or Chemistry.

Prerequisite to the Academic Minor: MATH 115, or equivalent; PHYSICS 135, 140, or equivalent.

Academic Minor Program: at least 18 credits of courses as follows:

1. CHEM 210/211, CHEM 260 or 370, CHEM 214/242, CHEM 447.

2. Electives: CHEM 480*, CHEM 545*.

*Although prerequisites are not enforced, students who elect CHEM 480 or 545 should consider taking, or having taken, advanced physical chemistry beyond the CHEM 260/370 level.

COURSES IN CHEMISTRY (CHEM)

CHEM 105 / AOSS 105 / ENSCEN 105 / ENVIRON 105. Our Changing Atmosphere (3). (NS). (BS). May not be repeated for credit.

CHEM 108 / GEOSCI 130 / PHYSICS 119. The Physical World

High-school algebra. (4). (NS). (BS). (QR/2). May not be repeated for credit.

CHEM 109 / PHYSICS 109. Natural Science: Bridging the Gaps (3). (NS). (BS). May not be repeated for credit.

CHEM 120. First Year Seminar in Chemistry

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit.

CHEM 125. General Chemistry Laboratory I

To be elected by students who are eligible for (or enrolled in) CHEM 130, and concurrent enrollment in CHEM 126. (1). (NS). (BS). May not be repeated for credit. F, W, Su.

CHEM 126. General Chemistry Laboratory II

To be elected by students who are eligible for (or enrolled in) CHEM 130, and concurrent enrollment in CHEM 125. (1). (NS). (BS). May not be repeated for credit. F, W, Su.

CHEM 130. General Chemistry: Macroscopic Investigations and Reaction Principles Three years of high school math or MATH 105; one year of high school chemistry recommended. Placement by testing, or permission of Chemistry department. (3). (NS). (BS). (QR/2). May not be repeated for credit. Intended for students without AP credit in Chemistry. F, W, Su.

CHEM 210. Structure and Reactivity I

High school chemistry. Placement by examination during Orientation. Must be taken concurrently with CHEM 211. (4). (NS). (BS). May not be repeated for credit. Students who have completed CHEM 215 will not receive credit for CHEM 210. F, W, Su.

CHEM 211. Investigations in Chemistry

Must be taken concurrently with CHEM 210. (1). (NS). (BS). May not be repeated for credit. Students who have completed CHEM 216 will not receive credit for CHEM 211 F, W, Su.

CHEM 215. Structure and Reactivity II

CHEM 210/211. To be taken with CHEM 216. (3). (NS). (BS). May not be repeated for credit. F, W, Sp.

CHEM 216. Synthesis and Characterization of Organic Compounds

CHEM 210/211. Must be taken with CHEM 215. (2). (NS). (BS). May not be repeated for credit. F, W, Sp.

CHEM 218. Independent Study in Biochemistry

Consent of instructor required. Permission of instructor. For students with less than junior standing. (1). (INDEPENDENT). May be repeated for a maximum of 4 credits. F, W, Sp/Su, Sp, Su.

CHEM 219. Independent Study in Chemistry

Consent of instructor required. Permission of instructor. For students with less than junior standing. (1). (INDEPENDENT). May not be repeated for credit. F, W, Sp/Su, Sp, Su.

CHEM 230. Physical Chemical Principles and Applications

CHEM 215/216. Students who plan to continue beyond a fourth term in Chemistry would typically enroll in CHEM 260/241/242 instead of CHEM 230; credit will not be given for both of these courses. (3). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in CHEM 260. F, W, Sp.

CHEM 241. Introduction to Chemical Analysis

Prior or concurrent enrollment in CHEM 230 or 260, and concurrent enrollment in CHEM 242. (2). (NS). (BS). May not be repeated for credit. F, W.

CHEM 242. Introduction to Chemical Analysis Laboratory

Prior or concurrent enrollment in CHEM 230 or 260, and concurrent enrollment in CHEM 241. (2). (NS). (BS). May not be repeated for credit. F, W.

CHEM 260. Chemical Principles

CHEM 210/211, MATH 115, and prior or concurrent enrollment in PHYSICS 135 or 140 or 160. (3). (NS). (BS). May not be repeated for credit. F, W, Sp.

CHEM 261. Introduction to Quantum Chemistry

CHEM 215/216, MATH 115, and prior or concurrent enrollment in PHYSICS 140 (or 160). CHEM 261 is intended primarily for Chemical Engineering students. (1). (BS). May not be repeated for credit. No credit granted for students that have completed or are enrolled in CHEM 260. F, W, Sp.

CHEM 302. Inorganic Chemistry: Principles of Structure, Reactivity, and Function CHEM 260 (or CHEM 261 and CHEM 330). (3). (NS). (BS). May not be repeated for credit. F. W.

CHEM 303. Introductory Bioinorganic Chemistry: The Role of Metals in Life

CHEM 260 (or CHEM 261 and CHEM 330). (3). (NS). (BS). May not be repeated for credit. Students who have taken or are enrolled in CHEM 302 will not earn credit for CHEM 303.

CHEM 312. Synthesis and Characterization

CHEM 215/216. Prior or concurrent enrollment in CHEM 302. (2). (BS). May not be repeated for credit. F.

CHEM 351. Fundamentals of Biochemistry

Completion of BIOLOGY 172 or equivalent; CHEM 210 and completion or concurrent in CHEM 215. (4). (NS). (BS). May not be repeated for credit. No credit for those currently or previously enrolled in BIOLOGY 310 or BIOLCHEM 415. F, W.

CHEM 352. Introduction to Biochemical Research Techniques

Current or prior enrollment in CHEM 351. (2). (BS). May not be repeated for credit. F, W.

CHEM 370 / BIOPHYS 370 / PHYSICS 370. Physical and Chemical Principles Behind Biology and Medicine

MATH 215 and PHYSICS 235 or 240. (Prerequisites enforced at registration.) CHEM 130 or placement in 210. (3). (NS). (BS). May not be repeated for credit. F, W.

CHEM 398. Undergraduate Research in Biochemistry

Consent of instructor required. Junior standing, and permission of a Biochemistry concentration advisor and the professor who will supervise the research. (1 - 4). (BS). (INDEPENDENT). May be repeated for a maximum of 4 credits. F, W, Sp/Su, Sp, Su.

CHEM 399. Undergraduate Research

Consent of instructor required. Junior standing, and permission of a chemistry concentration advisor and the professor who will supervise the research. (1 - 4). (BS). (INDE-PENDENT). May be repeated for a maximum of 4 credits. F, W, Sp/Su, Sp, Su.

CHEM 402. Intermediate Inorganic Chemistry

CHEM 302, and 461/462. (3). (BS). May not be repeated for credit. F.

CHEM 417 / BIOPHYS 417 / PHYSICS 417. Dynamical Processes in Biophysics MATH 216 or 256 or 286 or 316, and PHYSICS 340 or CHEM 463. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

CHEM 419. Intermediate Physical Organic Chemistry

CHEM 210 and CHEM 215. (3). (BS). May not be repeated for credit.

CHEM 420. Intermediate Organic Chemistry

CHEM 215 and 216 or their equivalents. (3). (BS). May not be repeated for credit. CHEM 436. Polymer Synthesis and Characterization

CHEM 260. (3). (BS). May not be repeated for credit. W odd years.

CHEM 440 / BIOPHYS 440. Biophysics of Diseases

BIOPHYS 370 or CHEM 370 or PHYSICS 370. (3). (BS). May not be repeated for credit.

CHEM 447. Physical Methods of Analysis CHEM 260 or 370 and 241/242. (3). (BS). May not be repeated for credit. F, W.

CHEM 451 / BIOLCHEM 451. Advanced Biochemistry: Macromolecular Structure and Function

(4). (BS). May not be repeated for credit. F.

CHEM 452 / BIOLCHEM 452. Advanced Biochemistry: Cellular Processes Must have completed CHEM 351 or MCDB 310 or BIOLCHEM 415 with a grade of C- or better. Consent of instructor required. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. W.

CHEM 453. Biophysical Chemistry I: Thermodynamics and Kinetics

CHEM 260 (or CHEM 261 and CHEM 330), CHEM 451, PHYSICS 240, and MATH 215. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in CHEM 463. F.

CHEM 454 / BIOPHYS 454. Biophysical Chemistry II: Macromolecular Structure and Dynamics

CHEM 453 or 463, and CHEM 451/452 or equivalent. (3). (BS). May not be repeated for credit. W.

CHEM 461. Physical Chemistry I

CHEM 260 or 370, PHYSICS 240 or 235, and MATH 215. No credit granted to students who have completed or are enrolled in CHEM 397 or 469. (3). (BS). May not be repeated for credit. F.

CHEM 462. Computational Chemistry Laboratory

MATH 215, and prior or concurrent enrollment in CHEM 461. (1). (BS). May not be repeated for credit. F.

CHEM 463. Physical Chemistry II

CHEM 461/462. (3). (BS). May not be repeated for credit. W.

CHEM 467 / AOSS 467 / ENSCEN 467 / ENVIRON 467 / GEOSCI 465. Biogeochemical Cycles

MATH 116, CHEM 210, and PHYSICS 240 (or 260). (3). (BS). May not be repeated for credit. F, W.

CHEM 480. Physical and Instrumental Chemistry

CHEM 447 and 461/462; and concurrent enrollment in CHEM 463. (3). (BS). May not be repeated for credit. W.

CHEM 485. Projects Laboratory

CHEM 480. (2). (BS). May not be repeated for credit. F, W.

CHEM 495. Professional Development in the Chemical Sciences CHEM 461. (2). (BS). May not be repeated for credit. W.

CHEM 498. Undergraduate Honors Thesis in Biochemistry

Consent of instructor required. CHEM 398 and permission of instructor. (1). (BS). (IN-DEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. To be elected in the term in which an Honors student presents a thesis.

CHEM 499. Undergraduate Thesis

Consent of instructor required. CHEM 399 and permission of instructor. (1). (BS). (IN-DEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. To be elected in the term in which an Honors student presents a thesis.

CHEM 507. Inorganic Chemistry

CHEM 461. (3). (BS). May not be repeated for credit. F.

CHEM 511 / MATSCIE 510. Materials Chemistry

CHEM 461, BIOLCHEM 415, CHEM 430; and permission of course director. (3). (BS). May not be repeated for credit.

CHEM 520 / BIOPHYS 520. Biophysical Chemistry I

CHEM 463, BIOLCHEM 415, or CHEM 420; permission of course director. (3). (BS). May not be repeated for credit.

CHEM 521 / BIOPHYS 521. Biophysical Chemistry II

CHEM 461, BIOLCHEM 415, and CHEM 430; and permission of course director. (3). (BS). May not be repeated for credit.

CHEM 538 / MACROMOL 538. Organic Chemistry of Macromolecules

CHEM 215/216, and CHEM 230 or 260 or 340. (3). (BS). May not be repeated for credit. F.

CHEM 540. Organic Principles

CHEM 312 and 461. (3). (BS). May not be repeated for credit.

CHEM 541. Advanced Organic Chemistry CHEM 540. (3). (BS). May not be repeated for credit. W.

CHEM 542. Applications of Physical Methods to Organic Chemistry

CHEM 260, 241/242, and 312. (3). (BS). May not be repeated for credit.

CHEM 570. Molecular Physical Chemistry (3). (BS). May not be repeated for credit.

CHEM 575. Chemical Thermodynamics

CHEM 461. (3). (BS). May not be repeated for credit.

CHEM 580. Molecular Spectra and Structure

CHEM 570 or permission of instructor. (3). (BS). May not be repeated for credit. W.

CHEM 673 / BIOLCHEM 673. Kinetics and Mechanism

BIOLCHEM 550, CHEMBIO 501, or equivalent, undergrad calculus. Physical Chemistry is recommended. (2). (BS). May not be repeated for credit.

Center for Chinese Studies (CCS)

1080 South University, Suite 4668 (734) 764-6308 (phone) (734) 764-5540 (fax) www.ii.umich.edu/ccs e-mail: chinese.studies@umich.edu Professor Mary Gallagher (Political Science), Director

Not a concentration program. Undergraduates may pursue Chinese Studies through the Asian Studies concentration or academic minor of the Department of Asian Languages and Cultures.

Professors Chang (History), Duanmu (Linguistics), Erickson (History of Art), Lam (Musicology), Liang (Health Management and Policy), Lim (Business Strategy), Lin (Chinese Literature), Little (Philosophy), Lopez (Buddhist & Tibetan Studies), Miller (SOE Educational Studies and Psychology), Powers (History of Art & Chinese Art and Cultures), Sheng (Music & Music Composition), Tang (Comparative literature), Tardif (Psychology), Thornton (History and Population Studies), Xie (Sociology and Statistics)

Associate Professors Baxter (Chinese Language and Linguistics), Brown (ALC), Gallagher (Political Science), Li (Social Work), Mueggler (Anthropology), Porter (English & Comparative Literature), Rolston (Chinese Language and Literature), Wang (Women's Studies)

Assistant Professors Adams (Architecture), Brose (Buddhist Studies), Cassel (History), de Pee (History), Howson (Law), Skar (History), Zhao (Business)

Lecturers Chen (Chinese Studies), Farnsworth (Business), Tao (Chinese Studies)

Professors Emeriti Dernberger (Economics), DeWoskin (Chinese Literature), Diamond (Anthropology), Edwards (History of Art), Feuerwerker, Albert (History), Feuerwerker, Yi-tsi Mei (Chinese Literature), Gómez (Buddhist Studies & Psychology), Gray (Law), Hermalin (Sociology), Kamachi (History), Lieberthal (Political Science & Business Administration), Mills (Chinese Literature), Munro (Philosophy & Chinese), Murphey (History), Oakley (Nursing), Terpstra (International Business), To (Education), Wan (Librarian), Wu (History of Art & Curator of Asian Art), Young (History)

The Center for Chinese Studies was founded in 1961, and since then has become one of the country's most prominent Centers devoted to a deeper understanding of China, past and present. The mission of the Center is to provide students, specialists and the public at large with expert resources and a deeper understanding of issues ranging from today's headlines to time-honored questions of value and meaning.

The Center for Chinese Studies offers a broad, interdisciplinary approach to the study of China at the Master's Level. Undergraduates may pursue Chinese Studies through the Asian Studies concentration of the Department of Asian Languages and Cultures.

Classical Studies

2160 Angell Hall 435 South State Street (734) 764-0360 (phone) (734) 763-4959 (fax) www.lsa.umich.edu/classics e-mail: classics@umich.edu Professor Ruth Scodel, Chair

Professors

- Sara L. Ahbel-Rappe, *Hellenistic and classical philosophy, neo-Platonism, philosophy of language*
- H.D. Cameron (Arthur F. Thurnau Professor), *Greek drama, linguistics, Greek orators, Plautus*
- Derek Collins, archaic Greek poetry, Latin literature, history of the classical tradition, religion
- Bruce W. Frier (Henry King Ransom Professor of Law; John and Teresa D'Arms Distinguished University Professor of Classics and Roman Law), *Roman law, Roman social and economic history, Hellenistic and Roman historiography and political science, ancient architecture, numismatics*
- Traianos Gagos, Greek papyrology; social and economic history of Roman and late antique Egypt (Petra papyri); integration of the historical, archaeological, and papyrological records of the Egyptian village, Karanis; violence in Egypt; computer applications in papyrology and classics; modern Greek language
- Kweku A. Garbrah, *Greek and Latin languages, comparative philology, epigraphy, early Latin tragedy*
- Sharon C. Herbert (John G. Pedley Professor of Classical Archaeology and Greek), *Greek archaeology, vase painting, Hellenistic Near East*
- Richard Janko (Gerald F. Else Collegiate Professor of Classical Studies, Greek language and literature, especially Mycenaean Greek, Homer and oral poetry, ancient literary criticism (especially Aristotle and Philodemus), comedy, Orphism and Greek religion, ancient manuscripts, textual criticism
- Vassilios Lambropoulos (C.P. Cavafy Professor of Modern Greek Studies; Professor of Comparative Literature), *modern Greek culture; the ancients and the moderns; ethics and politics; literature after cultural studies*
- David S. Potter (Arthur F. Thurnau Professor of Greek and Latin), *Greek and Roman Asia Minor, Greek and Latin historiography and epigraphy*
- Ruth Scodel (D.R. Shackelton Bailey Collegiate Professor of Greek and Latin), *Homer, tragedy, Greek literary criticism, ancient narrative*
- Nicola Terrenato, Roman Republican Archaeology, Roman Imperialism, Early Rome, Field survey method

Associate Professors

- Sara L. Forsdyke, Greek historiography, Greek political thought and ideology, Greek orators, Greek law, Greek history
- Benjamin Fortson, *Early Greek and Latin, history of Greek and Latin, comparative Indo-European linguistics, metrics and poetics, Roman comedy*
- Artemis Leontis, Comparative literature, especially classics and modern literatures, modern Greek literature, language, and culture; diaspora studies, including Greek Americans
- Lisa Nevett (History of Art), archaeology and iconography of domestic space in the ancient Greek world
- Christopher Ratté, Classical Archaeology, especially Greek architecture and urbanism, archaeology of Turkey
- Celia Schultz, *Roman religion, History and Literature of the Roman Republic, Cicero, Livy*
- Arthur M.F.W. Verhoogt, *Greek papyrology, socioeconomic, cultural* and administrative history of Greek and Roman Egypt, Egyptian, Greek and Latin personal names, Fayum villages

Assistant Professors

- Paolo Asso, Lucan, Greek and Latin epic, Latin poetry, Mythology, History of Classical Scholarship
- Ruth Caston, Latin Literature, Augustan Poetry, Ancient Rhetoric
- Basil Dufallo, Latin literature, ancient rhetoric, Roman cultural studies, critical theory
- J. Mira Seo, *Ovid and Post Ovidian epic, ancient literary criticism & culture, Hellenistic Poetry*

Lecturers

- Netta Berlin, Latin literature, epic poetry, Augustan poetry, literary theory
- Donka Markus, Oral performance of literature in Rome; Latin pedagogy; teaching with technology; Reading theory
- Despina Margomenou, Aegean prehistory, state formations in the Aegean, food storage technologies, archaeological ethics, politics of archaeology in Modern Greece

Deborah Pennell Ross, Latin language and literature, linguistics

Gina M. Soter, *Pedagogy of Latin and Greek; Greek and Roman theater, classical tradition theatre, women and gender in classical antiquity, religion in classical antiquity*

Adjunct Professors

Victor Caston, Ancient Greek & Roman Philosophy

- David Halperin (W.H. Auden Collegiate Professor; Professor of English Language and Literature and Professor of Women's Studies), *The history and theory of homosexuality; classical studies and its relation to contemporary cultural history; gay men's social practices and cultural identifications*
- Arlene W. Saxonhouse (Caroline Robbins Collegiate Professor of Political Science and Women's Studies), *Political theory, gender and politics/feminist theory*
- Raymond Van Dam (Richard Hudson Research Professor of History), Roman empire, late antiquity, early Christianity, history and anthropology

Adjunct Associate Professors

Johanna H. Prins (Associate Professor of English and Comparative Literature), *Nineteenth-century poetry; history and theory of lyric; translation and reception of classics, comparative literature*

Lauren Talalay, Aegean prehistory, gender, Neolithic figurines

Visiting Professor

Dirk Obbink (Lugwig Koenen Collegiate Professor of Papyrology), Literary papyrology, lost books, fragmentary sources, Hellenistic philosophy, Lucretius and poetae docti, Greek lyric poetry, literacy

Professors Emeriti Theodore V. Buttrey, Sally Humphreys, Ludwig Koenen, John G. Pedley, David O. Ross, Jr., James B. White, Charles Witke

The Department of Classical Studies is concerned with every aspect of the worlds of the ancient Greeks and Romans – their languages and literatures, art and material cultures, philosophy, history, daily life, law and justice, political theory, and religion. The works and thoughts of the Greeks and Romans provide focus and historical perspective to questions which are heatedly debated in our time, making this field of study exciting and intellectually engaging. An ideal liberal arts education, Classical Studies is an excellent way to develop analytical abilities, to learn to make careful arguments and express them lucidly as well as come to a solid understanding of some of the greatest monuments of human thought and art.

Courses Taught in English. The department offers a number of Classical Archaeology and Classical Civilization courses which require no knowledge of Greek or Latin. Through lectures and reading in translation, these courses offer students an opportunity to acquire a general knowledge of Greek and Roman archaeology, literature, mythology, religion, sport and daily life, sexuality, law, philosophy, and institutions.

LSA language requirement. The LSA language requirement for the A.B./B.S. degree may be satisfied with the successful completion of: MODGREEK 202, both GREEK 301 and 302 (or equivalent); GREEK 307 and 308; GREEK 300 and any upper-level course; or LATIN 232 or 295 (but not LATIN 194), or any course at the 300- or 400-level which has as a prerequisite one of these courses, or by satisfactory performance on a placement test. The Latin placement test is offered once at the beginning of each term, periodically during each term by arrangement, and throughout the Summer Orientation period. Students are placed into the department's language sequences according to their demonstrated proficiency.

Intensive Language Courses. The department offers intensive language courses in Latin and Greek which compress the normal two-year sequence required for elementary language proficiency. Intensive courses are available for Latin and Greek, and are offered during Fall and Winter Terms, and during the Spring or Summer Half-Term. For information about intensive Latin and Greek, please contact the department.

Special Departmental Policies. The department requires that a student earn a grade of at least C- in all *language* courses which are prerequisite for subsequent elections. A student should repeat any *language* course in which a D+ or lower grade is earned and which serves as a prerequisite to other courses which are to be elected. A grade of D+ signifies some achievement but denotes too weak a foundation for subsequent courses.

Concentration Program Options. The department offers Honors in each of the six concentrations. Interested students who have a cumulative grade point average of at least 3.5 should contact their concentration advisor to discuss an Honors thesis no later than the winter term of their junior year at the latest.

It is the student's responsibility to find a suitable faculty advisor to oversee the thesis project. For each student, an Honors committee, including at a minimum the thesis advisor and the undergraduate concentration advisor, is constituted. The committee is responsible for the oral examination of the student's work.

Honors students may receive six credits during their senior year for research culminating in a thesis project by registering for one of the following courses: CLARCH 495, CLCIV 495, GREEK 495 or LATIN 495 depending on the concentration. This project and its components are to be decided collectively by the student and the advisor in the beginning of the senior year. We encourage students to think creatively about the approach to their research and thesis project. Thesis advisors must sign off on a student's thesis project proposal. Candidates must offer an oral defense of this work, in a form to be agreed upon with their thesis advisor.

Additional information for specific concentrations:

- Classical Archaeology Honors Concentrators: In addition to the Honors concentration requirements stated above, Honors candidates are required to take a minimum of eight credits in the second classical language (Ancient Greek if the major language is Latin; Latin if the major language is Ancient Greek).
- 2. Classical Civilization Honors Concentrators: In addition to the Honors concentration requirements stated above, Honors concentrators must achieve fourth-term language proficiency, as defined by the LSA language requirement, in either ancient Greek or Latin. Students are required to take two terms of CLCIV 495 in place of CLCIV 480/481 (Capstone Seminar). Students must also take two upper-level cognate courses deemed relevant (at the discretion of the thesis advisor) to the subject of the Honors thesis.

- 3. Classical Languages & Literatures (Greek and Latin) Honors Concentrators: In addition to the Honors concentration requirements stated above, Honors candidates must take one course, above course level 420, in either Greek or Latin.
- 4. Modern Greek Studies concentrators: In addition to the concentration requirements, students must complete an Honors Thesis and a reading list in their senior year.

Advising. Students interested in the department's concentration programs in Ancient Greek, Latin, Classical Languages and Literatures, Classical Archaeology, Classical Civilization, or Modern Greek concentration should check with the department office for the name of the current advisor. Students interested in obtaining Teacher Certification in Latin should see Professor Deborah Ross. The department recommends that interested students see the undergraduate advisors as early as possible in order to plan their programs and avoid unnecessary scheduling conflicts.

Study Abroad. Classical Studies encourages students to go abroad as part of their undergraduate experience to deepen their interest and understanding of the classical world. Study abroad programs are widely available for undergraduates who wish to pursue their interests in the classical world 'on site.' Students can choose from a variety of programs in Italy, Greece, England, France, and the Middle East. Students can also choose from three and six-week summer programs, and fall and winter semester long programs.

The Department of Classical Studies is affiliated with the *Intercollegiate Center for Classical Studies* at Rome, Italy, where undergraduates from various American and Canadian institutions are given an opportunity to study Greek and Latin literature, ancient history, archaeology, and ancient art. Admission to this program is open to any undergraduate concentrating in these areas having appropriate background and interests. For information and application forms, contact the departmental office.

Awards. Each year, Classical Studies is pleased to present some of its top undergraduate students with awards acknowledging outstanding achievement and excellence in their field of study. The awards are made possible through the benevolence and generosity of University of Michigan alumni and patrons of Classics.

- *The Phillips Classical Prizes* Awarded to students with the top scores on the Philips Prize translation exams in Greek and Latin.
- The Modern Greek Prizes Awarded to students for excellence in translation of Modern Greek at the elementary and intermediate levels.
- The Context for Classics Prizes
 Awarded to students for excellence in translation of ancient texts.
- The Seligson Prize
- Awarded to the top senior in the field of Greek.
- The Copley Prize
- Awarded to the top senior in the field of Latin.
- The Classical Archaeology Prize
- Awarded to the top senior in the field of Classical Archaeology. • The Classical Civilization Prize
- Awarded to the top senior in the field of Classical Civilization. • Undergraduate Research and Travel Awards
- Grants awarded for the purposes of undergraduate research or travel in the summer months.
- Arthur and Mary Platsis Student Prize Competition for Work on the Greek Classical Legacy.

These prizes recognize and award undergraduate and graduate students for exceptional, original work relating to the Greek Classical legacy from its earliest historical roots in Minoan Crete, the Homeric epics, and the pre-Socratic philosophers, through the Classical and Hellenistic eras and as echoed and reinforced in the works of Byzantine and Modern Greek culture.

Resource Centers. *The Classics Library:* This resource is available to Undergraduate concentrators and Graduate students. The library contains over 3,800 texts (the oldest text dating back to 1669!),

journals, recent commentaries and major works of reference, and provides ample work space for research.

The Undergraduate Reading Room: This resource is designed for undergraduates. The room provides a place to study or read in comfort and comes equipped with computers. It also contains the *Classics Career Resource Center (CCRC)* which has information for students looking into graduate study, internships, and study abroad programs.

Student Organizations

FACTIO – The Classical Studies Undergraduate Association. The Undergraduate Classics Association is a student organization dedicated to furthering interest in the classical world through social activities, community service, academic projects, and mentorship. Membership is open to any interested.

The Archaeology Club. This organization is for undergraduates interested in exploring current archaeological research with students and faculty from the many areas of archaeology on campus. Activities include lectures, fieldtrips, and conferences.

Eta Sigma Phi – Alpha Eta Chapter. ESP is the national honorary collegiate society for students of Latin and/or Greek. For membership details, visit their website at: www.umich.edu/~etasigma

Classical Archaeology

May be elected as a departmental concentration program

Classical archaeology is the study of the material culture – the artifacts, sites, monuments, and landscapes – of the ancient Mediterranean world. While the civilizations of Greece and Rome tend to be our focus, other areas, notably Egypt and the Near East, also form part of what we study. Classical archeology deals with all periods from the Paleolithic ('Old Stone Age') through to Byzantine times.

Courses in CLARCH numbered 221 through 540 do not require knowledge of Greek or Latin.

Concentration Program. Requires a minimum of 9-10 courses (at least 3 credits each) including:

- 1. two of the following introductory courses: CLARCH 220, 221, 222, 323
- 2. three upper-level courses (numbered 380 and above) in the field of Classical Archaeology.
- 3. one course in either Greek or Roman history or civilization.
- one upper-level course in a cognate field (e.g., Anthropology, History, History of Art, Near Eastern Studies, Religion, Women's Studies).
- 5. third-term proficiency in Greek or Latin (usually met by successful completion of GREEK 301 or the equivalent; LATIN 231 or the equivalent). Students who plan to fulfill this requirement in other ways should speak to the undergraduate advisor.
- 6. at least one additional course.

Students interested in possibly continuing in the field of Classical Archaeology should discuss their plans (not least in the ancient languages) with the undergraduate advisor as early and as frequently as possible.

Honors Concentration. See Honors information, above.

Field Experience. Recommended but not required for a concentration in Classical Archaeology. There are several opportunities for students to join excavations in the Mediterranean area under the supervision of University of Michigan faculty. Contact the department to speak with an advisor.

Classical Civilization

May be elected as a departmental concentration program

Classical Civilization is an exploration of the life and culture of the ancient Greeks and Romans. Students examine almost every aspect of ancient life – art, architecture, social/political problems and events, and the literature of these cultures. Knowledge of Greek or Latin is not required for this program, but highly recommended.

Prerequisites to Concentration. A minimum of two courses from the following choices, for a total of 8 credits. One course must emphasize Greek culture and the other course must emphasize Roman culture: CLCIV 101, 102, HISTORY 200, 201, GTBOOKS 191.

Concentration Program. Requires a minimum of 9 courses (of at least 3 credits each) for approximately 29 credits including:

- at least five upper-level courses (minimum 15 credits) in Classical Civilization at the 300 or 400 level, with at least two of these at the 400 level. These courses must include at least one course in literature and one course in religion/philosophy. One course in Latin or Ancient Greek may substitute for one of these Classical Civilization courses.
- 2. One course (minimum 3 credits) in Classical Archaeology.
- 3. One course (minimum 3 credits) in Ancient Greek or Roman history. This requirement is separate from any History course that may have been taken as a prerequisite to the concentration.
- 4. at least one upper-level elective/cognate course (minimum 3 credits) outside the division of Classical Civilization. LATIN 231 or 232 may also count to meet this requirement.
- 5. The "Capstone Seminar," either CLCIV 480, *Studying Antiquity* or CLCIV 481, *Classical Tradition.*

Honors Concentration. See Honors information, above.

Classical Languages & Literatures

May be elected as a departmental concentration program

Concentration Program. The concentration requires study of both Greek and Latin; the student chooses one language as the major language for the purpose of determining requirements. The student takes a minimum of 9 courses (of at least 3 credits each) including:

- 1. In the major language at least 3 courses at the 400-level or above; 300-level courses count toward the concentration in the major language only.
- 2. In the minor language, at least one course at the 400-level or above.
- 3. Two courses selected from CLARCH (221 or 222), CLCIV (101 or 102), or HISTORY (200 or 201).

Three credits of Independent Study (GREEK 499 and LATIN 499) may be used with written approval of the undergraduate advisor.

Honors Concentration. See Honors information, above.

Ancient Greek Language & Literature

May be elected as a departmental concentration program

Prerequisites to Concentration. GREEK 101 and 102 or special placement examination.

Concentration Program. Requires a minimum of 9 courses (of at least 3 credits each) including:

- 1. Seven courses in GREEK at the 300-level or above (at least 4 of these must be at the 400-level or above, usually including GREEK 401 and 402).
- 2. Two courses selected from CLARCH 221, CLCIV 101, or HISTORY 200.

Three credits of Independent Study (GREEK 499) may be used with written approval of the undergraduate advisor.

Honors Concentration. See Honors information, above.

Latin Language & Literature

May be elected as a departmental concentration program

Prerequisites to Concentration. LATIN 194 or 232 or special placement examination.

Concentration Program. Requires a minimum of 9 courses (of at least 3 credits each) including:

- 1. Seven courses in LATIN at the 300-level or above; at least 4 of these courses must be at the 400-level or above and must include:
 - (a). LATIN 401 or 402;
 - (b).LATIN 409 or 410;
 - (c). another course from (a) or (b) or another course at the 400-level or above.
- 2. Two courses selected from CLARCH 222, CLCIV 102, or HISTORY 201.

Three credits of Independent Study (LATIN 499) may be used with written approval of the undergraduate advisor.

Honors Concentration. See Honors information, above.

Teaching Certificate. Students interested in a secondary school teaching certificate with a teaching major or minor in Latin must have Professor Deborah Ross approve their program of study.

Teaching Major in Latin. Thirty credits which must include:

- 1. Fifteen credits in LATIN beyond LATIN 194 or 232, of which 12 must be at the 400-level or above; neither LATIN 499 nor 599 may be counted toward the teaching major without permission of the teaching certificate advisor;
- 2. One course in Latin composition;
- 3. One course in Classical Archeology;
- 4. One course in Roman history;
- 5. One course in Linguistics.

Teaching Minor in Latin. Twenty credits which must include:

- 1. Twelve credits in LATIN beyond LATIN 194 or 232, of which 9 must be at the 400-level or above. Neither LATIN 499 nor 599 may be counted toward the teaching minor without permission of the teaching certificate advisor;
- 2. One course in Roman history;
- 3. One course in Linguistics.

Professor Deborah Ross has the authority to modify departmental requirements for a teaching *major* or *minor* in special cases and in keeping with the general requirements for the teaching certificate.

Modern Greek Studies

www.lsa.umich.edu/modgreek

Professor Vassilios Lambropoulos, Director

May be elected as a departmental concentration program

Affiliated faculty Tatjana Aleksić (Slavic, Comparative Literature), John Fine (History), Johannes Foufopoulos (Natural Resources), Traianos Gagos (Classical Studies), Janet Hart (Anthropology), Vassilios Lambropoulos (Classical Studies, Comparative Literature), Artemis Leontis (Classical Studies, Comparative Literature), Panagiotis Pafilis (Modern Greek, Natural Resources), Laurie Talalay (Kelsey Museum of Archaeology, Classical Studies), Keith Taylor (Creative Writing), George Tsebelis (Political Science), Ray van Dam (History) The field of Modern Greek consists in the study of global Hellenism over the last five centuries, including its intersection with the classical tradition in other cultures. Students pursuing the concentration in Modern Greek Studies study modern Hellenism, with a special emphasis on Greece and the Greek communities of the U.S. They also familiarize themselves with Hellenism's ancient and medieval origins. In addition to acquiring an in-depth knowledge of contemporary Greek language, culture, and history, students gain exposure to a number of disciplines and become aware of distinct methods (literary, historical, anthropological, theoretical/philosophical, etc.) used in the study of civilizations. The concentration requires detailed learning of the language and firm grounding in the knowledge of culture but also offers familiarity with broader issues of our times such as identity, tradition, transnationalism, globalism, and orientalism. Thus the concentration provides a broad-based liberal arts education and contributes to the development of critical thinking and related skills, both linguistic and interpretive. The concentration builds on the great strengths of the Department of Classical Studies and the Program in Comparative Literature, as well as on traditional West European, Balkan, and Mediterranean strengths across the Colleae.

Modern Greek courses cover language, literature, and culture, offering a systematic introduction to the Greek world of the last ten centuries, and especially to its contemporary social reality and intellectual achievement. As part of a liberal arts education, they promote the contextual study, both local and global, of contemporary Greek culture, placing particular emphasis on literary studies, critical theory, cultural politics, ethnicity, and diaspora (especially Greek-American). The Modern Greek Studies program offers both a concentration and an academic minor; interested students should contact Professor Vassilios Lambropoulos.

Prerequisites to the concentration. MODGREEK 101 and 102.

Concentration Program. Minimum of ten courses, distributed as follows:

- Modern Greek Language: Four (4) terms of Modern Greek language courses at the 200-level and above: MODGREEK 201, 202, 301, and 302 (205 and 305 are excluded).
- Modern Greek Literature and Culture: Three courses in Modern Greek literature and culture at the 300-level and above.
- Structure courses: Three courses, selected in consultation with, and approved by, the concentration advisor. At least one course must be selected in three of the areas listed below:
 - A. Classical Civilization
 - B. Byzantine History and Art
 - C. Anthropology
 - D. Political Science

Honors concentration. Students holding a cumulative GPA of 3.5 and Modern Greek Studies Concentration GPA of 3.5, who have demonstrated superior ability in the language and serious interest in a project of research, may be admitted to a program of advanced study at the beginning of the senior year, leading to the degree of Bachelor of Arts with Honors in Modern Greek Studies. In addition to the normal concentration requirements, students must complete an Honors Thesis and a reading list in their senior year.

Study Abroad. Opportunities exist for study abroad in Greece or Cyprus for the summer or an academic term. Students should work closely with the concentration advisor on both the selection of the foreign schools and the transfer of credit to ensure that their concentration program will be appropriately enriched.

Advising. Concentration advising is provided by Professors Vassilios Lambropoulos and Artemis Leontis. Information about scheduling appointments is available from the department office.

Classical Studies Academic Minors

Academic minors in Classical Studies are not open to students with any concentration or any other academic minor in Classical Studies.

Students wishing to pursue an academic minor in Classical Studies must develop a specific plan for its completion in consultation with the department's designated advisor. Appointments may be scheduled at 2160 Angell Hall.

Classical Archaeology

The academic minor in Classical Archaeology is intended to provide students with the opportunity to explore the archaeology and art of the ancient Mediterranean world. Students will acquire a broad archaeological, historical and cultural overview, before turning to more specific courses dealing with the artistic production and material conditions of Greek and Roman society.

Prerequisites to the Academic Minor: CLARCH 221, 222, or 323.

Academic Minor Program: At least 16 credits of courses, to be chosen from the following three categories as stated:

- 1. **Introductory courses:** At least one broad introductory course in classical archaeology, other than the course elected to meet the prerequisite (CLARCH 221, 222, or 323).
- Civilization or History courses (Greek or Roman): At least one broad introductory course (CLCIV 101, 102; HISTORY 200, 201).
- 3. Upper-Level Classical Archaeology courses: At least three courses at the 300- or 400-level in CLARCH.

Classical Civilization

This academic minor is designed to provides a grounding in ancient Greek and Roman civilization for those unable to elect Classical Civilization as a concentration. It requires students to learn about the history, literature, religion, philosophy, and material culture of ancient Greece and Rome, primarily through the close reading and analysis of original Greek and Latin texts in translation. Confrontation with how people lived and though tin ancient Greece and Rome allows students to gain an understanding of the relation between the ancient and modern world in all its complexity, and gives them valuable intellectual tools to deal with issues in many aspects of modern life. Courses in classical Civilization also enhance students' ability to think critically and improve their competence in written and oral communication

Prerequisites to the Academic Minor: A minimum of two courses from the following choices, for a total of 8 credits. One course must emphasize Greek culture and the other course must emphasize Roman culture:

CLCIV 101 (The Ancient Greek World), CLCIV 102 (The Ancient Roman World), HISTORY 200 (Greece to 201 B.C.), HISTORY 201 (Rome), GTBOOKS 191 (Great Books).

Academic Minor Program: At least five upper-level courses (minimum 15 credits) in Classical Civilization at the 300 or 400 level, with at least one of these at the 400 level. These courses must include at least one course that satisfies the Upper-Level Writing Requirement or be one of the "Capstone Seminars," either CLCIV 480 (Studying Antiquity) or CLCIV 481 (Classical Tradition).

One of the 300-level courses in Classical Civilization may be substituted for with any of the following

- 1. One course (minimum 3 credits) in Classical Archaeology.
- One course (minimum 3 credits) in Ancient Greek or Roman history (other than one taken as a prerequisite to the academic minor).
- 3. One course in ancient Greek or Latin at the third-term level or above;
- 4. MODGREEK 325, "Athens, Present and Past"

Language, Literature, and Culture of Ancient Greece

This academic minor is designed to provide a basic, but contextual and broad, familiarity with Greek language and literature and the civilization of ancient Greece. More specifically, it requires students to study, at the intermediate and advanced level, Greek and authors writing poetry and/or prose, but at the same time it acquaints the student with the broader historical, social, and cultural content in which these authors lived and worked.

Prerequisite to the Academic Minor: GREEK 301, or equivalent as determined by departmental placement examination.

Academic Minor Program: At least 16 credits of courses, to be chosen from the following three categories as stated:

- 1. Greek Language and Literature courses: at least two upperlevel courses, above GREEK 301.
- 2. Greek Civilization courses: at least one broad introductory course (CLCIV 101, CLARCH 221, or HISTORY 200).
- 3. **Upper-Level courses**: at least one upper-level (300- or 400-level) course in Greek civilization, archaeology, or history.

Language, Literature, and Culture of Ancient Rome

This academic minor is designed to provide a basic, but contextual and broad, familiarity with Latin language and literature and the civilization of ancient Rome. More specifically, it requires students to study, at the intermediate and advanced level, Latin and authors writing poetry and/or prose, but at the same time it acquaints the student with the broader historical, social, and cultural content in which these authors lived and worked.

Prerequisite to the Academic Minor: LATIN 232 or 194, or equivalent as determined by departmental placement examination.

Academic Minor Program: At least 16 credits of courses, to be chosen from the following three categories as stated:

- 1. Latin Language and Literature courses: at least two upperlevel courses, with at least one at the 350-level or higher.
- 2. Roman Civilization courses: at least one broad introductory course (CLCIV 102, CLARCH 222, or HISTORY 201).
- 3. **Upper-Level courses:** at least one upper-level (300- or 400-level) course in Roman civilization, archaeology, or history.

Modern Greek Studies

This academic minor is designed to provide a basic, but contextual and broad, familiarity with modern Greek language, literature, and culture. More specifically, it requires students to study, at the intermediate and advanced level, Greek and authors writing poetry and/or prose, but at the same time it acquaints the student with the broader historical, social, and cultural content in which these authors lived and worked. The academic minor is for students who have a strong interest in contemporary Hellenism and who wish to explore it, under close and careful supervision, in a meaningful fashion.

Prerequisite to the Academic Minor: MODGREEK 201, or equivalent as determined by departmental placement examination.

Academic Minor Program: At least 16 credits of courses, to be chosen from the following three categories as stated:

- 1. Modern Greek Language and Literature: at least two courses in modern Greek language and literature, above MODGREEK 201.
- 2. Modern Greek culture: at least one broad introductory course.
- 3. **Upper-Level courses:** at least two upper-level (300- or 400-level) courses in modern Greek diaspora and travel.

Substitutions. Any appropriate course taught in the area of Modern Greek Studies in departments other than Classical Studies must be approved by the program advisor and the Chair in Modern Greek.

COURSES IN CLASSICAL STUDIES

CLASSICAL ARCHAEOLOGY (CLARCH)

CLARCH 220 / HISTART 220. Great Buildings of Ancient Greece and Rome (4; 3 in the half-term). (HU). May not be repeated for credit.

CLARCH 221 / HISTART 221. Introduction to Greek Archaeology (4; 3 in the half-term). (HU). May not be repeated for credit. F.

CLARCH 222 / HISTART 222. Introduction to Roman Archaeology (4; 3 in the half-term). (HU). May not be repeated for credit. W.

CLARCH 223 / CLCIV 223. Greeks and Barbarian

(4). (HU). May not be repeated for credit.

CLARCH 323. Introduction to Field Archaeology (4; 3 in the half-term). (HU). May not be repeated for credit.

CLARCH 350. Topics in Classical Archaeology

CLARCH 221, 222, or 323. (3). (HU). May be repeated for a maximum of 12 credits. CLARCH 384 / HISTART 384. Principal Greek Archaeological Sites

Upperclass standing, and a course in archaeology. (3). May not be repeated for credit.

CLARCH 387 / HISTART 387. Archaeology of Ancient Housing (3). May not be repeated for credit.

CLARCH 389 / HISTART 389. Pompeii: Its Life and Art CLARCH 222/HISTART 222. (3). (HU). May not be repeated for credit.

CLARCH 424 / HISTART 424. Archaeology of the Roman Provinces

Upperclass standing, and CLARCH/HISTART 221 or 222. (3). May not be repeated for credit.

CLARCH 425. Hellenistic and Republican Roman Architecture

CLARCH 222. (3). May not be repeated for credit. Rackham credit requires additional work.

CLARCH 426. Roman Imperial Architecture

CLARCH 222/HISTART 222. (3). May not be repeated for credit. Rackham credit requires additional work.

CLARCH 433 / HISTART 433. Greek Sculpture

Upperclass standing, and HISTART 101. (3; 2 in the half-term). May not be repeated for credit. Rackham credit requires additional work

CLARCH 435 / HISTART 435. The Art and Archaeology of Asia Minor Upperclass standing. (3). May not be repeated for credit.

CLARCH 436 / HISTART 436. Hellenistic and Roman Architecture Upperclass standing, and HISTART 101 or CLARCH 221/HISTART 221 or CLARCH 222/HISTART 222. (3). May not be repeated for credit.

CLARCH 439 / HISTART 439. Greek Vase Painting

Upperclass standing. (3; 2 in the half-term). May not be repeated for credit. CLARCH 440 / HISTART 440. Cities and Sanctuaries of Classical Greece Upperclass standing, and a course in archaeology. (3; 2 in the half-term). May not be repeated for credit.

CLARCH 443 / HISTART 443. The Art and Archaeology of Greek Colonization Upperclass standing and CLARCH/HISTART 221. (3). May not be repeated for credit.

CLARCH 481 / HISTART 481. Art of Ancient Iran

Upperclass standing and HISTART 101 or 222. (3). May not be repeated for credit. Rackham credit requires additional work.

CLARCH 494 / GREEK 494 / LATIN 494. Classical Studies Honors Seminar Minimum 3.4 GPA. May not be repeated for credit.

CLARCH 495. Senior Honors Research

Consent of instructor required. Upperclass standing. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

CLARCH 496. Practicum in Museum Studies

Junior or seniors, or permission of instructor. (1 - 3). (EXPERIENTIAL). May be repeated for a maximum of 6 credits.

CLARCH 497. Practicum in Field Archaeology

Junior or seniors. (1 - 3). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. CLARCH 499. Supervised Reading

Consent of instructor required. Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for credit. May be elected more than once in the same term. F, W, Sp, Su.

CLARCH 515 / HISTART 515. The Archaeology of the Roman Economy

CLARCH/HISTART 222 or permission of instructor and upperclass standing. (3). May not be repeated for credit.

CLARCH 534 / HISTART 534. Ancient Painting

Upperclass standing, HISTART 101 and either HISTART/CLARCH 221 or 222. (3). May not be repeated for credit. Rackham credit requires additional work.

CLARCH 536 / HISTART 536. Hellenistic and Roman Sculpture

Upperclass standing, HISTART 101 and either CLARCH/HISTART 221 or 222. (3). May not be repeated for credit. Rackham credit requires additional work.

CLASSICAL CIVILIZATION (CLCIV)

CLCIV courses do not require a knowledge of Greek or Latin. They are intended for students who wish to acquire knowledge of ancient literature, life, and thought, and of the debt modern civilization owes the Greeks and Romans.

CLCIV 101. Classical Civilization I: The Ancient Greek World (in English)

Freshman or Sophomore or permission of instructor. (4). (FYWR). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GTBOOKS 191 or 201. F.

CLCIV 102. Classical Civilization II: The Ancient Roman World (in English)

Freshman or Sophomore or permission of instructor. (4). (HU). May not be repeated for credit. W. CLCIV 120. First-year Seminar in Classical Civilization (Humanities) Enrollment restricted to first-year students, including those with sophomore standing.

(3). (HU). May not be repeated for credit.

CLCIV 121. First-year Seminar in Classical Civilization (Composition) Enrollment restricted to first-year students, including those with sophomore standing. (4). (FYWR). May not be repeated for credit.

CLCIV 125. Mini Course in Classical Civilization

(1). (HU). May be repeated for a maximum of 3 credits. May be elected more than once in the same term. Offered mandatory credit/no credit.

CLCIV 215. Ovid (1). (HU). May not be repeated for credit.

CLCIV 223 / CLARCH 223. Greeks and Barbarian (4). (HU). May not be repeated for credit.

CLCIV 293, Applied Ethics in the Ancient World (3). (HU). May not be repeated for credit.

CLCIV 328. Ancient Languages and Scripts (3). (HU). May not be repeated for credit.

CLCIV 330. Homeric Greece

CLCIV 101 or 102 or GTBOOKS 191. (3). (HU). May not be repeated for credit.

CLCIV 341. Classics and Cinema (4). (HU). May not be repeated for credit.

CLCIV 342. Sexuality and Sexual Stereotype in Greek and Roman Culture (3 - 4). (HU). May not be repeated for credit.

CLCIV 350. Topics in Classical Civilization CLCIV 101 and 102. (3). (HU). May be repeated for a maximum of 6 credits.

CLCIV 372. Sports and Daily Life in Ancient Rome (4; 3 in the half-term). (HU). May not be repeated for credit.

CLCIV 375. War in Greek and Roman Civilization (4). (HU). May not be repeated for credit

CLCIV 376. Emperors of Rome

(4; 3 in the half-term). (HU). May not be repeated for credit.

CLCIV 385. Greek Mythology

(4). (HU). May not be repeated for credit.

CLCIV 386. Greek Drama

(3; 2 in the half-term). (HU). May not be repeated for credit.

CLCIV 388 / PHIL 388. History of Philosophy: Ancient

One philosophy course with at least a C-. (Prerequisites enforced at registration.) Knowledge of Greek or Latin is not required. (4; 2 in the half-term). (HU). May not be repeated for credit.

CLCIV 393. Plato's Dialogues in English (3). (HU). May not be repeated for credit.

CLCIV 403 / POLSCI 403. Greek Political Thought

POLSCI 101 or 302. (3). May not be repeated for credit.

CLCIV 456. Egypt after the Pharaohs: Public and Private Life in an Ancient Multicultural Society

CLCIV 101 or HISTORY 200 or HISTORY 201 or an introductory class in Egyptian archaeology or history, or CLCIV 102 or CLARCH/HISTORY 221 or CLARCH/HISTORY 222. (3). May not be repeated for credit.

CLCIV 464. The Ancient Epic

(3; 2 in the half-term). May not be repeated for credit.

CLCIV 467. The Psyche: A History of Its Life and Afterlife in the Ancient Greek World CLCIV 101. (3). May not be repeated for credit.

CLCIV 472. Roman Law

Sophomore or above. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit.

CLCIV 476 / HISTORY 405 / RELIGION 476. Pagans and Christians in the Roman World

(4; 3 in the half-term). May not be repeated for credit.

CLCIV 477. Law and Ethics in the Ancient World

(3). May not be repeated for credit.

CLCIV 478. Roman Family Law

Sophomore or above. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

CLCIV 480. Studying Antiquity

Open only to concentrators in Classical Civilization, Classical Archaeology, Classical Language and Literature, Ancient Greek, Latin, and Modern Greek. (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits.

CLCIV 495. Senior Honors Research

Consent of instructor required. Upperclass standing. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

CLCIV 499. Supervised Reading

Permission of Instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

GREEK (GREEK)

GREEK 101. Elementary Greek

(4). May not be repeated for credit. Graduate students should elect GREEK 502. F.

GREEK 102. Elementary Greek

GREEK 101. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GREEK 103/503.

GREEK 103. Intensive Elementary Greek I

(6). May not be repeated for credit. No credit granted for students who have completed GREEK 101 or 102, or any subsequent GREEK class.

GREEK 301. Second-Year Greek

GREEK 102 or 103. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to students who have completed or are enrolled in GREEK 507. F. The language requirement is satisfied with successful completion of both GREEK 301 AND 302. Graduate students should elect GREEK 507.

GREEK 302. Second-Year Greek

GREEK 102 or 103. (4). (Lang Req). May not be repeated for credit. No credit granted to students who have completed or are enrolled in GREEK 508. The language requirement is satisfied with successful completion of both GREEK 301 AND 302. W.

GREEK 307 / ACABS 307. The Synoptic Gospels: Matthew, Mark and Luke

GREEK 101 and 102; and permission of instructor. (3). May not be repeated for credit. Taught in Greek. The language requirement is satisfied with successful completion of both GREEK 307 AND 308.

GREEK 308 / ACABS 308. The Acts of the Apostles

GREEK 101 and 102; and permission of instructor. (3). (Lang Req). May not be repeated for credit. Taught in Greek. The language requirement is satisfied with successful completion of both GREEK 307 AND 308.

GREEK 401. Readings in Classical Greek Prose

GREEK 302. (3). May be repeated for a maximum of 9 credits.

GREEK 402. Greek Drama

GREEK 302. (3). May be repeated for a maximum of 9 credits. W.

GREEK 410. Elementary Greek Prose

GREEK 302. (3). May not be repeated for credit.

GREEK 449. Tragedy

GREEK 402. (3). May not be repeated for credit. Rackham credit requires additional work.

GREEK 451. Comedy

GREEK 402. (3). May not be repeated for credit. Rackham credit requires additional work.

GREEK 471. Imperial Greek

GREEK 402. (3). May not be repeated for credit. Rackham credit requires additional work.

GREEK 473 / ACABS 427. Advanced Koine

Two years of Greek, one term of New Testament Greek (300 level or equivalent). (3). May not be repeated for credit.

GREEK 494 / CLARCH 494 / LATIN 494. Classical Studies Honors Seminar Minimum 3.4 GPA. May not be repeated for credit.

GREEK 495. Senior Honors Research

Consent of instructor required. Upperclass standing. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

GREEK 499. Supervised Reading

Consent of instructor required. (1 - 4). (INDEPENDENT). May be repeated for credit. May not be included in a concentration plan in Greek or Classical Languages and Literatures. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. F, W, Sp. Su.

GREEK 506. Advanced Greek Composition

GREEK 410. (3). May not be repeated for credit.

GREEK 509. The Homeric Epic

Permission of instructor required for undergraduates; advanced ability to read Greek. (3; 2 in the half-term). May not be repeated for credit.

GREEK 515. Euripides

GREEK 302. (3). May not be repeated for credit.

GREEK 556. Greek Philosophical Literature I

Graduate standing in Classical Studies or permission of instructor. (3). May not be repeated for credit.

GREEK 560. Hellenistic Poetry

GREEK 301 and 302. (3). May not be repeated for credit.

MODERN GREEK (MODGREEK)

MODGREEK 101. Elementary Modern Greek

(4). May not be repeated for credit. No credit granted to those who have completed MODGREEK 500 or 501. F.

MODGREEK 102. Elementary Modern Greek, II

MODGREEK 101. (4). May not be repeated for credit. No credit granted to those who have completed MODGREEK 500 or 502. W.

MODGREEK 105. Elementary Modern Greek Conversation

MODGREEK 101. (1). May be elected twice for credit. Offered mandatory credit/no credit.

MODGREEK 201. Second Year Modern Greek I

MODGREEK 102. (4). May not be repeated for credit. No credit granted to those who have completed MODGREEK 503. F.

MODGREEK 202. Second Year Modern Greek, II

MODGREEK 201. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed MODGREEK 504. W.

MODGREEK 205. Intermediate Modern Greek Conversation, I

MODGREEK 201. (1). May be elected twice for credit. Offered mandatory credit/no credit.

MODGREEK 214. Introduction to Modern Greek Culture (3). (SS). May not be repeated for credit.

MODGREEK 301. Intermediate Modern Greek I MODGREEK 202. (3). May not be repeated for credit. No credit granted to those who have completed MODGREEK 505.

MODGREEK 302. Intermediate Modern Greek II

MODGREEK 202. (3). May not be repeated for credit. No credit granted to those who have completed MODGREEK 506.

MODGREEK 305. Intermediate Modern Greek Conversation, II

MODGREEK 301/302. (1). May be elected twice for credit. Offered mandatory credit/no credit.

MODGREEK 318 / AMCULT 318. Greek-American Culture (3). (R&E). May not be repeated for credit.

MODGREEK 325. Athens, Present and Past (3). (HU). May not be repeated for credit.

MODGREEK 340 / COMPLIT 340. Travels to Greece

(3). (HU). May not be repeated for credit.

MODGREEK 350. Topics in Modern Greek (3). (HU). May be elected twice for credit. May be elected more than once in the same term.

MODGREEK 399. Directed Study

Consent of instructor required. (1-4). (INDEPENDENT). May not be repeated for credit. MODGREEK 499. Supervised Reading

Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 9

credits.

LATIN (LATIN)

LATIN 101. Elementary Latin

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in LATIN 103, 193, or 502.

LATIN 102. Elementary Latin

LATIN 101. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in LATIN 193 or 502.

LATIN 103. Review Latin

Some background in Latin and assignment by placement test. (4). May not be repeated for credit. Credit is granted for no more than two courses among LATIN 101, 102 and 103. No credit granted to those who have completed or are enrolled in LATIN 193 or 502.

LATIN 193. Intensive Elementary Latin I

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in LATIN 101, 102, 103 or 502. F.

LATIN 194. Intensive Elementary Latin II

LATIN 193. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in LATIN 231, 232, or 503. Graduate students should elect LATIN 503. This course does not satisfy the language requirement. W.

LATIN 195 / RCLANG 195. Intensive Latin I

(8). May not be repeated for credit.

LATIN 231. Roman Kings and Emperors

LATIN 102 or 103. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in LATIN 194 or 503.

LATIN 232. Vergil, Aeneid

LATIN 231. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in LATIN 194 or 503.

LATIN 233. Late Latin

LATIN 231 OR P.I. (4). (Lang Req). May not be repeated for credit.

LATIN 295 / RCLANG 295. Intensive Latin II

LATIN 102, 103, or 193/504, or RCLANG 195. (8). (Lang Req). May not be repeated for credit.

LATIN 301. Intermediate Latin I

LATIN 194 or 232. (3; 2 in the half-term). (HU). May not be repeated for credit.

LATIN 306. Popular Latin

One year of college Latin or equivalent (i.e., working knowledge of Latin grammar) or permission of instructor. (2). (HU). May not be repeated for credit. This course can be taken concurrently with LATIN 231/232/233. It does not fulfill the language requirement. It does not count towards a concentration/academic minor in Latin or Classical Languages and Literatures; it can be counted toward a Classical Civilization concentration.

LATIN 325 / RCLANG 325. Readings in Latin Drama: From Text to Performance

One of RCLANG 295, LATIN 194, 195, 232, or 233, or permission of instructor. (4). May be elected twice for credit.

LATIN 401. Republican Prose

LATIN 301 or 302 or permission of instructor. (3; 2 in the half-term). May be repeated for a maximum of 9 credits. F.

LATIN 402. Imperial Prose

LATIN 301 or 302 or permission of instructor. (3; 2 in the half-term). May be repeated for a maximum of 9 credits. W.

LATIN 403. Elementary Latin Composition

LATIN 301. (3). May not be repeated for credit.

LATIN 409. Augustan Poetry

LATIN 301 or 302 or permission of instructor. (3; 2 in the half-term). May be repeated for a maximum of 9 credits.

LATIN 410. Poetry of the Republic or Later Empire

LATIN 301 or 302 or permission of instructor. (3; 2 in the half-term). May be repeated for a maximum of 9 credits. W.

LATIN 421 / EDCURINS 421. Teaching of Latin

Junior standing in Latin and permission of instructor. (3; 2 in the half-term). May not be repeated for credit. F, W, Sp.

LATIN 426. Practicum

Consent of instructor required. Junior or senior standing. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 8 credits. F, W, Su. Offered mandatory credit/no credit.

LATIN 436 / MEMS 441. Postclassical Latin II

Two years of college Latin. (3; 2 in the half-term). May not be repeated for credit.

LATIN 447. Catullus

At least one intermediate LATIN course (LATIN 401, 402, 409, 410). (3; 2 in the halfterm). May not be repeated for credit.

LATIN 449. Roman Satire

At least one intermediate LATIN course (LATIN 401, 402, 409, 410). (3). May not be repeated for credit.

LATIN 461. Livy

At least one intermediate LATIN course (LATIN 401, 402, 409, 410). (3). May not be repeated for credit. No credit granted for those who are enrolled or have completed LATIN 529.

LATIN 473. The Age of Nero

At least one intermediate LATIN course (LATIN 401, 402, 409, 410). (3; 2 in the halfterm). May not be repeated for credit.

LATIN 494 / CLARCH 494 / GREEK 494. Classical Studies Honors Seminar Minimum 3.4 GPA. May not be repeated for credit.

LATIN 495. Senior Honors Research

Consent of instructor required. Upperclass standing. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

LATIN 499. Latin: Supervised Reading

Consent of instructor required. (1 - 4). (INDEPENDENT). May be repeated for credit. May not be included in a concentration plan in Greek or Classical Languages and Literatures. F, W, Sp, Su.

LATIN 504. Intensive Latin

Consent of instructor required. (6). May not be repeated for credit. No credit granted to those who have completed LATIN 102, 193, or 502. Sp.

LATIN 506. Advanced Latin Composition

LATIN 403. (3). May not be repeated for credit. F.

LATIN 514. Tacitus, Annals

Graduate standing in Classical Studies or permission of instructor. (3; 2 in the halfterm). May not be repeated for credit.

LATIN 599. Supervised Reading in Latin Literature

Consent of instructor required. (1 - 4). (INDEPENDENT). May not be repeated for credit. F, W, Sp, Su.

Communication Studies

1225 South University Avenue (734) 764-0420 (phone) (734) 764-3288 (fax) www.lsa.umich.edu/comm e-mail: comm.studies.dept@umich.edu Professor Susan J. Douglas, Chair

Professors

- Susan J. Douglas (Catherine Neafie Kellogg Professor of Communication, Arthur F. Thurnau Professor), *The history of broadcasting in the United States and the representations of gender in the media*
- L. Rowell Huesmann (Amos N Tversky Collegiate Professor of Communication Studies and Psychology), *Media and violence, aggres*sion, methodology
- W. Russell Neuman (John Derby Evans Professor of Media Technology), New media, media policy, public opinion, and political communication
- G. Patrick (Paddy) Scannell, *Media, culture, and society; broadcast*ing history and rhetoric

Michael W. Traugott, Political communication, research methods

Associate Professors

- Robin Means Coleman, *Race, sexualities, gender and the media, African-American popular culture, media education, media activism, interpretive audience analysis*
- Nojin Kwak, Political and social effects of the media, the influence of traditional and new media on political attitudes and participation, and the role of informal associations and social attitudes in promoting social capital and civic culture
- Amanda Lotz, *Media institutions and media criticism, feminist media studies, U.S. television studies*

- Derek W. Vaillant, U.S. media and communications history, 1880present; Nineteenth- and twentieth-century popular culture and mass communication; Radio broadcasting in France and the U.S., 1921-1981
- Nicholas A. Valentino, *Behavioral and attitudinal effects of political communication*

Assistant Professors

- Megan Ankerson, Visual Representation, Visual Culture, Internet Studies, New Media, Software Studies
- Scott W. Campbell (Constance F. and Arnold C. Pohs Fellow of Telecommunications), *Social implications of new communication technologies, mobile telephony*
- Sonya Dal Cin, Media and health behavior, media and identity, persuasive impact of media
- Emily Falk, Media Effects, Media and Health Behavior, Social Cognition, Communication Neuroscience, Persuasive Communication, Culture
- Shazia Iftkhar, Race, Ethnicity and the Media
- Aswin Punathambekar, *Media institutions, globalization, new media and media convergence, postcolonial theory and criticism, contemporary South Asia and South Asian diaspora*

Lecturers

Anthony Collings, American news media coverage of foreign and national news

Faith Sparr, Media Law

Professors Emeriti Richard L. Allen, Frank E. Beaver, Howard H. Martin, Marion Marzolf, Alfred Storey, Edgar Willis

Mass communication is a powerful and complex set of processes. In its form it both shapes and is shaped by the social and cultural contexts in which it occurs. Mass communication involves the creation, dissemination, and reception of many kinds of messages. Their meanings structure the ways people and societies understand themselves and their world, as well as their politics, social relations, and identities.

The Department of Communication Studies offers an undergraduate concentration focusing on mass communication as a social phenomenon. The curriculum includes the study of mass media institutions, economics and organization; how mediated communication works, including media priming, media use, persuasion and social influence; the relationship between media, society, and culture; and the wide variety of media effects. One of the concentration's distinctive, interdisciplinary features is the integration of diverse analytical approaches from the fields of history, psychology, sociology, political science, anthropology, as well as the other humanities and social science traditions.

The concentration in Communication Studies forms an excellent base of knowledge and analytical training for students considering graduate study or professional work involving media relations or other media-related activities. The undergraduate concentration, however, is not intended as specific preparation for professional careers in the media; thus, pre-professional training in journalism, television and film production, *etc.* is not included among department offerings. Communication Studies courses provide students with a deeper understanding of the role of mass communication in society. The department does not offer an academic minor.

Awards. Numerous awards and scholarships are offered through the department. Information concerning all awards is available on the department's C-Tools site and in the department office at 1225 South University Avenue. Award amounts vary and range from \$100 to \$5,000. Please see the Comm Concentrators C-Tools for complete listing of awards and scholarships.

- Ann Arbor News Scholarship
- John L. and Clara M. Brumm Memorial Scholarship
- Mary Lou Butcher Equality in Journalism Award
- J. Evens Campbell Scholarship
- James P. Chapman Memorial Scholarship
- Mark Foote Distinguished Thesis Award
- Kara Sundlun House Scholarship
- G.H. Jenkins Memorial Journalism Award
- Michael L Luckoff Internship Award
- Saks Family Scholarship
- Claude Sifritt Undergraduate Award
- Claude Sifritt Senior Thesis Fellowship
- Carole Simpson Minority Aid Scholarship
- Leland Stowe Award

Research on Journalistic Performance. The department administers the Howard R. Marsh Center for the Study of Journalistic Performance. This endowed facility studies the role of the news media in a democratic society. A visiting professorship in journalism is also supported by a gift by Howard R. Marsh. The Marsh Center brings invited news media professionals and communication scholars to the campus during the academic year.

Upper-Level Writing Requirement (ULWR). Courses meeting the LSA Upper-Level Writing Requirement in Communication Studies are COMM 351, 361, 371 and 381. Priority for seats in these courses is given to senior and junior concentrators. Students enrolled in these courses must complete all writing assignments, regardless of whether or not they are seeking ULWR credit.

Quantitative Reasoning (QR) Requirement. COMM 211 meets the Quantitative Reasoning requirement set by LSA and is a required prerequisite to the concentration. **Michigan Association of Communication Studies (MACS)**. MACS is a group of undergraduate concentrators and prospective concentrators who meet on a regular basis to explore career and internship opportunities in communications related markets. A primary goal of MACS is to provide a forum that perpetuates student leadership, interaction (networking), and professional development. For more information see the MACS website:

www.umich.edu/~macsorg

Communication Studies

May be elected as a departmental concentration program

Prerequisites to Concentration. Communication Studies is a selective concentration. There are four prerequisite courses. COMM 111 is taken for credit, and COMM 101, 102, and 211 are graded. To apply to Communication Studies as a concentration, the student must have completed all four prerequisite courses; received credit for COMM 111; and completed COMM 101, 102, and 211 each with a grade of C– or higher. Transfer credit is not accepted for any prerequisite course.

Application. Students must apply for and be accepted into the concentration program. Applications are considered once each Fall and Winter academic terms. The application cycle is not on a rolling basis. Application deadlines are available from the department office or website (www.lsa.umich.edu/comm). **Students are declared into the concentration by a concentration advisor only.** Application to the concentration can be submitted after all four prerequisite courses have been completed. Application during the sophomore year is highly recommended. Admission is very competitive, and enrollment in the concentration will be limited to assure a high quality educational experience. The Admissions committee will make decisions based on the grade point average in the prerequisite courses, overall grade point average, and the applicant's personal statement.

For additional information about the application process, consult the Communication Studies website:

www.lsa.umich.edu/comm/undergrad

Special Departmental Policies. An "in-person" concentration advising appointment is required for students to declare a Communication Studies concentration. Students cannot declare by email, phone, or fax. Additionally, the official grades of all prerequisite courses must be recorded on the student's transcript before the student can apply to the concentration.

Concentration Program. A minimum of 29 credits: at least 23 credits in Communication Studies beyond the prerequisite courses and 6 credits of cognate work. These must include the following:

- 1. Areas of Communication Study: COMM 351 or 371, and COMM 361 or 381 should be completed by the end of the junior year.
- 2. Advanced Communication Study: A minimum of 15 credits of COMM courses numbered 300 and above, not used to satisfy requirement 1 above, at least eight credits of which must be at the 400-level and above. Undergraduate Internship (COMM 321) may not be included in this requirement, and no more than three credits of independent reading/research and three credits of Honors seminar courses can be used to meet this requirement.
- 3. *Cognates:* Six credits of approved cognate work from a single department other than Communication Studies at the 300-level or above, chosen in consultation with, and approved by, a concentration advisor.

In order to ensure that concentrators can enroll in required courses, up to 75% of spaces in many 300- and 400-level Communication Studies courses are reserved for declared concentrators. The remaining spaces are open for other students.

Undergraduate Internship: COMM 321. Communication Studies declared concentrators who have reached junior standing may receive some amount of experiential course credit for an internship. Students who have completed all four prerequisite courses (COMM

101, 102, 111, 211), with a 2.7 GPA or greater, and will apply for admission to the concentration during the following term, should contact the undergraduate program coordinator for information. Experiential credit is granted for work that takes place outside a university classroom, laboratory, library, or studio and is directly related to an academic discipline. In order to be approved for credit, internships must:

- involve systematic learning with demonstrated application of experience to the theory, concepts, or research methods of the field;
- be approved in advance by the faculty internship coordinator by the proposal deadline: (Summer – June 12; Fall – September 12; Winter – January 12); and
- 3. result in a product *(e.g.,* an analytical paper) that is evaluated as acceptable by the faculty internship coordinator.

Communication Studies concentrators learn of available internships through the University of Michigan's Career Center. Additional internship and professional career opportunities are provided through the Comm Concentrators CTools site, undergraduate program coordinator, and the Internship postings in the department office.

Honors Program. Qualified students are encouraged to undertake an Honors concentration. The Honors Program in Communication Studies is available in the senior year to students with a grade point average by their final term of junior year of 3.5 in Communication Studies courses and 3.4 overall. Application and formal admission by the department are required. Qualified students should contact the department's Honors concentration advisor as early as possible for curricular planning, but applications for Honors concentration are generally accepted only after March 1 of the student's junior year. In addition to satisfying all regular concentration requirements, an Honors concentration must also include:

- *STATS 250 (or 350) or equivalent.* All Honors concentrators should have completed, or be taking in their senior year, STATS 250 (or 350) or an equivalent. *All Honors concentrators are expected to have completed a statistics course before they start the Honors sequence in their senior year.* Under certain circumstances, the Honors advisor has the power to waive this requirement in cases that seem appropriate.
- Senior Honors Seminars: COMM 491 and 492, a two-term seminar sequence involving the design and completion of an Honors thesis.

Advising. Advising appointments are only scheduled online at: www.lsa.umich.edu/comm/undergrad. Students should schedule an advising appointment on the online appointment system with the undergraduate program coordinator to declare a Communications Studies concentration, discuss progress in the concentration, or to complete *Concentration Release Forms.* Students seeking approval for domestic transfer credit toward the concentration can meet with any faculty advisor. Students seeking approval for transfer credit from study abroad must meet with the department faculty foreign credit evaluator. Additionally, the department's faculty provide regular office hours to discuss current courses or other issues.

Prospective concentrators can schedule a pre-concentration appointment with the undergraduate program coordinator anytime, but no later than the second term of the sophomore year. Most concentrators continue to see an advisor at least once a year. In any case, students should consult with the undergraduate program coordinator during the first term of their senior year to ensure that required courses will be completed for graduation.

COURSES IN COMMUNICATION STUDIES (COMM)

COMM 101. The Mass Media

First- and second-year students. (Prerequisites enforced at registration.) (4). (SS). May not be repeated for credit.

COMM 102. Media Processes and Effects

First- and second-year students. (Prerequisites enforced at registration.) (4). (SS). May not be repeated for credit.

COMM 111. Workshop on Managing the Information Environment

First- and second-year students. (Prerequisites enforced at registration.) (1). May not be repeated for credit. Offered mandatory credit/no credit.

COMM 200 / AMCULT 200 / PSYCH 208 / SOC 200 / UC 200. The Academic Paradox (3). (ID). May not be repeated for credit. Does not count toward concentrations in American Culture, Communication Studies, or Psychology.

COMM 211. Evaluating Information

COMM 101 or 102 with a grade of at least C-. (Prerequisites enforced at registration.) Primarily for first- and second-year students. (4). (SS). (QR/1). May not be repeated for credit.

COMM 321. Undergraduate Internship

Consent of instructor required. Junior standing, concentration in Communication Studies, and permission of instructor. Internship credit is not retroactive and must be prearranged. (1 - 3). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. May not be used to satisfy Communication Studies electives in a Communication Studies concentration plan. Offered mandatory credit/no credit.

COMM 351. Understanding Media Industries

COMM 101 or 102 with a grade of at least C-. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

COMM 361. The Media and Public Affairs

COMM 101 or 102 with a grade of at least C-. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

COMM 371. Media, Culture, and Society

COMM 101 or 102 with a grade of at least C-. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

COMM 381. Mass Media and the Individual: Uses and Impact

COMM 101 or 102 with a grade of at least C-. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

COMM 431. Supreme Court News Coverage

At least one 300-level course in COMM strongly recommended. (3). May not be repeated for credit.

COMM 432. Foreign News Coverage

COMM 351 or 371 strongly recommended. (3). May not be repeated for credit.

COMM 439. Seminar in Journalistic Performance

(3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

COMM 441. Independent Reading

Consent of instructor required. Permission of department. (3 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. COMM 441 and 442 may be repeated for a combined total of eight credits. A maximum of three credits of COMM 441 and 442 may be included in a Communications Studies concentration. F, W, Sp, Su. Offered mandatory credit/no credit.

COMM 442. Independent Research

Consent of instructor required. Permission of department. (3 - 4). May be repeated for a maximum of 8 credits. COMM 441 and 442 may be repeated for a combined total of eight credits. A maximum of three credits of COMM 441 and 442 may be included in a Communications Studies concentration. F, W, Sp, Su. Offered mandatory credit/no credit.

COMM 451. Ethics Issues in Journalism

COMM 351 or 371 strongly recommended. (3). May not be repeated for credit. COMM 452. Media Law and Policy

COMM 351 or 371 strongly recommended. (3). May not be repeated for credit.

COMM 453. The Media in U.S. History COMM 351 or 371 strongly recommended. (3). May not be repeated for credit. COMM 454. Media Economics

COMM 351 or 371 strongly recommended. (3). May not be repeated for credit.

COMM 458. Special Topics in Media Systems

COMM 351 or 371 strongly recommended. (3 - 4). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

COMM 459. Seminar in Media Systems

COMM 351 or 371 strongly recommended. (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

COMM 462. Designing Persuasive Communication

COMM 361 or 381 strongly recommended. (3). May not be repeated for credit. COMM 463. Computer Mediated Communication

COMM 381 strongly recommended. (3). May not be repeated for credit.

COMM 464. Social Consequences of Mobile Communication COMM 381 strongly recommended. (3). May not be repeated for credit.

COMM 468. Special Topics in Mass Communications Processes

COMM 361 or 381 strongly recommended. (3 - 4). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

COMM 471. Gender Issues in the Media

COMM 351 or 371 strongly recommended. (3). May not be repeated for credit.

COMM 474. Mass Communication and Identity

COMM 351 or 371 strongly recommended. (3). May not be repeated for credit. COMM 475. Visual Communication

COMM 351 or 371 strongly recommended. (4). May not be repeated for credit.

COMM 478. Special Topics in Media and Culture COMM 351 or 371 strongly recommended. (3 - 4). May be repeated for a maximum of

8 credits. May be elected more than once in the same term.

COMM 479. Seminar in Media and Culture

COMM 351 or 371 strongly recommended. (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

COMM 481 / PSYCH 481. Media and Violence

COMM 361 or 381 strongly recommended. (4). May not be repeated for credit.

COMM 482. Children and the Media

COMM 361 or 381 strongly recommended. (3). May not be repeated for credit.

COMM 484 / POLSCI 484. Mass Media and Political Behavior

COMM 361 or 381 strongly recommended. (4). May not be repeated for credit.

COMM 488. Special Topics in Media Effects

COMM 381 strongly recommended. (3 - 4). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

COMM 489. Seminar in Media Effects

COMM 361 or 381 strongly recommended. (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

COMM 491. Senior Honors Seminar I

Consent of instructor required. STATS 350 and admission to Honors. Permission of instructor. (3). May not be repeated for credit. No more than 3 credits of COMM 491-492 may be included in a Communication concentration plan. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term (COMM 492), the final grade is posted for both term's elections.

COMM 492. Senior Honors Thesis

Consent of instructor required. COMM 491 and permission of instructor. (3). May not be repeated for credit. No more than three credits of COMM 491-492 may be included in a communication studies concentration plan.

Comparative Literature

2015 Tisch Hall 435 South State Street (734) 763-2351 (phone) (734) 764-8503 (fax) www.lsa.umich.edu/complit e-mail: complit.info@umich.edu Professor Yopie Prins (English), Chair

Professors

- Frieda Ekotto (Romance Languages and Literatures: French), 20th-Century French Literature and Theory; Francophone Culture and Literature; Law and Literature; Psychoanalysis; Film
- David Halperin (W. H. Auden Collegiate Professor of the History and Theory of Sexuality) (English), *Poetics, History of Sexuality; Lesbian/Gay Studies; Queer Theory*
- Daniel Herwitz (Mary Fair Croushore Professor of Humanities) (Institute for the Humanities, History of Art, Philosophy), *Continental, Social, Aesthetics, especially Film and Architecture*
- Vassilios Lambropoulos (Classical Studies), *modern Greek culture; the ancients and the moderns; ethics and politics; literature after cultural studies*
- Tomoko Masuzawa (History), Discourses on Religion; History of the Human Sciences (19th to 20th century); History of the Study of Religion; Critical Theory and Hermeneutics; Psychoanalysis
- Yopie Prins (English), English Literature; Translation Studies; Nineteenth-century poetry; history and theory of lyric; translation and reception of classics
- Anton Shammas (Near Eastern Studies), *Middle Eastern literature, Translation Studies*
- Xiaobing Tang (Helmut F. Stern Professor of Modern Chinese Studies), *Modern and contemporary Chinese literature and visual culture; realism and modernism*

Associate Professors

- Catherine Brown (Romance Languages and Literatures: Spanish), European Middle Ages (Spanish, French, Latin); medieval and contemporary practices of interpretation; translation
- Alina Clej (Romance Languages and Literatures: French), 19th- and 20th-century French literature; comparative literature; writing in exile; translation
- Santiago Colás (Residential College), Latin American literature; comparative literature; Zen Buddhism; pragmatism
- Kader Konuk (German), German, Turkish, and Anglophone Studies; Minority Literature; Exile; Postcolonialism; Cultural Studies; Gender Theory; Ottoman-European Encounters; Turkish German Studies

- Christi Merrill (South Asian Literature), *Theory and Practice of Translation (Hindi, French, Rajasthani); Postcoloniality; Oral to Written Literature; Literary Humor; Narratives of Displacement*
- David Porter (English), 18th-Century European literature; aesthetics; material culture; intellectual history; China in the western imagination
- Ruth Tsoffar (Women's Studies), *Feminism, sexuality and gender; Colonialism, ethnicity, and nationalism; Poetry and poetics; Hebrew culture and literature; The politics of writing, reading, and culture in Israel and the Middle East; Biblical narrative, ethnography and folklore*
- Silke Weineck (Germanic Languages), 18^{th-} and 19th-Century German literature; philosophy in Classical and Modern literature; aesthetics; political theory

Assistant Professors

- Tatjana Aleksić (Slavic), Literary Theory; Postmodern Fiction; Contemporary Balkan literature, with an emphasis on Serbian and Modern Greek fiction; Balkan Film; Myth, History, and Memory; Nationalism; Postcolonialism; Exile; Issues of Identity; Gender Migration and Post-Migration Literature; Balkan Folklore and Oral poetry; Travel Writing; Music
- Basil Dufallo (Classical Studies), Latin literature, Roman culture, critical/cultural theory, postclassical Latin
- Benjamin Paloff (Slavic), Comparative approaches to Polish, Russian, and Czech literatures, philosophy in literature, poetics, and translation in theory and practice
- Gayle Rubin (Anthropology, Women's Studies), *Sexualities and gend*ers; Sexual populations; Cities and urban geography; Sexological theory; Durable inequalities; Gay/Lesbian ethnography; Racial taxonomies
- Mira Seo (Classical Studies), *Ovid and post-Ovidian epic, ancient literary criticism and culture, Hellenistic poetry, characterization and the self in literature and rhetoric, genres in literature and popular culture*

Professors Emeriti Ross Chambers, Stuart McDougal

Comparative Literature is a discipline that examines literature across national, historical, and linguistic boundaries. Literary movements, periods, genres, criticism, and theory are studied from an international viewpoint as are the relationships between literature and the other arts (*e.g.*, film, painting, music) and literature and such disciplines as psychology, philosophy, anthropology, history, and women's studies.

Comparative Literature

May be elected as an interdepartmental concentration program

The concentration in Comparative Literature provides excellent preparation for professional studies in fields such as law, journalism, and business, as well as preparation for graduate work in the humanities.

Undergraduate concentrators will establish individualized programs of study in close consultation with both the concentration and faculty advisors. These programs will offer students the opportunity to increase skills in analytical reading and argumentative writing and to develop an understanding of the interrelationships among several literary traditions. Students who concentrate in comparative literature will acquire training in one or more second languages, study at least two literatures (one of which may be English) in the original languages, and acquaint themselves with some of the essential writings in the theory of literature. Students who choose to write a senior thesis will find it an opportunity for synthesis of earlier course work and further intellectual exploration.

Prerequisites to Concentration. Foreign languages necessary for the study of foreign literature courses at the 300-level.

Concentration Program. 33 credits minimum, according to the following plan:

 24 credits: A complementary grouping of literature courses at the 300-level or above in a minimum of two languages, one of which may be English. At least 12 credits are required in each literature.

- If a student chooses to work in English as one of the chosen languages, then a maximum of 18 credits of undergraduate courses in COMPLIT may be applied to the concentration, of which the maximum number of credits at the 200-level is six. Students may also combine with courses in COMPLIT other courses in the national literature departments and related fields, in consultation with the undergraduate advisory. 100-level courses do not count toward the concentration.
- 3 credits: The senior seminar, COMPLIT 495, is required for all students in the concentration.
- 6 credits: Comparative Literature electives at the 200 level or above. COMPLIT 496 (3 credits), for those writing an Honors thesis during the last term may be used. (Maximum of 6 credits of 200-level COMPLIT courses may be used in the concentration.)

Courses will be chosen in consultation with the undergraduate advisor in Comparative Literature based on a robust theoretical or organizational principle.

Honors Concentration. To be eligible for an Honors concentration in Comparative Literature, students should have a cumulative grade point average of at least a 3.4, and a 3.5 grade point average in courses counting toward the concentration. Students who elect an Honors degree will write an Honors thesis during the final year of their course work.

Advising. Prospective concentrators should consult the Comparative Literature concentration advisor as early as possible about developing a challenging and unified interdepartmental program of study.

COURSES IN COMPARATIVE LITERATURE (COMPLIT)

COMPLIT 122. Writing World Literatures (4). (FYWR). May not be repeated for credit.

COMPLIT 140. First-Year Literary Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May be repeated for a maximum of 6 credits.

COMPLIT 222 / GTBOOKS 212. Great Books in World Literatures (3). (HU). May not be repeated for credit.

COMPLIT 240. Introduction to Comparative Literature (*3*; *2 in the half-term*). (*HU*). May not be repeated for credit. F.

COMPLIT 241. Topics in Comparative Literature

COMPLIT 240. (3; 2 in the half-term). (HU). May not be repeated for credit. W.

COMPLIT 260. Europe and Its Others (3). (HU). May not be repeated for credit.

COMPLIT 280. America and Its Others (3). (HU). May be elected twice for credit.

COMPLIT 322. Translating World Literatures (3). (HU). May not be repeated for credit.

COMPLIT 340 / MODGREEK 340. Travels to Greece (3). (HU). May not be repeated for credit.

COMPLIT 350. The Text and Its Cultural Context (3). (HU). May be repeated for a maximum of 6 credits.

COMPLIT 362. Comparative Studies in Form and Genre (3). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

COMPLIT 364. Comparative Literary Movements and Periods

(3). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

COMPLIT 372. Literature and Identity

(3). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

COMPLIT 374. Literature and the Body (3 - 4). (HU). May be repeated for a maximum of 6 credits. COMPLIT 376. Literature and Ideas

(3). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

COMPLIT 382. Literature and the Other Arts (3). (HU). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

COMPLIT 384. Literature and Other Disciplines One course in literary studies. (3). (HU). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

COMPLIT 430. Comparative Studies in Fiction Upperclass standing. (3; 2 in the half-term). May be repeated for a maximum of 9 credits.

COMPLIT 490. Comparative Cultural Studies Junior standing. (3). May be repeated for a maximum of 6 credits.

COMPLIT 492. Comparative Literary Theory Junior standing. (3). May be repeated for a maximum of 6 credits.

COMPLIT 495. Senior Seminar in Comparative Literature

Senior standing and concentration in Comparative Literature. (3). May not be repeated for credit. F.

COMPLIT 496. Honors Thesis

Consent of instructor required. COMPLIT 495 and Honors concentration in Comparative Literature. Permission of instructor. (3). (INDEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. F, W, Sp, Su.

COMPLIT 498. Directed Reading

Consent of instructor required. Permission of instructor. (1 - 4). (INDEPENDENT). May not be repeated for credit. F, W, Sp/Su, Sp, Su.

Center for the Study of Complex Systems (CSCS)

321 West Hall 1085 South University Avenue (734) 763-3301 (phone) (734) 763-9267 (fax) www.cscs.umich.edu e-mail: cscs@umich.edu Professor Scott E. Page (Complex Systems, Political Sciences, Economics), Director

Not a concentration program

Professors Robert Deegan (Complex Systems, Physics), Charles Doering (Complex Systems, Mathematics), Mark Newman (Complex Systems, Physics), Scott E. Page (Complex Systems, Political Sciences, Economics), Carl P. Simon (Mathematics, Public Policy, Economics)

Assistant Professor Elizabeth Bruch (Complex Systems, Sociology)

Research Scientist Irving T. Salmeen

Associate Research Scientist Rick L. Riolo

Adjunct Assistant Professor Lada A. Adamic (Complex Systems, School of Information)

The Center for the Study of Complex Systems (CSCS) is a broadly interdisciplinary graduate certificate program at the University of Michigan designed to encourage and facilitate research and education in the general area of nonlinear, dynamical, and adaptive systems. The Center is based on the recognition that many different kinds of systems which include self-regulation, feedback or adaptation in their dynamics, may have a common underlying structure despite their apparent differences. Moreover, these deep structural similarities can be exploited to transfer methods of analysis and understanding from one field to another. In addition to developing deeper understandings of specific systems, interdisciplinary approaches should help elucidate the general structure and behavior of complex systems, and move us toward a deeper appreciation of the general nature of such systems.

Academic Minor in Complex Systems

Over the past twenty years, the ideas and methodologies that underpin the science of complex systems have gained a foothold in the research agendas of many of the world's leading universities. This trend can be explained by the resonance of the complexity paradigm and its focus on core concepts of networks, nonlinear interdependence, adaptation, and diversity to current scientific and social challenges and opportunities. These include climate change, epidemics, ecosystem and financial system robustness, genetic engineering, sustainability science, health sciences and ethnic conflict.

Academic research on nonlinear systems, networks, evolutionary and adaptive systems, emergence, and diversity using mathematics, agent based models, and numerical computation increases with each passing day at think tanks, universities, and laboratories. Most leading graduate programs in physical, biological, and social sciences now include courses that fall under the rubric of complexity science. Many of these courses involve agent based modeling and numerical analysis. At the same time, government and private sector demand for students with skills in modeling, understanding of systems level thinking, and deep understandings of the roles of networks and diversity grows.

The academic minor in Complex Systems is designed to give students an understanding of the basic concepts of complexity science and to learn how those concepts can be applied within a functional area. It provides an opportunity for concentrators in other departments to take a coherent curriculum in complexity and modeling that complements their major field of study. This academic minor requires foundational courses in complex systems theory and modeling. Students are encouraged to attend research seminars and book club meetings run by CSCS. This will provide an opportunity for undergrads to engage intellectually with students and faculty from a range of fields.

Prerequisites to the Academic Minor: There will be no formal prerequisites but students who have not taken calculus may find some of the courses difficult. Therefore, previous experience with calculus is strongly recommended.

Academic Minor Program: Students are required to elect 15 credits (5 courses) including upper-level courses in complex systems within one of four areas of focus: (1) social sciences, (2) biological science, (3) physical science and engineering or (4) complex systems theory and methods.

- **A.** Core Courses (Take 2 of 4). We require students to take at least one of the modeling courses so that students develop the skills necessary for the upper level classes.
 - CMPLXSYS 270: Introduction to Agent-Based Modeling (ABM)
 - CMPLXSYS 281 / POLSCI 381: Applied Complex Systems: Emergent Challenges
 - CMPLXSYS 501: An Introduction to Complex Systems
 - CMPLXSYS 511: Theory of Complex Systems
- **B. Elective Courses.** Students must take two courses from one section and one course from another section. The final course can be from this list or a course not on this list as long as it is approved by the CSCS Director. Additional cross-cutting courses such as MATH 295: Honors Mathematics I can also be taken as an elective and will count for any of the four areas, with approval from the CSCS Director.

I. Physical Science & Engineering

- BIOINF 463 / MATH 463 / BIOPHYS 463: Mathematical Modeling in Biology
- BIOPHYS 463 / MATH 463 / BIOINF 463: Mathematical Modeling in Biology
- CMPLXSYS 470 / PHYSICS 470: Experiments in Nonlinear Dynamics
- CMPLXSYS 520 / PHYSICS 580: Empirical Analysis of Nonlinear Systems
- CMPLXSYS 535 / PHYSICS 508: Network Theory
- CMPLXSYS 541 / PHYSICS 541: Introduction to Nonlinear Dynamics and the Physics of Complexity
- EECS 492: Introduction to Artificial Intelligence
- EECS 587: Parallel Computing
- EECS 598: Special Topics (section titled "Algorithms for Robotics")
- ENGR 371 / MATH 371: Numerical Methods for Engineers and Scientists
- HONORS 493: College Honors Seminar (section titled "Introduction to Networks")
- MATH 176: Explorations in Topology and Analysis (Nonlinear Systems and Chaos)
- MATH 371 / ENGR 371: Numerical Methods for Engineers and Scientists
- MATH 463 / BIOINF 463 / BIOPHYS 463: Mathematical Modeling in Biology
- MATH 471: Introduction to Numerical Methods
- PHYSICS 470 / CMPLXSYS 470: Experiments in Nonlinear Dynamics
- PHYSICS 508 / CMPLXSYS 535: Network Theory
- PHYSICS 541 / CMPLXSYS 541: Introduction to Nonlinear Dynamics and the Physics of Complexity
- PHYSICS 580 / CMPLXSYS 520: Empirical Analysis of Nonlinear Systems

II. Social Science

- CMPLXSYS 250: Social Systems & Energy
- CMPLXSYS 260 / SOC 260: Tipping Points, Bandwagons and Cascades: From Individual Behavior to Social Dynamics
- EECS 594: Introduction to Adaptive Systems (section titled "Complexity & Emergence")
- HONORS 493: College Honors Seminar (section titled "Complexity & Emergence")
- MATH 217: Linear Algebra
- MATH 425 / STATS 425: Introduction to Probability
- NRE 550: Systems Thinking for Sustainable Development
- POLSCI 598: Mathematics for Political Scientists
- POLSCI 793: Methods Seminar (section titled "Advanced Modeling in Political Science")
- PSYCH 447: Current Topics in Cognition and Perception (section titled "Complexity & Emergence")
- PUBPOL 513: Calculus for Social Scientists
- SOC 260 / CMPLXSYS 260: Tipping Points, Bandwagons and Cascades: From Individual Behavior to Social Dynamics
- STATS 425 / MATH 425: Introduction to Probability
- STRATEGY 566: Systems Thinking for Sustainable Development

III. Biological Science

- BIOINF 463 / MATH 463 / BIOPHYS 463: Mathematical Modeling in Biology
- BIOINF 800: Special Topics (section titled "Computation and Neuroscience")
- BIOPHYS 463 / MATH 463 / BIOINF 463: Mathematical Modeling in Biology
- CMPLXSYS 510 / MATH 550: Introduction to Adaptive Systems
- EEB 315 / ENVIRON 315: The Ecology and Evolution of Infectious Diseases
- EEB 401: Advanced Topics in Biology (section titled "Interrogating Data with Models")
- EEB 466 / MATH 466: Mathematical Ecology
- ENVIRON 315 / EEB 315: The Ecology and Evolution of Infectious Diseases

- MATH 463 / BIOINF 463 / BIOPHYS 463: Mathematical Modeling in Biology
- MATH 466 / EEB 466: Mathematical Ecology
- MATH 550 / CMPLXSYS 510: Introduction to Adaptive Systems
- MATH 559: Selected Topics in Applied Mathematics (section titled "Computation and Neuroscience")
- MICRBIOL 510: Mathematical Modeling for Infectious Diseases

IV. Theory & Methods

- BIOINF 800: Special Topics (section titled "Computation and Neuroscience")
- CMPLXSYS 501: Basic Readings
- CMPLXSYS 520 / PHYSICS 580 / MATH 552: Empirical Analysis of Nonlinear Systems
- CMPLXSYS 530: Computer Modeling of Complex Systems
- CMPLXSYS 531: Basic Computing Skills for Programming Agent Based Models (ABM)
- EECS 594: Introduction to Adaptive Systems (section titled "Complexity & Emergence")
- HONORS 493: College Honors Seminar (sections titled "Complexity & Emergence" and "Introduction to Networks")
- MATH 425 / STATS 425: Introduction to Probability
- MATH 462: Mathematical Models
- MATH 552 / CMPLXSYS 520 / PHYSICS 580: Empirical Analysis of Nonlinear Systems
- MATH 559: Selected Topics in Applied Mathematics (section titled "Computation and Neuroscience")
- PHYSICS 580 / CMPLXSYS 520 / MATH 552: Empirical Analysis of Nonlinear Systems
- PSYCH 447: Current Topics in Cognition and Perception (section titled "Complexity & Emergence")
- STATS 425 / MATH 425: Introduction to Probability

Advising. The CSCS Director and core faculty will serve as advisors to students. The CSCS Key Administrator, Mita Gibson, will be the initial point of contact.

COURSES IN COMPLEX SYSTEMS (CMPLXSYS)

CMPLXSYS 250. Social Systems and Energy (3). May not be repeated for credit.

CMPLXSYS 260 / SOC 260. Tipping Points, Bandwagons and Cascades: From Individual Behavior to Social Dynamics (3). May not be repeated for credit.

CMPLXSYS 270. Agent-Based Modeling (3). May not be repeated for credit.

CMPLXSYS 281 / POLSCI 281. Applied Complex Systems: Emergent Challenges (4). May not be repeated for credit.

CMPLXSYS 470 / PHYSICS 470. Experiments in Nonlinear Dynamics

[PHYSICS 125 or 135 or 140] and [MATH 115 or 185] each with a minimum grade of C. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

CMPLXSYS 541 / PHYSICS 413. Introduction to Nonlinear Dynamics and the Physics of Complexity

PHYSICS 401 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

Comprehensive Studies Program (CSP)

1159 Angell Hall 435 South State Street (734) 764-9128 (phone) (734) 763-6359 (FAX) www.lsa.umich.edu/csp e-mail: cspinfo@umich.edu Margaret Noori, Ph.D., Director

Not a concentration program

The Comprehensive Studies Program (CSP) is an academic unit within the College of Literature, Science and the Arts that offers a variety of academic support services, including the Summer Bridge Program, academic year course instruction, academic advising and peer advising, tutoring, and freshmen interest groups. CSP works closely with a wide variety of academic departments, offices and programs throughout the university, including offices in the various schools and colleges, the Undergraduate Admissions Office, the Office of Financial Aid, and the Division of Student Affairs.

Admission. CSP's services are available to all undergraduate students. Some students are pre-selected by the Undergraduate Admissions Office, while other students may choose to affiliate with the program following matriculation. Any University of Michigan student may request to affiliate with CSP by completing an application. Over 2,500 students currently participate in CSP programs and services.

Academic Advising and Personal Counseling. Each CSP student has an assigned academic advisor with whom to meet on a regular basis, starting with Orientation and continuing until the student graduates. Together, student and advisor will explore the student's interests, talents, needs, academic goals, and career objectives. They then develop an individualized program to promote general intellectual growth as well as expertise in a particular field of study. Advisors also provide advice on a wide range of practical and personal matters.

Intensive Course Sections. CSP Intensive sections are offered jointly with departments and are regularly available in the Fall and Winter terms for major introductory courses including Biology, Chemistry, Economics, English, Mathematics, Physics, and Spanish. CSP faculty and staff are dedicated to supporting students who have the determination, dedication, and willingness to work hard toward achieving their academic and career goals. The CSP model emphasizes increased contact between students, instructors and advisors. CSP intensive course sections are small by design, allowing for more one-to-one interaction between student and instructor. Students enrolled in CSP sections can expect not only more contact with the course instructor, but also more learning opportunities through homework, small group learning sessions, instructor office visits, test-taking practice, and consistent performance feedback from the instructor throughout the term. CSP also provides tutoring opportunities in a variety of subjects for those students who need it, but are not enrolled in CSP courses.

Summer Bridge Program. The Summer Bridge Program is designed to facilitate the transition from high school to college. It is also designed to ensure a high level of participation by the students in the academic life of the university. It is offered during the sevenweek Summer Half-Term at the University of Michigan. Program participants reside in University Housing, enroll in credit-bearing courses (with all attendant course obligations), and explore student life at the University of Michigan. Participation in Summer Bridge provides excellent preparation for the fall term. It also provides Summer Bridge students with the opportunity to meet fellow students as well as faculty and advisors. Summer Bridge participants enjoy the camaraderie of a cohesive group while they receive highly individualized academic advice, the benefits of small classes, and the personalized attention of faculty and staff.

Other Services. CSP provides a variety of other services designed to assist students in their development and progress. These services typically include tutoring programs, First-year Interest Groups for career exploration, Peer Advising, and Mentoring opportunities.

COURSES IN COMPREHENSIVE STUDIES PROGRAM (CSP)

CSP 100. CSP Readings Seminar (3). (SS). May be elected twice for credit. F, W, Su. CSP 105. Reading and Writing Seminar: Insiders/Outsiders (4). (R&E). May not be repeated for credit. W.

Computer Science

Computer Science & Engineering Division Electrical Engineering and Computer Science College of Engineering 2808 CSE Building 2260 Hayward (734) 763-6563 (phone) (734) 773-1260 (fax) www.eecs.umich.edu/cse e-mail: cslsaadvisor@umich.edu Professor Farnam Jahanian, CSE Chair

Computer science is an integral part of our lives, shaping virtually everything from the objects around us to the ways in which we communicate, travel, work, and play. And the computer revolution has just begun – computer science is now a key enabler for discovery and innovation in most other fields of endeavor, making it an incredibly relevant course of study. The potential for creativity and impact in areas such as medicine, health care, entertainment, the performing arts, education, transportation, security, and the environment is enormous.

At Michigan, computer science students become experts on the subject of computation, both in terms of the theory and practice of computational methodology, and in terms of the application of computational power. Students within computer science can develop expertise in the development of software applications, in designing advanced computer hardware, in developing and analyzing algorithms for a variety of applications, or within new and emerging areas of specialization.

Questions?

If you are interested in Computer Science, contact the Undergraduate Advising Office at (734) 763-6563, 2808 CSE Building.

If you are undecided about which concentration to choose, please contact the LSA Advising Center at (734) 764-0332, 1255 Angell Hall or the Engineering Advising Center at (734) 647-7106, 1009 Lurie Engineering Center.

If you have questions about the CS academic minor, or would like advice about pursuing the academic minor, please contact the Undergraduate Advising Office to set up an appointment with an advisor.

Questions about the concentration or academic minor program in Computer Science should be addressed to:

Undergraduate Advising Office Computer Science & Engineering Division – EECS Dept. 2808 CSE Building University of Michigan Ann Arbor, MI 48109-2122 Telephone: (734) 763-6563 www.eecs.umich.edu/cse e-mail: cslsaadvisor@umich.edu

The Department of Electrical Engineering and Computer Science is a participating unit in the interdepartmental Informatics concentration program listed in this *Bulletin* in *Chapter VI* under Informatics.

Prior Programming Experience. EECS 280 assumes prior programming experience using decision constructs, iteration, functions, basic I/O, and simple arrays in C/C++. Many students interested in Computer Science or Computer Engineering will have had such experience in high school coursework. Engineering students who do not place out of ENGR 101 should take ENGR 101 first, and LSA students who lack prior programming experience should take EECS 183 before taking EECS 280.

EECS Department Grade Policy. Grades of C or better must be achieved in all courses taken to satisfy Computer Science requirements.

Computer Science

May be elected as a departmental concentration program; Accredited by the Accreditation Board for Engineering and Technology (ABET)

The program requires students to have a solid foundation in computer software, hardware, and theory, but also gives a student ample opportunity to take advanced electives in areas of computer science such as databases, architecture, networks, artificial intelligence, and graphics, or in emerging interdisciplinary areas such as electronic commerce, web information systems, and computer game design.

Pre-Concentration Requirements.

To declare in the LSA Computer Science (CS) concentration a student must first complete 5 pre-concentration courses. These are: EECS 203, EECS 280, MATH 115, MATH 116, and one of MATH 214, MATH 215, or MATH 216. Performance in these classes is indicative of student aptitude for the Computer Science program, and students who do not perform well are discouraged from continuing. Students must achieve a 2.5 GPA over the 5 pre-concentration courses and have at least a C in each course. Students may repeat a pre-concentration course once, for a maximum of two attempts at each course, and only the final grade for the course will be used to compute the preconcentration GPA. Only courses with grades of C+ or below can be repeated for this purpose.

ABET (Accreditation Board for Engineering and Technology) Laboratory Science Requirement. In order to meet accreditation standards for CS degree programs, all students seeking a CS degree must complete a minimum of 12 credits of NS, and this must include two courses with laboratories that are required in a science or engineering degree program. Credits used to meet this requirement may be counted toward LSA distribution requirements, but cannot be used toward Flexible Technical Electives in the concentration program. *Meeting this requirement is mandatory for the CS degree.*

Concentration Program.

1. Core Courses:

- a. Computer Science: EECS 281, 370, 376, 496.
- b. Probability and Statistics: STATS 412 or STATS 265/IOE 265.
- c. *Major Design Experience (MDE):* A course approved as satisfying the MDE requirement (check with the department for current list of approved MDE courses). This must be taken concurrently with EECS 496 and TCHNCLCM 497, and is normally one of the Upper-Level CS Technical Electives (see below).
- 2. **Technical Communications.** Three credits, including TCHNCLCM 300 (1 credit) and TCHNCLCM 497 (2 credits). TCHNCLCM 300 may be taken at any time, but is a prerequisite to TCHNCLCM 497, which must be taken concurrently with EECS 496 and a Major Design Experience (MDE) elective.
- 3. **Technical Electives.** A minimum of 21 additional credits of technical electives are required, selected as follows:
 - a. At least 16 of the 21 credits must be in approved *Upper Level CS Technical Electives.* These are the CS courses listed in this *Bulletin* at the 300, 400, and 500 levels, excluding EECS 398, 498, 499, 598, and 599. Check with the department for an up-to-date list of approved Upper Level CS elective courses. All 21 elective credits can be Upper Level electives, and students are encouraged to take more than the minimum of 16.
 - b. A maximum of 5 of the required 21 technical elective credits may be chosen from the approved *Flexible Technical Electives*. These are courses in engineering, mathematics, or science that are approved as appropriate for CS students. Check with the department for the current list of approved Flexible Technical Electives. EECS 499 (Directed Study) is accepted as

a Flexible elective, but is limited to a maximum of 4 credits; any additional 499 credits count towards free electives.

c. At least 18 of the 21 elective credits must be in CS courses listed in this Bulletin (or the department CS elective lists) at 200-level and above. This means that if the student takes the minimum number of Upper Level CS Technical Electives, at least 2 credits of the Flexible electives must be in CS courses.

Comprehensive and up-to-date information about the computer science program can be found on the web at:

www.eecs.umich.edu/eecs/undergraduate/ugcs/computer_science.html

Honors Concentration. Students wishing to complete an Honors degree in Computer Science must have earned a 3.2 or higher GPA in the five required pre-concentration courses (MATH 115, 116, 215, EECS 203 and 280). Student must also have earned an overall GPA of 3.4 or higher (as required by LSA for Honors), and must have a final concentration GPA in Computer Science of 3.5 or higher.

In addition, the required minimum of 18 credits of electives in Computer Science must be satisfied by Upper-Level CS electives; no Flexible electives can be used to meet this requirement.

How to Major in Computer Science

The following is general advice we often give our students, but we encourage you to meet with a Computer Science advisor at any time to discuss your plans and progress.

- 1. Pay careful attention to the rules stated in the concentration requirements. Our program has a very full schedule. Thus mistakes in understanding the requirements can cost you additional academic terms. In case of doubt, please come in for advice at the EECS Undergraduate Advising office, or check the current program requirements on the Departmental web site:
- The C grade rule for concentration program courses is very important. Required courses with grades of C- or below must be retaken; concentration electives with grades of C- or below must either be retaken or replaced with a different acceptable elective.
- 3. If you are a transfer student, please contact the EECS Advising Office immediately. We make case-by-case decisions on transferred coursework to make sure you get started in our program at the right place. To avoid possibly costly delays, you need to start this process immediately.
- 4. Your first goal is to meet the pre-concentration requirements. Taking EECS 203 (Discrete Structures) and EECS 280 (Programming) simultaneously often works well, and these are the two prerequisites for the "gateway" course, EECS 281 (Data Structures and Algorithms). Try to have the Math courses done by the time you complete EECS 203 and 280. If you are having trouble meeting the pre-concentration GPA requirement, it is vital to meet with a CS advisor without delay.
- 5. Take EECS 281 as soon as you can, and declare the Computer Science concentration during that academic term. Because the Upper Level CS Electives are open only to declared CS concentrators, declaring at this time will allow you to register for the Upper Level Electives the next academic term, which will help you get the choices you want as you finish the program.
- 6. The Laboratory Science requirement is required to get the CS degree, and must be completed by graduation. But you can take these courses at any convenient time; none of them are prerequisites for any required CS courses or Upper Level CS electives.
- 7. If you are interested in Operating Systems and Networks, taking EECS 370 (Computer Organization) at the same time as EECS 281 will enable you to register the next academic term for EECS 482 (Operating Systems) which is the prerequisite for EECS 489 (Networks).
- 8. We often advise students to avoid taking more than two courses at the same time that involve a lot of programming work. The advisors can help you make the best selection. You

are encouraged to speak with an EECS peer mentor for a student's insight into course selections and expectations. Saving some of your LSA requirements for later academic terms can help spread out the workload.

- 9. It is a good idea to save some of the Flexible Technical Elective credits for doing an EECS 499 (Directed Study) course in which you work with a professor on a project of mutual interest. A 499 is especially valuable if you are interested in graduate school. If one of your professors is doing work that is interesting to you, approach him or her to discuss this possibility. It is usually most valuable to do an EECS 499 relatively late in your program, when you have acquired knowledge and skills that contribute to the work, and have a clearer picture of what areas you are most interested in.
- 10. All of our Upper Level Electives are challenging and substantial courses, and cover a wide variety of topics in computing. The best way to choose your electives is have an idea about the kind of work or career path you want to pursue after getting your degree, and then choose the electives that will help you do it. EECS faculty in your area of interest are an excellent source of advice. We encourage you to discuss your elective choices with them, or the CS advisors.
- 11. The best time to take the Major Design Experience package is as late as possible, no earlier than Fall of your final year. This will take the most advantage of the technical knowledge you have gained in your other courses. To prepare for this, take TCHNCLCM 300 your sophomore or junior year, and then be sure to take TCHNCLCM 497 and EECS 496 in the same term as you take your Major Design Experience elective. TCHNCLCM 497 is supposed to coordinate with the MDE course to give you the most realistic preparation for real-world design and development work, in which communicating your ideas is critical to success. Similarly, EECS 496 will be most useful if taken at the same time as the MDE course.
- 12. *Caution:* There are many EECS courses that are not approved as Computer Science Technical Electives. If a course of interest is not listed in this *Bulletin* as a CS course, check with the department for the up-to-date list. If a course is not listed as an approved CS elective, it will not be accepted unless an exception is granted by the Chief Program Advisor.

13. The CS program advisors based in the EECS department do not provide any advice or guidance on meeting LSA requirements. Please review these periodically with an LSA advisor. We recommend that you direct all questions about the CS program requirements to the CS advisors whenever possible.

Computer Science Academic Minor

An academic minor in Computer Science is not open to students with a concentration or academic minor in Department of Electrical Engineering and Computer Science.

The academic minor in Computer Science is intended to provide students with a foundational grounding in the discipline of software construction, along with an in-depth experience in at least one advanced area.

Students wishing to pursue an academic minor in Computer Science should meet with the program advisor for the LSA Computer Science concentration. Information about scheduling advising appointments is available from the EECS Undergraduate Advising Office.

Prerequisites to the Academic Minor: MATH 115, and prior programming experience: EECS 183, ENGR 101, or their equivalent.

You must satisfy the prerequisites before declaring. The best time to declare is during or after the academic term you take your first core course (EECS 203 or 280). Note that you will need to declare before you will be allowed to enroll in any of the electives.

Academic Minor Program: 16 credits of courses as follows:

- 1. Three Core Courses (4 credits each):
 - EECS 203: Discrete Mathematics
 - EECS 280: Programming and Introductory Data Structures
 - EECS 281: Data Structures and Algorithms

EECS 281 has both EECS 203 and 280 as prerequisites. All of the electives have EECS 281 as a prerequisite. Thus, completing the academic minor requires a minimum of three academic terms.

 Electives: At least one 4-credit elective selected from EECS 482, 483, 484, 487, 490, 492, and 493.

COURSES IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE (EECS)

All EECS courses listed in the *LSA Bulletin* are eligible for LSA credit; all other EECS courses (as listed in the *CoE Bulletin*) are considered non-LSA courses.

EECS 182 / SI 182. Building Applications for Information Environments

(4). (MSA). (BS). May not be repeated for credit. F, W.

EECS 183. Elementary Programming Concepts

(4). (MSA). (BS). May not be repeated for credit. Credit is granted for only one course among EECS 183 or ENGR 101. Not intended for Engineering students (who should take ENGR 101), nor for Computer Science concentrators in LSA who qualify to enter EECS 280. F, W, Sp.

EECS 203. Discrete Math

MATH 115 or 116 or 119 or 120 or 121 or 156 or 176 or 185 or 186 or 295 or 296 or 215 or 255 or 285 with a grade of at least C or better. (Prerequisites enforced at registration.) (4). (MSA). (BS). May not be repeated for credit. F, W.

EECS 270. Introduction to Logic Design

ENGR 101 or EECS 183 with a grade of at least C. (Prerequisites enforced at registration.) (4). (MSA). (BS). May not be repeated for credit. F, W, Sp.

EECS 280. Programming and Introductory Data Structures

MATH 115. (4). (MSA). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in EECS 283. F, W.

EECS 281. Data Structures and Algorithms

EECS 280 and 203 with a grade of at least C. (Prerequisites enforced at registration.) (4). (NS). (BS). May not be repeated for credit. F, W.

EECS 282. Information Systems Design and Programming

EECS 182 or EECS 183 or ENGR 101. (4). (MSA). (BS). May not be repeated for credit. W.

EECS 285. A Programming Language or Computer System

Some programming knowledge required. (2). (BS). May not be repeated for credit.

EECS 370. Introduction to Computer Organization

EECS 203 or 270 with a grade of at least C; and EECS 280 or 283 with a grade of at

least C. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 373. Design of Microprocessor Based Systems

EECS 370 and 270 with a grade of at least C; and junior standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 376. Foundations of Computer Science

EECS 280 and 203 with a grade of at least C. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 381. Object Oriented and Advanced Programming

EECS 281 with a grade of at least C. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. W.

EECS 382. Internet-Scale Computing

EECS 281 or 282 with a grade of at least C. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F.

EECS 398. Special Topics

Permission of instructor. (1 - 4). (BS). May be repeated for credit.

EECS 427. Very Large Scale Integrated Design I

EECS 270 and 312 with a grade of at least C_i or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 442. Computer Vision

EECS 281 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) EECS 281 or EECS 398, Winter 2005, section 001 or Graduate Standing. (4). (BS). May not be repeated for credit. F (Alternate years).

EECS 470. Computer Architecture

EECS 270 and 370 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 475. Introduction to Cryptography

EECS 203 or MATH 312 or MATH 412; and EECS 183 or ENGR 101 or 104 or EECS 280 or 283; each with a grade of at least C or better; or Graduate standing. (Prere-

quisites enforced at registration.) EECS 203 or MATH 312/412 and EECS 183/280. (4). (BS). May not be repeated for credit. F. (Alternating Years).

EECS 477. Introduction to Algorithms

EECS 281 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) EECS 281 or EECS 398, Winter 2005, Section 001 or Graduate Standing. (4). (BS). May not be repeated for credit. F.

EECS 478. Logic Circuit Synthesis and Optimization

EECS 270 and 203 with a grade of at least C; and senior or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 480. Logic and Formal Verification

EECS 281; and EECS 376 or EECS 270; each with a grade of at least C; or Graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. W. (Alternating Years).

EECS 481. Software Engineering

EECS 281 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) EECS 281 or EECS 398, Winter 2005, Section 001 or Graduate Standing. (4). (BS). May not be repeated for credit. F, W.

EECS 482. Introduction to Operating Systems

EECS 370 and 281 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 483. Compiler Construction

EECS 281 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) EECS 281 or EECS 398, Winter 2005, section 001 or Graduate Standing. (4). (BS). May not be repeated for credit. F.

EECS 484. Database Management Systems

EECS 281 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 485. Web Database and Information Systems

EECS 484 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. W.

EECS 487. Interactive Computer Graphics

EECS 281 with a grade of at least C; and senior or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 489. Computer Networks

EECS 482 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. W.

EECS 492. Introduction to Artificial Intelligence

EECS 281 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 493. User Interface Development

EECS 281 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) EECS 281 or EECS 398, Winter 2005, Section 001 or Graduate Standing. (4). (BS). May not be repeated for credit. W.

EECS 494. Computer Game Design and Development

EECS 281 with a grade of at least C; or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F.

EECS 496. Major Design Experience-Professionalism

Senior or Above. (Prerequisites enforced at registration.) (2). (BS). May not be repeated for credit. F, W.

EECS 497. Major Design Projects

Senior or graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F, W.

EECS 498. Special Topics

Permission of instructor. (1 - 4). (BS). May be repeated for credit.

EECS 499. Directed Study

Senior or graduate standing. (Prerequisites enforced at registration.) Senior standing in EECS. (1 - 4). (BS). May be repeated for credit.

EECS 543. Knowledge-Based Systems

EECS 281 and graduate standing, or permission of instructor. (3). (BS). May not be repeated for credit. F.

EECS 545. Machine Learning

EECS 492. (3). (BS). May not be repeated for credit. W, odd years.

EECS 567 / MECHENG 567 / MFG 567. Introduction to Robotics Graduate standing or permission of instructor. (3). (BS). May not be repeated for

credit. W.

EECS 570. Parallel Computer Architecture

EECS 470. (4). (BS). May not be repeated for credit. F.

EECS 574. Computational Complexity EECS 376 or graduate standing. (4). (BS). May not be repeated for credit. F.

EECS 575. Advanced Cryptography

EECS 203 or equivalent. EECS 574 recommended. (4). (BS). May not be repeated for credit. W.

EECS 579. Digital Systems Testing

Graduate standing. (4). (BS). May not be repeated for credit. F.

EECS 582. Advanced Operating Systems *EECS 482/EQ. (4). (BS). May not be repeated for credit. W.*

LLC3 402/LQ. (4). (D3). May not be repeated for e

EECS 583. Advanced Compilers EECS 281 and 370 (EECS 483 is also recommended). (4). (BS). May not be repeated for credit. F.

EECS 584. Advanced Database Systems

EECS 484 or permission of instructor. (4). (BS). May not be repeated for credit. F.

EECS 586. Design and Analysis of Algorithms EECS 281. (4). (BS). May not be repeated for credit. W.

EECS 587. Parallel Computing

EECS 281; graduate standing. (4). (BS). May not be repeated for credit. F.

EECS 588. Computer and Network Security EECS 482 or 489; or graduate standing. (4). (BS). May not be repeated for credit. F.

EECS 589. Advanced Computer Networks

EECS 489. (4). (BS). May not be repeated for credit. W.

EECS 590. Advanced Programming Languages EECS 281 or equivalent. (4). (BS). May not be repeated for credit. W.

EECS 592. Advanced Artificial Intelligence

EECS 492 or permission of instructor. (4). (BS). May not be repeated for credit. W.

EECS 594. Introduction to Adaptive Systems *EECS 203, and Math 425 or Stat 425. (3). (BS). May not be repeated for credit. W.*

EECS 595 / LING 541 / SI 561. Natural Language Processing

Senior standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

EECS 598. Special Topics

Permission of instructor or counselor. (1 - 4). (BS). May be repeated for credit. F, W, Sp/Su, Sp, Su.

Ecology and Evolutionary Biology (EEB)

2019 E.H. Kraus Natural Science Building 830 North University Avenue (734) 764-2446 (phone) (734) 647-0884 (fax) www.eeb.lsa.umich.edu Professor Deborah Goldberg, Chair

Professors

Julian P. Adams, *Population Genetics*Paul Berry, *Plant Systematics*Robert Denver, *Comparative Endocrinology*Paul Dunlap, *Microbial Symbiosis and Bioluminescence*George F. Estabrook, *Biometry*William L. Fink, *Ichthyology, Phylogenetics*Deborah E. Goldberg, *Plant Ecology*Mark Hunter, *Population Ecology, Plant Herbivore Interactions, and Ecosystems Processes* George W. Kling (Robert G. Wetzel Collegiate Professor of Ecology and Evolutionary Biology), *Limnology*

Alexey Kondrashov (Andrei R. Skovoroda Collegiate Professor in the Life Sciences), *Evolutionary Processes*

John T. Lehman, *Aquatic Ecology*

Philip Myers, Mammalogy

Knute Nadelhoffer, Ecosystems Ecology, Terrestrial Biogeochemistry, and Global Change

Ronald A. Nussbaum, Herpetology

- Diarmaid Ó Foighil, Evolutionary Biology of Mollusks
- Barry M. OConnor, Entomology, Parasitology, Acarology
- Mercedes Pascual (Rosemary Grant Collegiate Professor of Ecology and Evolutionary Biology), *Ecology*
- Pejman Rohani, *Theoretical ecology, population dynamics, infectious diseases, metapopulations*
- Priscilla K. Tucker, Mammalian Organismal, Chromosomal, and Genome Evolution

John H. Vandermeer (Margaret Davis Collegiate Professor of Ecology and Evolutionary Biology; Arthur F. Thurnau Professor), *Ecology*

Paul W. Webb, Physiological Ecology and Bioenergetics of Animals

Earl E. Werner, *Ecology and Evolutionary Biology*

Mark L. Wilson, Ecology of Diseases

Donald R. Zak (Burton V. Barnes Collegiate Professor), *Microbial Ecology and Ecosystem Ecology*

Jianzhi George Zhang, Molecular Evolutionary Genetics

Associate Professors

Robyn J. Burnham, Paleobotany

Johannes Foufopoulos, *Wildlife infectious diseases, conservation bi*ology, herpetology and ornithology

L. Lacy Knowles, Evolutionary Biology of Insects

Yin-Long Qiu, *Molecular Phylogeny and Molecular Evolution of Plants* Beverly J. Rathcke, *Community Ecology*

Noah Rosenberg, *Mathematical models in genetics and evolution, human population genetics, phylogenetics*

Assistant Professors

Catherine Badgley, *Ecology and Paleoecology of mammals, Biogeography*

Christopher Dick, Tropical Ecology and Evolution

Thomas F. Duda, Evolutionary Biology of Mollusks

Timothy James, Evolution of Fungi, Mating Systems Phylogenetics

Aaron King, Theoretical Ecology, Epidemiology, and Population Dynamics

Annette Ostling, Community Ecology

Elizabeth Tibbetts, *Behavioral Evolution, Organismal Biology, and Evolutionary Processes*

Patricia Wittkopp, Evolution of Development

Lecturers

Marc Ammerlaan, Microbiology

Lynn Carpenter, *Phylogeography and Paleoecology* Laura Eidietis, *Organismal Biology and Science Education* Josepha Kurdziel, *Evolutionary Biology and Science Education*

Research Scientist

Florence Wagner, Pteridophytes: systematics, evolution, cytology

Associate Research Scientist

Raymond Barbehenn, Insect biochemistry and ecology

Assistant Research Scientists

Liliana Cortés Ortiz, *Evolution of neotropical primates* Margaret Liu, *Developmental and evolutionary biology*

- Professors Emeriti William R. Anderson, John B. Burch, Brian A. Hazlett, Arnold G. Kluge, Larry D. Noodén, Robert B. Payne, Gerald R. Smith, James A. Teeri, Michael J. Wynne
- Professors Emeriti of Biology Richard D. Alexander, John M. Allen, Sally L. Allen, Reeve M. Bailey, Charles B. Beck, James N. Cather, William R. Dawson, Harry A. Douthit, David M. Gates, Hiroshi Ikuma, Peter B. Kaufman, Michael M. Martin, Thomas E. Moore, Robert Shaffer, David G. Shappirio, Edward G. Voss, Conrad S. Yocum

The Department of Ecology and Evolutionary Biology embraces education and research on virtually all aspects of biodiversity, including the origins and history of species ranging from bacteria to humans, the processes by which this diversity has evolved, and the ecological context in which this evolution takes place. These basic sciences underlie some of the most important applied sciences in the world today, such as global climate change, sustainable agriculture, the emergence and spread of infectious diseases, invasive and exotic species, conservation biology, natural resource management, and evolution of pesticide and antibiotic resistance.

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Ecologists and evolutionary biologists seek to understand the origin and complex interactions of the earth's biodiversity and ecosystems. Our collective focus spans numerous levels of biological organization over multiple timescales; including genes, individuals, kin groups, populations, species, communities, and ecosystems. Studies in ecology and evolution strive to synthesize how these levels of organization are related to one another and what processes govern their interactions. Although the methods, background knowledge, and social context for such investigations have changed radically in recent decades, the fundamental questions about life remain, and their relevance to humans has increased. How did we get here? How does nature work? How will our role in nature change in the future?

Concentration Program. The department administers the concentration and academic minor in Ecology and Evolutionary Biology. Students interested in concentrations in Biology, General Biology, or Plant Biology or an academic minor in Biology or Plant Biology should refer to information listed under the Program in Biology in this *Bulletin*.

Advising. Students who are interested in a concentration or academic minor in the department should consult a general advisor during the freshman year and a concentration advisor during the second term of the sophomore year. It is not necessary to complete every prerequisite before declaring a concentration.

Writing Requirement. The LSA Upper-Level Writing Requirement is usually met by permission of the instructor in EEB courses.

Field of Concentration. For purposes of calculating grade point average, the term "field of concentration" means the following:

- 1. All BIOLOGY, EEB, MCDB, and Biological Station courses, including cross-listed ones, at the 200-level and above.
- 2. All required cognate courses (if any).
- 3. All mandatory prerequisites.

Introductory Biology Credit Limitation: The maximum amount of credit that can be earned in introductory biology courses is 17 credits. Students interested in concentrating in Ecology and Evolutionary Biology or Plant Biology must complete BIOLOGY 171, 172/174 and 173, or BIOLOGY 195 and 173, or equivalent.

Supporting Facilities. Modern teaching and research laboratories house electron microscopes, controlled environment rooms, analytical and preparative centrifuges, spectrophotometers, and other tools essential for modern research in all areas of the biological sciences. In addition, the Herbarium, the Museum of Paleontology, the Museum of Anthropology Ethnobotanical Laboratory, the Museum of Zoology, and the Matthaei Botanical Gardens supplement the instructional and research programs. University-owned research facilities in the vicinity of Ann Arbor include Saginaw Forest, Edwin S. George Reserve, Stinchfield Woods, and Mud Lake Bog. The Biological Station provides additional facilities for instruction and research. The University of Michigan is also a member of the Organization for Tropical Studies.

Biological Station. It is recommended that students with a concentration in the department give serious consideration to spending a summer at a field station, especially the University of Michigan Biological Station, or a marine laboratory. The training and experience provided by such facilities are particularly valuable for students interested in ecology, systematics, animal behavior, and evolutionary biology and are especially relevant to the EEB concentration.

The curriculum at the Biological Station places a strong emphasis on ecology, systematics, field biology, and environmental studies. Courses are taught during the Spring and Summer Half-Terms (IIIa and IIIb) at the Biological Station on the shores of Douglas Lake in northern Lower Michigan. The Biological Station occupies a 10,000 acre tract between Burt and Douglas Lakes and is the world's largest inland field station for instruction and research in biological science. Located in the transition zone between coniferous forests to the north and deciduous forests to the south, it is surrounded by a remarkable variety of natural communities.

The Biological Station offers students and faculty an opportunity to study together the biota of the regions with a full appreciation of the dynamics of the natural systems involved. The small community of students, faculty, and scientists shares knowledge during meal and recreation times as well as in the classroom, field, and laboratory. Many courses offered at the Biological Station can be used as part of a concentration plan in biology, plant biology, or ecology and evolutionary biology with approval from a concentration advisor.

Two courses in college biology are normally required for admission to Biological Station courses, all of which are either upper level or graduate level and are offered for five credits. A normal load at the Biological Station is two courses (ten credits). Each formal course occupies the entire days assigned to it. Field work is supported by modern equipment, vehicles, boats, laboratories, and a fine library.

The phone number for the campus office is (734) 763-4461.

Awards/Fellowships: *K.L. Jones Award.* Since 1977, this award has been given to the outstanding plant sciences undergraduate. The Kenneth L. Jones Undergraduate Award for excellence in botany was endowed by colleagues, friends, and alumni upon the retirement of Professor Jones and consists principally of a sum to enable the recipient to purchase books or equipment of his or her own choice.

J.T. Slater Award. Since 1983, this award has been given to systematic and/or field botanists from among upper-division students. Awards are made on the basis of excellence in classes as well as fieldwork, and are in the form of a check. The award was financed by Professor Slater of the University of Puget Sound, expert in field studies of northwestern ferns. Awardees may be in any school at the University of Michigan, so long as individuals selected excel in the targeted fields.

Underwood-Alger Scholarship. This scholarship program is based on merit and intended to provide support for students concentrating in the biological sciences. For this program, special consideration is given to applicants who are female and who have financial need. A gift from Dr. Nelda E. Alger provides funding for this scholarship.

Anne Rudo Memorial Award. The award is designated for a student with dual interests in the disciplines of biology and psychology, and superior academic achievement. Information is available in the Psychology Undergraduate Office, 1343 East Hall.

Ecology and Evolutionary Biology

May be elected as a departmental concentration program

Exclusions: Students who elect a concentration in Ecology and Evolutionary Biology may not elect the following concentrations: Biology, General Biology; Microbiology; Plant Biology; or Biochemistry. They may also not elect an academic minor in Biology; Ecology and Evolutionary Biology; Plant Biology; Chemistry; or Biochemistry.

The Ecology and Evolutionary Biology concentration will train biologists interested in the origins and complex interactions of the Earth's biodiversity and ecosystems with both the fundamental knowledge in these areas and the basic skills of scientific inquiry. The program spans numerous levels of biological organization over multiple timescales, and includes studies of genes and genomes, organ systems, individual organisms, populations, species, communities, and ecosystems. Students learn to synthesize how these levels of organization are related to one another and what processes govern their interactions. The concentration in EEB will prepare students for a variety of career paths including graduate study in biology, public health and medical, dental, and veterinary health professions, conservation and natural resource management, teaching at the K-12 level, positions in the local, state and federal governments, non-profit/nongovernmental organizations, and private sector opportunities such as environmental consulting agencies. The academic minor embraces similar principles but to lesser depth for students who wish to supplement a major in another area with additional biological expertise.

Advising. Students will be advised by a combination of staff and faculty to discuss individual course selection based on the student's interests, as well as career counseling, and research opportunities. Students who are interested in the EEB concentration should consult a general advisor during the freshman year and are strongly encouraged to meet with a concentration advisor early in their academic career, but no later than the second term of their sophomore year. It is not necessary to complete every prerequisite before declaring a concentration. To make an appointment come in person to the Undergraduate Program Office located in 1111 Kraus Natural Sciences Building.

Prerequisites to Concentration.

- BIOLOGY 171, 172/174 and 173; or BIOLOGY 195 and 173; or BIOLOGY 162 or 163;
- CHEM 210/211 and 215/216;
- MATH 115 and 116;
- PHYSICS 125/127 and 126/128; or PHYSICS 135/141 and 235/241; or PHYSICS 140/141 and 240/241.

Under exceptional circumstances, students may petition the Associate Chair of Curriculum to substitute other classes in chemistry, physics, mathematics, and statistics for a prerequisite.

Concentration Program. A minimum of 30 credits (Students who took BIOLOGY 162 or 163, or have AP credit for BIOLOGY 162, must complete 32 credits).

- 1. Core courses
 - a. *Ecology:* BIOLOGY 281 & 282; or EEB 381* (elected at UMBS)
 - b. Genetics: BIOLOGY 305
 - c. Evolution: EEB 390*
 - d. *Statistics or Biochemistry* (students should consult with an EEB advisor prior to choosing and the other option may be taken as an elective):
 - (1).STATS 250 (or 350), or
 - (2). One of the following: MCDB 310, or BIOLCHEM 415
 - * EEB 381 or EEB 390 taken at UMBS satisfies both the residential field course requirement and the individual course requirements.

2. Research Experience or Residential Field Course.

- a. EEB 300 or 400, or
- b. Any upper division UMBS course.

It is possible to receive EEB 300/400 credit for research done under the direction of a faculty member in another unit of the University, as long as an EEB faculty member agrees to serve, in advance, as a co-sponsor. Approval in advance by an EEB advisory is required to obtain credit for residential field courses (minimum duration of three weeks) taken at non-UM academic institutions.

- 3. Capstone Seminar: EEB 410.
- 4. Additional Concentration Courses (Electives): 9-12 credits of courses at the 200-level or above chosen in consultation with, and approved by, the concentration advisor. These courses should be tailored to the student's individual interests and should promote interdisciplinary approaches among EEB areas and other natural sciences:
 - · At least one course must be from EEB offerings
 - · At least one course must have a biodiversity focus
 - At least one course must include a lab
 - At least two courses must be at the 300-level or above (one must be an EEB course)

A maximum of three credits of any independent study course may count toward the *Additional Concentration Courses* (in addition to those used to meet the *Research Experience* requirement, *i.e.*, there is a maximum allowable total of six independent research credits). If students elect EEB 300 or 400 to meet the laboratory requirement, they must complete three credits in one term to satisfy the requirement.

Biodiversity focus courses

(An asterisk indicates a course that satisfies a laboratory requirement. Note that many are taught at the UMBS and meet the field course requirement when successfully completed there.)

BIOLOGY 207* (4) Introductory Microbiology BIOLOGY 230* (4) Introduction to Plant Biology BIOLOGY 252* (4) Chordate Anatomy and Phylogeny BIOLOGY 255* (4) Plant Diversity BIOLOGY 288* (4) Animal Diversity EEB 330* (5) Biology of Birds (UMBS) EEB 341* (4) Parasitology EEB 420 (3) Plant Evolution EEB 431* (5) Biology of Animal Parasites (UMBS) EEB 433* (4) Ornithology EEB 436* (4) Woody Plants I: Biology and Identification EEB 440 (3) Biology of Fishes EEB 441* (1) Biology of Fishes Laboratory EEB 442* (4, 5) Biology of Insects (I in Ann Arbor; IIIb at UMBS) EEB 450* (5) Biology of Amphibians and Reptiles EEB 451* (4) Biology of Mammals EEB 453* (5) Field Mammalogy (UMBS) EEB 457* (5) Algae of Freshwater Ecosystems (UMBS) EEB 459* (4) Systematic Botany EEB 463 (3) Neotropical Plant Families EEB 470 (3) Microbial Diversity EEB 486* (5) Biology and Ecology of Fishes (UMBS) EEB 532* (3) Birds of the World EEB 556* (5) Field Botany of Northern Michigan (UMBS)

Currently approved elective courses for the EEB concentration from other departments/units

Anthropology

ANTHRBIO 365 Human Evolution ANTHRBIO 368 Primate Social Behavior I

Chemistry

Any course number CHEM 230 or above.

Complex Systems

CMPLXSYS 501 Introduction to Complex Systems CMPLXSYS 530 Computer Modeling of Complex Systems

Environment

ENVIRON 310 Toxicology: The Study of Environmental Chemicals and Disease ENVIRON 311 Lakes, Rivers and Wetlands (Also taught at UMBS) ENVIRON 315 The Ecology and Evolution of Infectious Diseases ENVIRON 317 Conservation of Biological Diversity ENVIRON 341 Environmental Science in the Rockies **ENVIRON 348 Forest Ecosystems ENVIRON 409 Ecology of Fishes** ENVIRON 411 Fluvial Ecosystems ENVIRON 415 Behavioral Ecology and Conservation Biology ENVIRON 416 Field Skills in Wildlife Behavior ENVIRON 418 Biology and Management of Insects ENVIRON 419 Agricultural/Forest Pest Management ENVIRON 422/423 Biology of Fishes ENVIRON 425 Applied Population Ecology ENVIRON 430 Soil Ecology ENVIRON 433 Ornithology ENVIRON 436 Woody Plants I: Biology and Identification ENVIRON 441 Remote Sensing of Environment ENVIRON 451 Biology of Mammals ENVIRON 453 Tropical Conservation and Resource Management ENVIRON 476 Ecosystem Ecology

Geological Sciences

GEOSCI 320 Earth Systems Evolution GEOSCI 341 Environmental Science in the Rockies

GEOSCI 418 Paleontology

GEOSCI 436 Field Studies in Stratigraphy, Paleontology, and Sedimentology

GEOSCI 437 Evolution of Vertebrates GEOSCI 438 Evolution of the Primates

Mathematics

Courses numbered above MATH 186.

Molecular Cell and Developmental Biology All MCDB courses.

All MCDD Course

Physics

Courses approved in advance by the concentration advisor

Psychology

PSYCH 338 Primate Social Behavior I PSYCH 338 Primate Social Behavior I PSYCH 435 Biological Rhythms and Behavior PSYCH 438 Hormones and Behavior PSYCH 530 Advanced Topics in Evolutionary Comparative Psychology

Statistics

STATS 250 (or 350) Introduction to Statistics and Data Analysis STATS 400 Applied Statistical Methods

College of Engineering

AOSS 304 The Atmospheric and Oceanic Environment AOSS 320 Earth Systems Evolution BIOMEDE 231 Introduction to Biomechanics ENSCEN 304 The Atmospheric and Oceanic Environment

Medical School

HUMGEN 541 Gene Structure and Regulation

School of Public Health

EHS 311 Naturally Occurring Biological Toxins EPID 543 Virus Diseases EPID 560 Mechanisms of Bacterial Pathogenesis

Honors Program

The department conducts an Honors program to trains students to conduct independent research in Ecology and Evolutionary Biology. In addition to completing all the requirements for the EEB concentration, an Honors degree requires a concentration GPA of at least 3.4, and the completion of a significant piece of independent research that is reported in an Honors thesis and presented in a public forum. It is recommended that students discuss the Honors Program with a concentration advisor early in their undergraduate career, and to meet with a concentration advisor to declare Honors as soon a possible.

Admission to the Biology Honors Program

Students may join the Honors Program at any time during their undergraduate career, but applications for a given term must be received no later than the deadline for submission of the Honors thesis. However, it is recommended that students discuss the Honors Program with a concentration advisor early in their undergraduate career, and declare their participation in Honors as soon as possible.

The Honors Program

1. *Research:* The student must identify a research mentor, preferably by the end of the sophomore year. The research mentor can be a member of the Department of Ecology and Evolutionary Biology (EEB) or a life scientist holding a faculty appointment in another unit of the University, such as the School of Natural Resources and the Environment, the Department of Molecular, Cellular, and Developmental Biology, or the Life Sciences Institute. If the mentor is not a member of EEB, the student must also identify a co-sponsor from this department.

Students are encouraged to register for independent research (EEB 300 or 400) for at least two terms; most students register for three or four terms of independent research. Students working in labs outside of the EEB Department will usually register for EEB 300 and 400 through their co-sponsor's independent study

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number. However, it is permitted to use the independent study number of another department if the co-sponsor approves it.

It is highly recommended that students arrange to work full time on their Honors thesis during the summer between their junior and senior years. A limited amount of funds are available from university fellowships, but in most cases support will have to come from the sponsoring lab. Students working on field-based topics are urged to contact faculty about the possibility of starting work during the summer between their sophomore and junior years.

- 2. *Readers:* Prior to submitting their thesis, the student should identify three readers for the thesis, one of whom is the sponsor. At least two readers must be faculty members of the EEB Department, unless the student receives the written approval of the EEB Associate Chair for curriculum for an exception. Readers must agree to turn in their evaluations within 10 days after the thesis is submitted.
- 3. The Honors Thesis: The thesis is due on April 1, August 1, or December 1, depending on the anticipated graduation date. Based on the material presented in the Honors thesis and the student's overall record, the readers of the thesis will recommend a rating of "no Honors," "Honors," "High Honors," "or Highest Honors." Readers of Honors theses are expected to file their reports with the Biology Program Honors Committee within 10 days after the thesis is submitted. The reports of all readers should address the quality of the science reported in the thesis, as well as the quality of the written presentation. The report of the mentor should also address the role the student played in the design, execution, and interpretation of the experiments reported in the thesis, and should point out the role that others in the lab played.

The EEB Honors Committee will meet approximately two weeks after the due date of the theses to review the recommendations of the readers and decide on the appropriate level of Honors. The committee will attempt to maintain uniform standards for Honors and is not constrained by the level of Honors recommended by the readers. The Honors committee may decide to table discussion and request the student to revise the thesis if they believe that a revised version might merit a higher rating.

4. Oral Presentation: The student will present the research results in an advertised public forum, such as a class, a poster session, or a departmental seminar. If the number of Honors students graduating in a particular term warrants it, EEB will organize a departmental poster session that would meet this requirement. Students interested in participating are encouraged to contact the EEB Associate Chair for Curriculum at least two months prior to the end of term. The mentor will declare in the thesis evaluation letter when and where the student has fulfilled the public presentation requirement.

Academic Minor in Ecology and Evolutionary Biology

The academic minor trains biologists interested in the origins and complex interactions of the Earth's biodiversity and ecosystems with both the fundamental knowledge in these areas and the basic skills of scientific inquiry. The academic minor covers the material of the concentration to a lesser depth for students who wish to supplement a major in another area with additional biological expertise.

Exclusions: Students who elect an academic minor in Ecology and Evolutionary Biology may not elect the following concentrations: Biology, General Biology, Plant Biology, Ecology and Evolutionary Biology, Microbiology, or Biochemistry. They may also not elect an academic minor in Biology, Program in the Environment, Plant Biology, or Global Change.

The academic minor in Ecology and Evolutionary Biology is not recommended for students interested in graduate work in the biological sciences.

Prerequisites to the Academic Minor. BIOLOGY 171, 172/174 and 173; or BIOLOGY 195 and 173; or BIOLOGY 162 or 163.

Academic Minor Program. 15 credits at the 200-level and above (Students who took BIOLOGY 162 or 163, or students with AP credit for BIOLOGY 162 must take 18 credits), distributed as follows:

- 1. Core courses: Two courses chosen from the following three areas:
 - a. Ecology: BIOLOGY 281 or EEB 381 (Biological Station)
 - b. Genetics: BIOLOGY 305
 - c. Evolution: EEB 390 (on campus or at the Biological Station)
- Elective courses in EEB to bring academic minor credits to at least 15 (18 for students who took BIOLOGY 162 or 163, or students with AP credit for BIOLOGY 162).
 - At least one course must have a biodiversity focus (see list of approved courses, above)
 - At least one course must include a lab. EEB 300 or 400, elected for three credits, may be used to satisfy this requirement. A maximum of three credits in undergraduate research credits can be applied to the academic minor in EEB. Three credits of independent research must be completed in one term to satisfy a laboratory requirement.
 - Attendance at a residential field station is encouraged

Multiple requirements may be satisfied by one course.

COURSES IN ECOLOGY AND EVOLUTIONARY BIOLOGY (EEB)

EEB 300. Undergraduate Research

Consent of instructor required. Eight credits of biology and 3.0 grade point average in science; permission of faculty member in EEB. (1 - 3). (BS). (INDEPENDENT). May be repeated for a maximum of 9 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term (EEB 300 or 400), the final grade is posted for both term's elections.

EEB 302. Teaching Experience for Undergraduates

Consent of instructor required. Permission of instructor. (1 - 3). (EXPERIENTIAL). May not be repeated for credit.

EEB 315 / ENVIRON 315. The Ecology and Evolution of Infectious Diseases

BIOLOGY 100 or 162 or 163 or 171 & 172 & 173 or 195 & 173. (3). (NS). (BS). May not be repeated for credit.

EEB 318 / ENVIRON 318 / RCIDIV 318. Food, Land, and Society

One year of college-level Biology, Environmental Science or Environmental Studies; General Ecology recommended. (4). (ID). May not be repeated for credit.

EEB 319 / ENVIRON 319 / RCIDIV 319. Food, Land and Society Field Study

RCIDIV 318/ENVIRON 318/EEB 318. (Prerequisites enforced at registration.) (2). (EX-PERIENTIAL). May not be repeated for credit.

EEB 320 / ENVIRON 311. Rivers, Lakes, and Wetlands: Introduction to Aquatic Ecosystems

One course in BIOLOGY or permission of instructor. (4; 5 in the half-term). (NS). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

EEB 330. Biology of Birds

Two college-level courses in biology. (5 in the half-term). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

EEB 335. Biodiversity Research Seminar

BIOLOGY 162 or 163 or [171 and 172] or [195 and 173]. (Prerequisites enforced at registration.) Recommended grade of at least B in BIOLOGY 162. (2). (BS). May not be repeated for credit. F and W.

EEB 341. Parasitology

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. (4). (BS). May not be repeated for credit. W. Satisfies a Biology laboratory requirement.

EEB 348 / ENVIRON 348. Forest Ecosystems

Consent of department required. BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. (5 in the half-term). (NS). (BS). May not be repeated for credit. Su at Biological Station.

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173, and one term of college CHEM or PHYSICS. (3). (BS). May not be repeated for credit.

EEB 381 / ENVIRON 381. General Ecology

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173, AND a laboratory course in CHEM. (5 in the half-term). (BS). May not be repeated for credit.

EEB 390. Evolution

BIOLOGY 162 or 163 or 171 or (195 & 173); prior or concurrent enrollment in BIOLOGY 305. (3; 5 in the half-term). (BS). May not be repeated for credit.

EEB 397 / MCDB 397. Writing in Biology MCDB 300 or 400, OR EEB 300 or 400, OR permission of instructor. (3). (BS). May not be repeated for credit. No credit granted for students who have completed or are enrolled in EEB 301 or MCDB 301.

EEB 400. Advanced Research

Consent of instructor required. 12 credits of BIOLOGY, 3.0 average in science, and permission of instructor in EEB. (1 - 3). (BS). (INDEPENDENT). May be repeated for a maximum of 9 credits. Continuing Course. Y grade can be reported at end of the firstterm to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

EEB 401. Advanced Topics in Biology

Intended for senior concentrators. The prerequisites will be set by the instructor as appropriate for each section. (2 - 3). (BS). May be repeated for a maximum of 6 credits.

EEB 404 / MCDB 404. Genetics, Development, and Evolution

BIOLOGY 305. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

EEB 410. EEB Capstone Seminar

BIOLOGY 281 and 390. (3). (BS). May not be repeated for credit.

EEB 412. Molecular Ecology

BIOLOGY 305 and 390, or equivalents. Population genetics and ecology desirable. (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

EEB 420. Plant Evolution

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173, AND BIOLOGY 230 or equivalent. (3). (BS). May not be repeated for credit.

EEB 424 / ENVIRON 415 / NRE 415. Behavioral Ecology and Conservation Biology

BIOLOGY 162 or 171 and completion or concurrent enrollment in either ENVIRON 415 or EEB 424 or NRE 415. (4). (BS). May not be repeated for credit. No credit granted for students who have taken or are enrolled in EEB 492.

EEB 425 / ENVIRON 416 / NRE 416. Field Skills in Wildlife Behavior

BIOLOGY 162 or 171 and completion or concurrent enrollment in ENVIRON 415. (2). (BS). May not be repeated for credit. No credit granted for students who have taken or are enrolled in EEB 492.

EEB 431. Ecology of Animal Parasites

Two laboratory courses in BIOLOGY. (5 in the half-term). (BS). May not be repeated for credit. Meets June 26 - August 21, 2010.

EEB 436 / ENVIRON 436 / NRE 436. Woody Plants: Biology and Identification

BIOLOGY 162 or 171. (4). (BS). May not be repeated for credit. Rackham credit reauires additional work.

EEB 440 / ENVIRON 422 / NRE 422. Biology of Fishes

BIOLOGY 162 or 171, 172 and 173. (3). (BS). May not be repeated for credit. F.

EEB 441 / ENVIRON 423 / NRE 423. The Biology of Fishes Laboratory

BIOLOGY 162 or 171, 172 and 173. (1). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

EEB 442. Biology of Insects

BIOLOGY 162 or 163 or [171 and 172] or [195 and 173]. (4 - 5; 4 in the half-term). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

EEB 445 / GEOSCI 445. Biogeography

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. One course in historical geology is recommended. (3). (BS). May not be repeated for credit.

EEB 450. Biology of Amphibians and Reptiles

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. (5). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

EEB 451 / ENVIRON 451 / NRE 451. Biology of Mammals

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. (4). (BS). May not be repeated for credit. F. (Offered in alternate years). Satisfies a Biology laboratory requirement.

EEB 453. Field Mammalogy

Two laboratory courses in BIOLOGY. (5 in the half-term). (BS). May not be repeated for credit. (Offered in even years at the Biological Station). Satisfies a Biology laboratory requirement.

EEB 455, Ethnobotany

Two college-level courses in BIOLOGY. (5 in the half-term). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

EEB 457. Algae in Freshwater Ecosystems

Two laboratory courses in Botany. (5 in the half-term). (BS). May not be repeated for credit. (Offered in even years at the Biological Station). Satisfies a Biology laboratory requirement.

EEB 459. Systematic Botany

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173 OR 255. (4). (BS). May not be repeated for credit. F. Satisfies a Biology laboratory requirement.

EEB 463. Neotropical Plant Families

BIOLOGY 215 or EEB 459. (3). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

EEB 466 / MATH 466. Mathematical Ecology

MATH 217, 417, or 419; MATH 256, 286, or 316; and MATH 450 or 451. (3). May not be repeated for credit. Rackham credit requires additional work.

EEB 468. Biology of Fungi

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. (4). (BS). May not be repeated for credit.

EEB 470. Microbial Diversity

Junior standing; BIOLOGY 207 and at least one 300 level course in the Biological Sciences. (3). (BS). May not be repeated for credit.

EEB 472, Plant-Animal Interactions

BIOLOGY 281. (3). (BS). May not be repeated for credit. W.

EEB 476 / ENVIRON 476 / NRE 476. Ecosystem Ecology

General Ecology and a 400-level course in Aquatic or Terrestrial Ecology. (3). (BS). May not be repeated for credit. W.

EEB 477. Laboratory in Field Ecology

A course in Ecology. (5). (BS). May not be repeated for credit. F. Satisfies a Biology laboratory requirement.

EEB 479. The Dynamics of Neotropical Rainforests

Consent of instructor required. A course in Ecology, fluency in Spanish, and permission of instructor. (2). (BS). May be repeated for a maximum of 4 credits.

EEB 480. Computer-Aided Inferences in Evolution and Ecology

Senior natural science concentrator or Graduate student. (4). (BS). May not be repeated for credit.

EEB 481. Population Dynamics and Ecology

A course in ecology. Calculus is strongly recommended. (4). (BS). May not be repeated for credit.

EEB 483. Limnology: Freshwater Ecology

Advanced undergraduate or Graduate standing, with background in PHYSICS, CHEMI-STRY, BIOLOGY, or water-related sciences. (3). (BS). (QR/1). May not be repeated for credit. W.

EEB 484. Limnology Laboratory

Concurrent enrollment in EEB 483. (3). (BS). (QR/1). May not be repeated for credit. Satisfies a Biology laboratory requirement.

EEB 485. Population and Community Ecology (4). (BS). May not be repeated for credit. Rackham credit requires additional work.

EEB 486. Biology and Ecology of Fish

Two laboratory courses in BIOLOGY. (5 in the half-term). (BS). May not be repeated for credit. (Offered in odd years at the Biological Station). Satisfies a Biology laboratory requirement.

EEB 487 / ENVIRON 409 / NRE 409. Ecology of Fishes

BIOLOGY 162 or 171, 172 and 173. (3 - 4). (BS). May not be repeated for credit. W. (Lectures: 3 credits; lectures and lab: 4 credits). Satisfies a Biology laboratory requirement only if the student signs up for four credits.

EEB 489 / ENVIRON 430 / NRE 430. Soil Ecology

BIOLOGY 162 or 171 and 172 and 173, and General Chemistry. Concurrent enrollment in ENVIRON 436/EEB 436 and ENVIRON 435/NRE 435 highly recommended. (3). (BS). May not be repeated for credit. F. Satisfies a Biology laboratory requirement.

EEB 492. Behavioral Ecology

BIOLOGY 162 or 163 or 172 or 174 or [195 & 173]. (Prerequisites enforced at registration.) BIOLOGY 390 or EEB 390. (3; 5 in the half-term). (BS). May not be repeated for credit. (Offered in odd years at the Biological Station).

EEB 498. The Ecology of Agroecosystems

A course in Ecology. (3). (BS). May not be repeated for credit. F.

EEB 556. Field Botany of Northern Michigan

A course in Systematic Botany (EEB 459). (5 in the half-term). (BS). May not be repeated for credit. Satisfies a Biology laboratory requirement.

Economics

238 Lorch Hall 611 Tappan Street (734) 764-2355 (phone) (734) 764-2769 (fax) www.lsa.umich.edu/econ e-mail: econundergradoffice@umich.edu Professor Linda Tesar, Chair Professor William James Adams, Director of Undergraduate Studies

Professors

William James Adams (Arthur F. Thurnau Professor), Industrial Organization, Comparative Economics Robert Barsky, Macroeconomics

Tilman Börgers (Samuel Zell Professor of the Economics of Risk), Microeconomic Theory

John Bound, Labor Economics, Demography

Charles Brown, Labor Economics

Susan Collins, International Finance, Macroeconomics

- Paul Courant (Arthur F. Thurnau Professor and Harold T. Shapiro Collegiate Professor of Public Policy), *Public Economics*
- Alan Deardorff (John W. Sweetland Professor of International Economics), *International Trade*

John DiNardo, Labor Economics

Kathryn Dominguez, International Finance

- James Hines (Richard A. Musgrave Collegiate Professor of Economics), *Public Finance*
- Brian Jacob (Annenberg Professor of Education Policy, Ford School of Public Policy), *Economics of Education, Labor Economics*

Lutz Kilian, Econometrics, Macroeconomics, International Finance

Miles Kimball, Macroeconomics

Francine Lafontaine, Business Economics

John Laitner, Macroeconomics

David Lam, Demography, Development Economics

Brian McCall, Economics of Education, Applied Econometrics

Edward Norton, Health Economics

- Scott E. Page (Leonard Hurwicz Collegiate Professor of Political Science, Complex Systems, and Economics), *Microeconomic Theory*
- Paul Rhode, Economic History

Stephen Salant, Microeconomics, Natural Resource Economics

Robert Schoeni, Labor Economics, Demography

Matthew Shapiro (Lawrence R. Klein Collegiate Professor of Economics), *Macroeconomics*

Joel Slemrod (Paul W. McCracken Professor of Business Economics), Public Finance

Jeffrey Smith, Labor Economics, Applied Econometrics

Lones Smith, Microeconomic Theory

Frank Stafford, Labor Economics

Jan Svejnar (Everett E. Berg Professor of Business Administration), Comparative Economics

Linda Tesar, International Finance, Macroeconomics Warren Whatley, Economic History, Political Economy

Robert Willis, Labor Economics, Demography

Associate Professors

Christopher House, *Macroeconomics* Kai-Uwe Kühn, *Industrial Organization* Dan Silverman, *Public Economics* Melvin Stephens, Jr., *Labor Economics, Econometrics* Dmitriy Stolyarov, *Industrial Organization, Macroeconomics*

Assistant Professors

David Albouy, *Public Finance* Raj Arunachalam, *Development Economics* Rüediger Bachmann, *Macroeconomics* Martha Bailey, *Labor Economics, Demography* Matias Cattaneo, *Econometrics* Michael Elsby, *Labor Economics, Macroeconomics* Ying Fan, *Industrial Organization, Applied Microeconomics* Ryan Kellogg, *Industrial Organization, Environmental Economics* Stephan Lauermann, *Microeconomic Theory* Yoonseok Lee, *Econometrics* Andrei Levchencko, *International Economics* Yusufcan Masatlioglu, *Microeconomic Theory* Daisuke Nakajima, *Microeconomic Theory* Rebecca Thornton, *Development Economics* Dean Yang, *Development Economics* Jing Zhang, *International Finance*

Lecturers

Janet Gerson, *Microeconomics* Chad Hogan, *Microeconomics* Paula Malone, *Microeconomics* Chris Proulx, *Microeconomics* Vinay Ramani, *Microeconomics* Stan Sedo, *Labor Economics, Econometrics* Adam Stevenson, *Macroeconomics* Frank Thompson, *Political Economy* Neslihan Uler, *Experimental Economics, Development Economics*

Professors Emeriti Morris Bornstein, John Cross, Robert Dernberger, Robert Holbrook, E. Philip Howrey, Saul Hymans, George Johnson, Thomas Juster, Jan Kmenta, Harold Levinson, James Morgan, Richard Porter, Gary Solon, Peter Steiner, Robert Stern, Thomas Weisskopf

Economic problems are central to modern society. Consequently, a broad understanding of the modern world requires some knowledge of economic systems. An individual's intelligent understanding of and participation in the solution of problems which face society is aided by an understanding of the point of view and techniques of analysis which have been developed by economists. The introductory courses (ECON 101 and 102) offered by the department are designed to provide basic knowledge as well as to serve as a foundation for other courses in economics for students who wish to pursue the subject at an intermediate or advanced level. A concentration in Economics leads to a more detailed understanding of the modern economic world and provides a useful background for students seeking careers in law, business, government, journalism, and teaching. Students who wish to attain professional competence as economists in preparation for careers in research or in college or university teaching normally plan on graduate work in economics.

Special Departmental Policies. Students who receive a 4 or 5 on the AP Microeconomics examination receive two credits in ECON 101X. Students who receive a 4 or 5 on the AP Macroeconomics examination receive two credits in ECON 102X.

ECON 101X does not substitute for ECON 101, and ECON 102X does not substitute for ECON 102, as prerequisite for other ECON classes.

Students with credit for ECON 101X are eligible to receive full credit for ECON 101, and students with credit for ECON 102X are eligible to receive full credit for ECON 102. No student should take a 400-level ECON elective before completing each of the relevant prerequisites with a grade of at least C–.

Economics Undergraduate Office. The undergraduate office is located at 238 Lorch Hall, (734) 763-9242. The Student Services Assistant for the economics undergraduate program is available to answer questions about concentration requirements, course offerings,

wait-list procedures, career/job information, economics networking program, and other matters concerning the undergraduate program.

Michigan Economics Society. The Michigan Economics Society, 154 Lorch Hall, (734) 763-5318, is the organization for undergraduate students in Economics. MES provides informational meetings about careers for economics graduates, informal talks by faculty members, informal peer counseling, and social events. Undergraduate students are encouraged to join MES and avail themselves of its many services.

Prizes. *The Sims Honor Scholarship in Economics,* which carries a stipend of \$1000, is awarded yearly in the spring to the junior judged the most outstanding and promising economics concentrator.

The Harold D. Osterweil Prize in Economics, which carries an honorarium of \$1000, is awarded yearly to the most outstanding graduating senior in economics who has also shown a high degree of social awareness.

The Bunzel Prize in Economics, which carries a stipend of \$1000, is awarded yearly to a student who has declared a concentration in Economics and is not a resident of the state of Michigan.

The Ferrando Prize in Economics, which carries a stipend of \$1000, is awarded yearly to the Honors Economics students with the best undergraduate Honors thesis in Economics.

The John Elliot Parker Prize, which carries a stipend of \$750, may be awarded yearly in the spring to an economics undergraduate and/or graduate student for an outstanding written contribution in the area of labor economics or human resources.

Roster of Undergraduate Economics Courses

- A. Introductory Courses 101, 102, 108, 195
- B. *Economic Theory* 398, 401, 402, 403, 409
- C. *Statistics and Econometrics* 404, 405, 406, 407
- D. *Macroeconomics* 310, 411, 414, 418
- E. Financial Economics 434, 435
- F. *Labor Economics* 320, 421, 422
- G. Industrial Organization 330, 431, 432
- H. *International Economics* 340, 441, 442
- I. Comparative Economics 453
- J. *Economic Development* 461, 462, 466
- K. *Environmental Economics* 370, 437, 471, 472
- L. *Public Economics* 380, 481, 482
- M. *Economic History* 491, 492, 494
- N. Other Topics in Economics 309, 323, 327, 395, 408, 412, 423, 438, 487, 490
- Honors Program, Internships, Seminars, & Independent Research 299, 495, 498, 499

Economics

May be elected as a departmental concentration program

Prerequisites to the Concentration. ECON 101 and 102 and MATH 115, each completed with a grade of at least C. One of the Honors alternatives to MATH 115 may be substituted for MATH 115. Advanced placement credits in MATH 121 may be substituted for MATH 115, but students who scored less than a 4 on the BC Calculus exam are encouraged to elect one of the calculus courses on the placement list before proceeding to economics courses having a MATH 115 prerequisite. Credits in MATH 120 alone do not satisfy the mathematics prerequisite for an economics concentration or academic minor. Students with this credit may complete the economics mathematics prerequisite by completing, with a grade of at least C, MATH 115, MATH 116, or one of the Honors alternatives to these courses.

Students with a serious interest in the study of economics are strongly encouraged to continue the study of calculus beyond MATH 115. MATH 116, 215, and 217, or their Honors equivalents, are recommended for students with an interest in quantitative economics. Students with a serious interest in advanced research should elect ECON 405 (or STATS 426) and ECON 406.

Schedule an appointment with an economics concentration advisor to declare an economics concentration. Students must complete the prerequisites to the concentration before declaring and must have a GPA of at least 2.0 in the concentration.

Concentration Program. An economics concentration plan must include:

- 1. ECON 401 (Intermediate Microeconomics) and ECON 402 (Intermediate Macroeconomics), each completed with a grade of at least C-;
- Statistics. One of the following: ECON 404 (Statistics for Economists), ECON 405 (Introduction to Statistics), or STATS 426 (Introduction to Mathematical Statistics); and
- 3. **Electives:** 15 additional credits in upper-level (300 and 400 level) ECON courses, including at least nine credits taken from courses with ECON 401 or ECON 402 as a prerequisite. ECON 406 also counts toward these nine credits.

Ann Arbor campus requirement: Any concentration courses to be taken outside the Ann Arbor campus of the University should be approved in advance by an economics concentration advisor. At least 12 credits in the concentration plan, including ECON 401, ECON 402, and at least three of the credits in upper-level economics electives in courses with ECON 401 or ECON 402 as a prerequisite, must be taken at the Ann Arbor campus.

Students who have completed ECON 405 / STATS 405 or STATS 426 are strongly encouraged to include ECON 406 (Introduction to Econometrics) as one of the electives in their concentration plan. Note that MATH 116 (Calculus II) is a prerequisite for ECON 405 / STATS 405 and that MATH 215 (Calculus III) and MATH 425 / STATS 425 (Introduction to Probability) are prerequisites for STATS 426.

ECON 401, 402, and statistics are prerequisites to many upper-level economics courses and should be elected during the sophomore or junior year. ECON 401 should be elected before ECON 402.

Honors Concentration. Qualified students are encouraged to consider an Honors concentration in Economics. The standards for admission are a cumulative grade point average of at least 3.5 and evidence of outstanding ability in economics. Application is made and admission is granted to the Honors concentration during the first term of the junior year.

Honors concentrators are required to complete the requirements for a regular concentration in Economics. An Honors concentration plan must include ECON 405 (or STATS 426) and ECON 406. In addition, Honors concentrators must complete a senior Honors thesis. The senior Honors thesis may be an extension of concentration course-

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work and normally includes original work completed by the student under the direction of a faculty advisor and the Director of the Honors Program in Economics. Honors concentrators are given priority in election of one section of ECON 495 (Seminar in Economics). Honors concentrators have an opportunity to elect ECON 498 (Honors Independent Research) in order to complete the senior Honors thesis during the senior year.

Advising. Students interested in a concentration in Economics should consult an economics concentration advisor. Appointments are scheduled online at:

www.lsa.umich.edu/econ/ug/advising

Students are urged to consult with a concentration advisor each term before selecting courses for the following term.

Academic Minor in Economics

An academic minor in Economics is not open to students with a concentration in the Department of Economics

An academic minor in economics provides a useful background for students seeking careers in law, business, government, journalism, and teaching. Students concentrating in one of the other social sciences are often interested in economic issues and the study of economics provides them with tools useful for analyzing the economic aspects of issues in these other disciplines. The analytic skills and knowledge of economic institutions developed in the pursuit of the academic minor in economics will be useful to students in all disciplines who will be contributing to business and public policy decisions. Students completing the academic minor in economics develop analytical skills through exploring the paradigms of microeconomics and macroeconomics at the intermediate level and increase their understanding of economics institutions and of application of economic principles. Students wishing to pursue an academic minor in Economics must develop a specific plan for its completion in consultation with one of the department's designated advisors.

Schedule an appointment with an economics academic minor advisor to declare an economics academic minor. Students must complete the prerequisites to the academic minor before declaring and must have a GPA of at least 2.0 in the academic minor.

Prerequisites to the Academic Minor. ECON 101 and 102 and MATH 115, each completed with a grade of at least C. One of the Honors alternatives to MATH 115 may be substituted for MATH 115. Advanced placement credits in MATH 121 may be substituted for MATH 115, but students who scored less than a 4 on the BC Calculus exam are encouraged to elect one of the calculus courses on the placement list before proceeding to economics courses having a MATH 115 prerequisite for an economics concentration or academic minor. Students with this credit may complete the economics mathematics prerequisite by completing, with a grade of at least C, MATH 115, MATH 116, or one of the Honors alternatives to these courses.

Academic Minor Program. 17 credits in ECON at the 300-level and above, distributed as follows:

- 1. ECON 401 (Intermediate Microeconomics) and ECON 402 (Intermediate Macroeconomics), each completed with a grade of at least C– $\,$
- Nine additional credits in upper level (300 and 400 level) ECON courses, including at least three credits in courses with ECON 401 or ECON 402 as a prerequisite.

Ann Arbor campus requirement: Any courses to be taken outside the Ann Arbor campus of the University should be approved in advance by an economics concentration advisor. At least 11 credits in the academic minor plan, including ECON 401, ECON 402, and the 3 credits in upper-level economics elective with the ECON 401 or ECON 402 prerequisite, must be taken at the Ann Arbor campus.

COURSES IN ECONOMICS (ECON)

ECON 101. Principles of Economics I

High school algebra and geometry. (4; 3 in the half-term). (SS). (QR/2). May not be repeated for credit. F, W, Sp/Su.

ECON 102. Principles of Economics II

ECON 101. (4; 3 in the half-term). (SS). (QR/2). May not be repeated for credit. F, W, Sp/Su.

ECON 108. Introductory Microeconomics Workshop

First-year standing and concurrent enrollment in ECON 101. (1). (SS). May not be repeated for credit. Offered mandatory credit/no credit.

ECON 140. First-Year Seminar in Economics

(3). (ID). May not be repeated for credit.

ECON 195. Seminar in Introductory Economics (3). (SS). May not be repeated for credit.

ECON 299. Undergraduate Internship

Consent of instructor required. Must be declared economics concentrator and have permission of concentration advisor. Internship credit is not retroactive, must be prearranged, and may not be used to satisfy electives for the concentration. (1). (EX-PERIENTIAL). May be repeated for a maximum of 2 credits. May not be used to satisfy economics electives for an economics concentration. Internship credit is not retroactive and must be prearranged. Offered mandatory credit/no credit.

ECON 309. Experimental Economics

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (3). (SS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ECON 109.

ECON 310. Money and Banking

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (3). (SS). May not be repeated for credit.

ECON 320. Survey of Labor Economics

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (3). (SS). May not be repeated for credit.

ECON 323. Economics and Gender

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (3). May not be repeated for credit.

ECON 325 / POLSCI 332. Inequality in the United States

ECON 101 and 102, and POLSCI 111. (3). May not be repeated for credit.

ECON 327. Economics of Crime

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (3). May not be repeated for credit.

ECON 330. American Industries

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (4). (SS). May not be repeated for credit.

ECON 340. International Economics

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (3). (SS). May not be repeated for credit.

ECON 357 / CAAS 357. Economic History of African-Americans CAAS 201. (3). (SS). May not be repeated for credit.

ECON 370 / ENVIRON 375. Environmental and Resource Economics

Econ 101. (Prerequisites enforced at registration.) (3). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ECON 471 or 472.

ECON 380. Public Finance

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (3). (SS). May not be repeated for credit.

ECON 395. Topics in Microeconomics and Microeconomic Policy

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (1 - 3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ECON 396. Topics in Macroeconomics and Macroeconomic Policy

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (1 - 3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ECON 398. Strategy

ECON 101 with a C or better. (Prerequisites enforced at registration.) ECON 102 (unless ECON 101 completed with B or higher). (4). (MSA). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ECON 409 or RCSSCI/SOC 222.

ECON 401. Intermediate Microeconomic Theory

MATH 115, 116, 121, 156, 175, 176, 185, 186, 215, 295, or 296; with C or better. (Prerequisites enforced at registration.) ECON 101 and 102. (4). (BS). (QR/1). May not be repeated for credit. F, W, Sp. Rackham credit requires additional work.

ECON 402. Intermediate Macroeconomic Theory

MATH 115, 116, 121, 156, 175, 176, 185, 186, 215, 295, or 296 with C or better, (Prerequisites enforced at registration.) It is strongly recommended that students take ECON 401 before 402. (4). (BS). (QR/1). May not be repeated for credit. F, W, Su. Rackham credit requires additional work.

ECON 403. Advanced Economic Theory

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 404. Statistics for Economists

ECON 101 and 102 and MATH 115 each with minimum grade of C. (Prerequisites enforced at registration.) (4). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ECON 405 or STATS 265, 311, 400, 405, or 412. F, W, Sp. Rackham credit requires additional work.

ECON 405. Introduction to Statistics

MATH 116 with C- or better. (Prerequisites enforced at registration.) Juniors and Seniors may elect ECON 405 concurrently with ECON 101 or 102. (4). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in IOE 265, STATS 265, 400, or 412. Students with credit for ECON 404 can only elect STATS 405/ECON 405 for 2 credits and must have permission of instructor.

ECON 406. Introduction to Econometrics

ECON 405 with at least a C-. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. W. Rackham credit requires additional work.

ECON 407. Time Series and Financial Econometrics

ECON 401 (C or better) and ECON 406 (C or better) or Graduate Standing. (Prerequisites enforced at registration.) ECON 435. Students may request permission of instructor to take ECON 406 concurrently. (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 408 / PHIL 408. Philosophy and Economics

ECON 401 with a C- or better. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 409. Game Theory

ECON 401 with a C- or better; or Graduate Standing. (Prerequisites enforced at registration.) MATH 217. (4). (BS). May not be repeated for credit.

ECON 411. Monetary and Financial Theory

ECON 402 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) ECON 404 or 405. (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 412. Topics in Macroeconomics

ECON 402 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work

ECON 414. Growth Theory

ECON 401 and 402 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

ECON 418. Business Cycles

ECON 402 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

FCON 421, Labor Economics L

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 422. The Structure of Labor Markets

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional

ECON 423. Economic Perspectives on Social Policy

ECON 401 with a C- or better, and ECON 404 or 405; or Graduate Standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 431. Industrial Organization and Performance

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 432. Government Regulation of Industry

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. W. Rackham credit requires additional work.

ECON 434. Corporate Financial Economics

ECON 401 with a grade of at least C-; or graduate standing. (Prerequisites enforced at registration.) ECON 404 or 405. (3). May not be repeated for credit. No credit granted to those who completed ECON 411 in Fall 2000, Winter 2001, or Fall 2001.

ECON 435. Financial Economics

ECON 401 with a grade of C- or better; or Graduate standing. (Prerequisites enforced

at registration.) ECON 404 or 405. (4). May not be repeated for credit. Rackham credit requires additional work.

ECON 437. Energy Economics and Policy

ECON 401 with a grade of C- or better or graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 441. International Trade Theory ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work

ECON 442. International Finance

ECON 402 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (4). May not be repeated for credit. Rackham credit requires additional work.

ECON 453. The European Economy

ECON 401 with a grade of at least C-; or graduate standing. (Prerequisites enforced at registration.) (4). May not be repeated for credit. Rackham credit requires additional work

ECON 461. The Economics of Development I

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work

ECON 462. The Economics of Development II

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) ECON 360 or 461. (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 466. Economics of Population

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional

ECON 471 / NRE 571. Environmental Economics

ECON 401 with a grade of at least C-, or NRE 570; or Graduate standing. (Prerequisites enforced at registration.) NRE 570. (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 472 / NRE 583. Intermediate Natural Resource Economics

ECON 401 with a grade of at least C-, or NRE 570; or graduate standing. (Prerequisites enforced at registration.) NRE 570 or PI. (3). May not be repeated for credit.

ECON 481. Government Expenditures

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 482. Government Revenues

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional

ECON 487, Urban Economics

ECON 401 with a C- or better; or Graduate Standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 490. Topics in Microeconomics

ECON 401 with a grade of C- or better; or Graduate standing. (Prerequisites enforced at registration.) ECON 404 or 405. (3). May not be repeated for credit.

ECON 491 / HISTORY 491. The History of the American Economy

ECON 401 with a C- or better; or Graduate Standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 492. World Economic History

ECON 401 with a grade of at least C-; or Graduate standing. (Prerequisites enforced at registration.) ECON 404 or 406. (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 494 / HISTORY 494. Topics in Economic History

ECON 401 with a C- or better; or Graduate Standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. History concentrators without ECON 401 will need permission to enroll.

ECON 495. Seminar in Economics

ECON 401 and 402 with a grade of at least C-. (Prerequisites enforced at registration.) ECON 404 or 405. (3). May be repeated for a maximum of 6 credits.

ECON 496. History of Economic Thought

ECON 401 with a C- or better; or Graduate Standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

ECON 498. Honors Independent Research

Consent of instructor required. Open only to students admitted to Honors concentration in economics. Permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of ECON 498, the final grade is posted for both term's elections.

ECON 499. Independent Research

Consent of instructor required. Written permission of staff member supervising research, and permission of the Economics concentration advisor. (1 - 4). (INDEPEN-DENT). May be repeated for a maximum of 8 credits. No more than four credits may be used in an Economics concentration program. Rackham credit requires additional work.

English Language and Literature

3187 Angell Hall 435 South State Street

(734) 764-6330 (phone) (734) 763-3128 (fax)

www.lsa.umich.edu/english

Professor Michael C. Schoenfeldt, Chair

Associate Professor David Porter, Associate Chair

Associate Professor Joshua Miller, Director of Undergraduate Studies Associate Professor Anne Curzan, Director of the English Department Writing Program

Professors

- William F. Alexander (Arthur F. Thurnau Professor of English Language and Literature), *Film, Pedagogy, American Literature*
- Michael Awkward (Gayl A. Jones Collegiate Chair of Afro-American Literature and Culture) (English/Afroamerican and African Studies), *African-American Literature*
- Sara Blair, American Literature, Modern Literature
- Enoch Brater (Kenneth T. Rowe Collegiate Professor in Dramatic Literature), *Drama*
- Peter Ho Davies, Contemporary British and American fiction
- Nicholas F. Delbanco (Robert Frost Distinguished University Professor of English Language and Literature), *Creative Writing*
- Lincoln B. Faller, 18th-Century Literature, Fiction
- Jonathan Freedman, Cultural Theory, Film, 19th-Century American and British Literature
- Anne Gere (Gertrude Buck Collegiate Professor of Education; Arthur F. Thurnau Professor), *Composition, Pedagogy*
- Laurence A. Goldstein, 19th-Century Literature, Creative Writing

Lorna Goodison (Lemuel A. Johnson Collegiate Professor of English and Afroamerican and African Studies), *Creative Writing*

- Linda Gregerson (Frederick G.L. Huetwell Professor of English Language and Literature; Caroline Walker Bynum Distinguished University Professor of English), *Renaissance Literature, 20th-C. American, Early Modern, Creative Writing*
- Sandra Gunning, African-American Literature, American Literature
- David Halperin (W.H. Auden Collegiate Professor of English Language and Literature), *Queer Theory, Critical Theory*
- Anne Herrmann, *Modern Literature*
- Barbara Hodgdon, Drama
- June Howard (Arthur F. Thurnau Professor of English, American Culture, and Women's Studies), *American Literature*

A. Van Jordan, Creative Writing

Kerry C. Larson, American Literature

- Marjorie Levinson (Frederick G.L. Huetwell Professor of English Language and Literature), *Romantic and Victorian British Poetry, Critical Theory*
- Thylias Moss, Creative Writing
- Anita Norich, 19th-Century Literature, Jewish American and Yiddish Literature
- Eric S. Rabkin (Arthur F. Thurnau Professor), *Critical Theory, Modern Literature, Computer Technology*
- Michael C. Schoenfeldt, Renaissance Literature
- Tobin Siebers (Vernon Lewis Parrington Professor of Literary and Cultural Criticism), *Critical Theory*, 19th-Century Literature
- Sidonie Smith (Martha Guernsey Colby Collegiate Professor of Women's Studies and English), *Women's Studies, Autobiography*
- Valerie Traub, Renaissance Literature
- Martha Vicinus (Eliza M. Mosher Distinguished University Professor of English, Women's Studies, and History), 19th-Century Literature
- Alan M. Wald (H. Chandler Davis Collegiate Professor of English and American Culture), *American Literature*
- Ralph G. Williams (Arthur F. Thurnau Professor), *Renaissance Literature, Critical Theory*
- Patsy Yaeger (Henry Simmons Frieze Collegiate Professor), Women's Studies, Critical Theory, American Literature

Associate Professors

Peter M. Bauland, *Drama* Gregg Crane, *19th-Century American* Richard D. Cureton, *Language* Anne Curzan (Arthur F. Thurnau Professor), *History of English Lan-*

guage, Pedagogy and Composition

Daniel Hack, 19th-Century British Literature

Lucy Hartley, English/Trans-Atlantic Literature

Laura Kasischke, Creative Writing

Petra Kuppers, Drama and Performance Studies, Disability Studies

Julian Levinson (Samuel Shetzer Endowed Professor in Jewish American Studies), *20th-Century American*

Joshua Miller, 20th-Century U.S. Literature

Steven Mullaney, Renaissance Literature

Susan Najita, Asian American and Pacific Literatures

Scottie Parrish, Colonial Literature

Adela Pinch, 19th-Century Literature

Eileen Pollack, Creative Writing

David Porter, 18th-Century Literature, Comparative Literature, Computer Technology

Alisse Portnoy, Rhetoric, Composition

Yopie Prins, Victorian Literature

Catherine Sanok, Medieval

Xiomara Santamarina, 19th-Century and African American Literature

Sarita See, Asian American and Pacific Literatures

Macklin Smith, Medieval Literature

Karla Taylor, *Medieval Literature*

Theresa Tinkle (Arthur F. Thurnau Professor), Medieval Literature

Thomas E. Toon, Language, Medieval Literature, Composition

Doug Trevor, 16th and 17th-Century English Literature

Jennifer Wenzel, Post-Colonial Literature

- John Whittier-Ferguson (Arthur F. Thurnau Professor), Modern Literature
- Andrea Zemgulys, Modernist Literature

Assistant Professors

Michael Byers, Literary Fiction, the American Short Story

- Amy Carroll, *Latina/o Studies* Tina Lupton, *18th-C. British Literature + philosophy, Marxist + critical theory*
- Khaled Mattawa, Creative Writing, translation, Arab and Arab-American Poetry

Victor Mendoza, Asian American, Gender + Sexuality, Post Colonial

- Sean Silver, American: Colonial + Early American 17th- + 18th-C., British
- Megan Sweeney, African American, 20th-C. American, Gender / Sexuality
- Gillian White, Modern and Contemporary and British Poetry; Poetics; Critical Theory (Modernism and Postmodernism, Lyric, Avant-Garde, Form)

Lecturers

Anne Axel, Environmental Literature + Writing

Gina Brandolino, Medieval Literature, Early English Lit, composition

George Cooper, Sweetland Writing Center

Aric Knuth, Composition, New England Literature Program

Mark Koch, Composition, 18th-Century Literature

Brenda Marshall, Creative Writing, Composition

Tish O'Dowd, Creative Writing

John Rubadeau, Composition

Christopher Schmidt, *Poetics, 20th C. Literature, Tech + Humanities* Keith G. Taylor, *Creative Writing*

Cody Walker, Modern and Contemporary Poetry, Creative Writing

Professors Emeriti Richard Bailey, Joseph J. Blotner, George J. Bornstein, J.R. Brown, Emily L. Cloyd, William Coles, Hubert M. English, Russell Fraser, H. Hornbeck, Alan B. Howes, William H. Ingram, Ejner J. Jensen, Harold King, John R. Knott, Ira Konigsberg, John Kucich, Robert E. Lewis, Stuart Y. McDougal, James McIntosh, Leo F. McNamara, Frances K. McSparran, Lyall H. Powers, Jay L. Robinson, Richard W. Tillinghast, Bernard Van't Hul, Robert A. Weisbuch

The Department of English focuses primary attention on the analysis and enjoyment of works of imaginative literature. Drawing on the rich variety of texts produced over the last millennium and a half in diverse forms of English from every part of the globe, our courses aim at a subtle and flexible understanding of the content of these texts and a sensitive appreciation of their style and form.

The interests the department addresses and the studies it sponsors, however, range far beyond the study of imaginative literature. Its courses offer instruction in writing, including exposition and creative writing, whether prose fiction, poetry, or drama. An increasing number of our courses involve substantial use of computers and extended inquiry into information networks. The English language itself, its history, structure, and diverse traditions of use, is the focus of yet other courses. Still others focus on literary theory, examining strategies of literary interpretation, evaluation, and appreciation and considering the ways in which literary texts relate to other forms of cultural representation.

One special feature of this English Department consists in the number of courses it offers jointly with other Programs in the College – Women's Studies, for example, the Center for Afro-American and African Studies, American Culture (Native American Studies, Latina/o Studies, Asian American Studies), Studies in Religion, Comparative Literature, Medieval and Early Modern Studies, and Screen Arts and Cultures. The varieties of materials and the diverse backgrounds and interests of students involved in such courses present extraordinary opportunities for intellectual growth.

The present study of literature has returned with particular force and new perspectives to a very old consideration – that language and literature are necessarily understood as social products and agents, deeply implicated in the processes and questions that interest and, at times, agitate society more generally. These issues as represented in texts – issues of ethics, of political order, of economic and ethnic difference, of gender, of systems of belief – recur as a regular feature of discussion in many of our courses.

Courses in Expository Writing. Courses in writing develop a student's sense of the various possible forms of expression. Writing practice, lectures, and class discussion are supplemented in these courses by regular meetings with the instructor. Sections of ENGLISH 225, 325, and 425 are limited to 18 students. The first of these courses includes a great variety of writing projects while sections of the upper-level courses tend to be somewhat more specialized.

Repeating Courses for Credit. Some of the courses listed are general titles under which varied topics may be offered. Such courses may be repeated for credit with departmental permission. Students must obtain the proper approval form from the English Office, 3187 Angell Hall and return it for approval within the first two weeks of class.

The Avery and Jule Hopwood Awards in Creative Writing. Under the terms of the will of Avery Hopwood, a member of the Class of 1905, the annual income from a generous endowment fund is distributed in prizes for creative work in four fields: dramatic writing, fiction, poetry, and the essay. Competition is open to qualified students enrolled in any school or college of the University. Entrants must, however, be enrolled in a designated writing course elected through the Department of English Language and Literature, the Residential College, the Department of Communication Studies, the Department of Theatre and Drama, or the Department of Screen Arts and Cultures. The Hopwood Program also administers 20 other writing and prize competitions. For full information about the conditions of competition contact the Hopwood Program Associate, 1176 Angell Hall, (734) 764-6296.

Student Organizations. English concentrators are encouraged to join the Undergraduate English Association (UEA). The group works closely with the department in planning activities which serve to strengthen student affiliations with one another, the faculty, and the department as a whole. Mass meetings are held within the first two weeks of each term. For further information contact the Undergraduate Office, located at 3187 Angell Hall.

Half-Term Information. ENGLISH 124, 125, 223, 225, 297, 298, 323, 324, 325, 398, 450, 451, and 452 are frequently offered. Other courses are offered when they can be staffed, and when there is demand. Half-term courses normally carry one fewer credit than comparable courses offered during the Fall and Winter terms.

New England Literature Program (NELP)

NELP is a University of Michigan academic program that takes place off campus during the Spring half-term. U-M faculty and other instructors teach the courses, and students earn regular U-M credit.

The program takes place at Camp Wohelo on Sebago Lake in Maine. For six and a half weeks, 40 students and 13 U-M instructors live and work together closely, reading New England authors, writing, and exploring the New England countryside, its people, culture, and history.

Academic Program. NELP students earn 8 hours of credit. Although NELP's academic work is taught as a single integrated academic experience, the credits appear on transcripts as three separate courses:

- ENGLISH 473 Topics in American Literature (3 cr.)
- ENGLISH 317 Literature and Culture (2 cr.)
- ENGLISH 328 Writing and the Environment (3 cr.)

The program emphasizes the writings of Nathaniel Hawthorne, Ralph Waldo Emerson, Henry David Thoreau, Emily Dickinson, Frederick Douglass, Sarah Orne Jewett, Robert Frost, Wallace Stevens, Carolyn Chute, Louise Glück, as well as other 18th through 20th century writers of various backgrounds.

NELP offers creative writing workshops, but most writing is done in a journal. Journal writing is required and is central to NELP education. The journals are both personal and academic. Student writing often explores creative expression, the natural world and the New England environment, and the writer's response to the NELP experience.

NELP courses are graded. The academic program requires completion of a reading list, active work in the journal, and vigorous participation in classes and in the journal group.

Who Can Apply? All University of Michigan students are eligible to apply for NELP, as are special students, international students, and students from other colleges. Some seniors participate in NELP after they graduate from U-M. You need not be an English concentrator to apply.

Application. Applications for NELP are due to the English Department in early January, usually during the first week of Winter Term, along with a \$35 non-refundable application fee. At that time, all applicants sign up for a 20-minute interview with two NELP staff members, to be held later in the month. Applicants who will not be on-campus in January can arrange for a phone interview and to submit their applications electronically.

Cost. Exact costs and detailed financial aid information will be provided in acceptance letters. There are two costs for attending NELP:

- 1. The NELP program fee, which covers transportation, textbooks, food and lodging for the duration of the program, will most likely be between \$2200 and \$2600.
- Spring half-term U-M tuition rates are set by the University. Outof-state students should note the reduction in the cost of out-of-

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state tuition for students at NELP (made possible by a special arrangement with the College).

For further information and to download the brochure and application, visit the program website: www.lsa.umich.edu/english/nelp

English

May be elected as a departmental concentration program

The following paragraphs describe typical patterns of study in the department and indicate the various ways in which a student can, with much opportunity for individual initiative, form a challenging and rewarding concentration within it.

Prerequisites to Concentration. Students who wish to concentrate in English must take as prerequisite two courses, ENGLISH 297 (Introduction to Poetry) and ENGLISH 298 (Introduction to Literary Studies).

Degree Program Options. The Department of English Language and Literature offers three main routes toward the concentration: (1) the General Program; (2) the Honors Program; and (3) the Creative Writing Program. Students electing any of these may work simultaneously toward a secondary school teaching certificate. Students within the General Program are strongly encouraged to select three upper-division courses within one of the optional areas of specialization below (or one designed by a student and an advisor). Possible areas of specialization are:

- Medieval Literature in English (Pre-1600),
- Early Modern (c.1500-1700),
- The Long Eighteenth Century (late 17th c. through early 19th c.),
- Nineteenth Century (through Modernism),
- Twentieth and Twenty-First Century (Modernism through Contemporary),
- Literatures of the Americas,
- World Literatures in English,
- Literary Criticism and Theory,
- Genre Studies,
- Studies in Race & Ethnicity,
- Sexuality/Gender Studies,
- Drama and Performance Studies,
- Language, Writing, and Rhetoric.

Students must complete a course with a grade of C- or better to have it count toward the concentration requirements.

Advising. Students are encouraged to discuss their academic program and related concerns with an English concentration advisor. Appointments are scheduled on the English Department's website under academic advising. For questions of immediate concern or general questions about the concentration, students may speak with the Undergraduate Administrator by phoning (734) 764-6330 or by coming to 3187 Angell Hall.

Teaching Certificate. English concentrators in any of the programs above may also apply to be granted a teaching certificate. Students in the General Program must elect, in addition to the pattern of courses there prescribed, a course in composition (normally SWC 300 or 430) and a course in English language (ENGLISH 305, 308, or 406). Honors candidates must elect ENGLISH 305 in addition to the courses required for their program.

The general requirements for a teaching certificate are described elsewhere in this *Bulletin*, and are available from the School of Education Teacher Education office, 1228 School of Education Building. A brochure summarizing these requirements is available in the English Office. Application to the certificate program itself must be made through the School of Education. The deadline is January 15 for the following academic term. Please check their website: www.soe.umich.edu **Upper-Level Writing Requirement.** Concentrators in English may meet this requirement by taking ENGLISH 325, 398, 425, 428, or 496. A published list of English-approved courses can be found in 3187 Angell Hall. For those in the Honors and Creative Writing Programs, the writing requirement is met within their curriculum, which culminates in the supervised composition of the senior thesis.

The General Program. Students in the General Program must successfully complete 27 credits in ENGLISH courses numbered 300 or above. [Students must complete a course with a grade of C- or better to have it count toward the concentration requirements.] These courses must include at a minimum: three courses on literature written primarily before 1830, at least one of which must be on literature written primarily before 1600; one course in American literature; and one course designated "New Traditions," focusing on the cultural traditions of women, minority ethnic groups, and people of color. The department will offer in any one term a considerable range of courses designed to meet these requirements. A list of which courses meet a given requirement will be available each year in the English Undergraduate Office, online at www.lsa.umich.edu, or from an English concentration advisor.

Concentrators should note that no more than one course in expository or creative writing may be counted toward the minimum 27 credits at the upper level required for the concentration, although students may elect any number of such courses, subject to availability of spaces and to *College limits on total elections of courses in any one department.* Also, no more than six upper-level credits of Independent Study may count towards the concentration. With written prior approval by the undergraduate administrator, courses elected in other departments or programs may on occasion be used as part of a concentration plan. Independent study projects cannot be used to meet Department program requirements.

Students considering the concentration in English should elect ENGLISH 297 and ENGLISH 298 during the sophomore year. Then, while fulfilling the concentration requirements, they may elect such a pattern of courses as will provide the course of study they find most helpful and satisfying. Students are strongly encouraged to choose an optional area of specialization and take three upper-level courses within the subconcentration. A full list of areas of specialization is available in the English Undergraduate office, online, or from a concentration advisor. Please refer to the *Handbook for English Concentrators* for more information on how to design specific paths of study. All ENGLISH courses applied to the concentration must meet a minimum grade requirement of C–.

The Honors Program. Joining the English Department's Honors Program means becoming a part of a small, intensely committed group of teachers and students all working toward achieving excellence in the related disciplines of reading, understanding, and writing about texts. Honors courses and the program at large place a premium on discussion, on sustained elaboration of ideas inside and outside the classroom, on conceiving of projects in complex and engaging ways, on learning to do research, and on presenting the fruits of that research in expressive, lucid prose.

Students interested in the Honors Program should apply for admission as soon as possible after the beginning of their sophomore year. Since students generally have not decided to pursue Honors before they have completed at least one of the Sophomore prerequisites for the English concentration (ENGLISH 297, 298), almost all applicants for admission to Honors come in the winter term of the sophomore year or the fall term of the junior year. Applications are due at the end of the seventh week of each term. Though the program occasionally accepts a few late applicants (i.e., students applying in the winter term of their junior year), admission is more difficult to achieve if students apply late, and students' chances for success in the program are greatest if, before the first term of your senior year, you have taken at least one theory course (preferably ENGLISH 390 or 490) and begun thinking about a possible focus for their thesis. The application consists of a cover sheet; a transcript; a 500-word statement of purpose; and a writing sample. Students must also be maintaining a 3.5 GPA or better in the concentration.

- Honors students take two Honors seminars (specified sections of ENGLISH 450 and 451, or ENGLISH 497), preferably in different terms. These courses may also satisfy English program concentration requirements. Enrollment in these courses is limited; classroom discussion, reading, and writing requirements are particularly challenging. These should number among the most exciting and difficult courses you take as an undergraduate. These courses are specially designated in the *LSA Course Guide*. Admission to these seminars is by permission of the instructor only; please notify the undergraduate student services assistant in 3187 Angell Hall of your section preference.
- Honors students write a thesis of approximately sixty pages in length during the senior year – a project that is designed to be the single most important, most meaningful piece of work students undertake as English concentrators at the University. Students write most of their thesis in a required year-long course, "Research and Thesis Writing" (ENGLISH 495/496). Students are guided throughout much of their senior year by a faculty advisor chosen early in that year. The completed thesis is due in mid-March of the senior year.
- During graduation weekend, Honors students will participate in an Honors Symposium, at which students make brief presentations of their theses to interested faculty, friends, and family.

The Creative Writing Program. Students interested in the department's offerings in creative writing should begin with ENGLISH

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223, an introduction to the reading and writing of modern poetry and prose fiction and to the workshop method of critiquing student writing. ENGLISH 223 is a prerequisite to ENGLISH 323 (Advanced Creative Writing in Fiction) and 324 (Advanced Creative Writing in Poetry), but admission into ENGLISH 323 and 324 is based on a portfolio submission. There is a "permission of instructor" restriction on these courses. At the advanced level students may elect (with the instructor's permission) the advanced fiction workshop (ENGLISH 423) or the advanced poetry workshop (ENGLISH 424).

English concentrators who wish to specialize in the writing of poetry or prose fiction may, in the winter term of their junior year, apply to the Creative Writing Subconcentration, which is an optional path to a Bachelor of Arts degree in English. Students in the program take the creative writing workshops described above in sequence, and, in their last term, compile a major manuscript of poetry or prose fiction while working closely with the creative-writing faculty in a tutorial reserved for subconcentrators (ENGLISH 428).

Students must complete a course with a grade of C– or better to have it count toward the concentration requirements.

The program is small and highly selective; however, students not enrolled in the subconcentration may still pursue their interest in creative writing by applying to the appropriate upper-level workshops. Those students who have earned at least a 3.5 GPA in the concentration may apply for Creative Writing Honors after they have been accepted to the subconcentration. Honors will be awarded, as warranted, on the basis of the thesis.

COURSES IN ENGLISH LANGUAGE AND LITERATURE (ENGLISH)

ENGLISH 124. College Writing: Writing and Literature

(4). (FYWR). May not be repeated for credit.

ENGLISH 125. College Writing

(4). (FYWR). May not be repeated for credit. F, W, Sp, Su.

ENGLISH 140. First-Year Seminar on English Language and Literature

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit.

ENGLISH 142. First-Year Interdisciplinary English Literature Seminar (3). (ID). May be repeated for a maximum of 6 credits.

ENGLISH 223. Creative Writing

(3; 2 in the half-term). (CE). May not be repeated for credit. F, W, Sp.

ENGLISH 225. Academic Argumentation

Completion of the First-Year Writing Requirement. (4; 3 in the half-term). (HU). May not be repeated for credit. F, W, Sp.

ENGLISH 226. Directed Writing

Consent of instructor required. Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 3 credits. F, W, Sp/Su, Sp, Su.

ENGLISH 227 / THTREMUS 227. Introductory Playwriting

(3; 2 in the half-term). (CE). May not be repeated for credit.

ENGLISH 229. Professional Writing

Completion of the Introductory Composition requirement. (4). May not be repeated for credit.

ENGLISH 230. Introduction to Short Story and Novel

(3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 232. Introduction to Visual Culture

(3; 2 in the half-term). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ENGLISH 235. Introduction to Autobiography

(3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 245 / RCHUMS 280 / THTREMUS 211. Introduction to Drama and Theatre (*3*; *2* in the half-term). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RCHUMS 281.

ENGLISH 250. Introduction to English Language Studies

(3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 258 / RELIGION 258. The English Bible as Literature

(3). May not be repeated for credit.

ENGLISH 260. Introduction to British Literature

(3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 267. Shakespeare and His World

Completion of first-year writing requirement. (3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 270. Introduction to American Literature (*3*; *2 in the half-term*). (HU). May not be repeated for credit.

ENGLISH 274 / CAAS 274. Introduction to Afro-American Literature *CAAS 111. (3; 2 in the half-term). (HU). May not be repeated for credit.*

ENGLISH 275. Introduction to World Literature in English (3; 2 - 3 in the half-term). (HU). May not be repeated for credit.

ENGLISH 280. Introduction to Digital Cultures (*3*; *2 in the half-term*). (*HU*). May not be repeated for credit.

ENGLISH 285. Introduction to Twentieth-Century Literature (*3*; *2 in the half-term*). (HU). May not be repeated for credit.

ENGLISH 290. Themes in Language and Literature

(3; 2 in the half-term). (HU). May be repeated for a maximum of 6 credits. ENGLISH 292. Topics in Language and Literature

(1 - 2; 1 in the half-term). May be elected twice for credit. May be elected more than once in the same term.

ENGLISH 293. Great Works

(1 - 2; 1 in the half-term). May be repeated for a maximum of 4 credits. May be elected more than once in the same term.

ENGLISH 297. Introduction to Poetry

Prerequisite for concentrators in English and Honors English. (3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 298. Introduction to Literary Studies

Prerequisite for concentrators in English and Honors English. (3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 299. Directed Study

Consent of instructor required. Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 3 credits. F, W, Sp/Su, Sp, Su.

ENGLISH 303. Language and Rhetorical Studies

Recommended for students interested in focusing their study of English on language matters. (4; 3 in the half-term). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

ENGLISH 305. Introduction to the English Language

Recommended for students preparing to teach English. (4; 3 in the half-term). (HU). May not be repeated for credit.

ENGLISH 308. History of the English Language

(4; 3 in the half-term). (HU). May not be repeated for credit.

ENGLISH 309. American English

(3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 310. Discourse and Society

(3). May not be repeated for credit.

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ENGLISH 313. Topics in Literary Studies

(4; 3 in the half-term). (HU). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

ENGLISH 314. Gender/Sexuality Studies

(3 - 4; 2 - 3 in the half-term). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ENGLISH 315 / WOMENSTD 315. Women and Literature (*3*; *2 in the half-term*). (HU). May be repeated for a maximum of 6 credits.

ENGLISH 316. Disability Studies (*3; 2 in the half-term*). May not be repeated for credit.

ENGLISH 317. Literature and Culture

(3; 2 in the half-term). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ENGLISH 318. Genre Studies (3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 319. Literature and Social Change

(3; 2 in the half-term). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ENGLISH 320. Literature and the Environment (3 - 4; 2 - 3 in the half-term). (HU). May not be repeated for credit.

ENGLISH 321. Internship

Concentration in English. (1). (EXPERIENTIAL). May be repeated for a maximum of 4 credits. Offered mandatory credit/no credit.

ENGLISH 323. Creative Writing: Fiction

ENGLISH 223; submission of portfolio and application required. (3; 2 in the half-term). (CE). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ENGLISH 324. Creative Writing: Poetry

ENGLISH 223; submission of portfolio and application required. (3). (CE). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ENGLISH 325. Art of the Essay Completion of the First-Year Writing Requirement. (3; 2 in the half-term). May not be repeated for credit. F, W, Sp, Su.

ENGLISH 326. Community Writing and Public Culture Completion of the First-Year Writing Requirement. (3; 2 in the half-term). (CE). May be repeated for a maximum of 6 credits.

ENGLISH 327 / THTREMUS 327. Intermediate Playwriting ENGLISH 227. (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 328. Writing and the Environment

(3; 2 in the half-term). (CE). May be elected twice for credit. ENGLISH 330 / SAC 330. Major Directors

FILMVID/SAC 236. (3). (HU). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

ENGLISH 331 / SAC 331. Film Genres and Types

FILMVID 236 or SAC 236. (3). (HU). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

ENGLISH 335. Autobiography (3 - 4; 2 - 3 in the half-term). (HU). May not be repeated for credit.

ENGLISH 340. Reading and Writing Poetry (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 341. Fantasy (4; 3 in the half-term). (HU). May not be repeated for credit.

ENGLISH 342. Science Fiction (4; 3 in the half-term). (HU). May not be repeated for credit.

ENGLISH 346. Performance Studies (*3*; *2 in the half-term). May not be repeated for credit.*

ENGLISH 349 / THTREMUS 323. American Theatre and Drama (3). (HU). May not be repeated for credit.

ENGLISH 350 / MEMS 350. Literature in English to 1660 (4; 3 in the half-term). May not be repeated for credit. F.

ENGLISH 351. Literature in English after 1660-1830 (4; 3 in the half-term). May not be repeated for credit. W.

ENGLISH 352. Literature in English, 1830-Present (4; 3 in the half-term). May not be repeated for credit.

ENGLISH 360. The Rise of the Novel (*3*; *2 in the half-term*). May not be repeated for credit.

ENGLISH 361. The Victorian Novel

(3; 2 in the half-term). May not be repeated for credit. ENGLISH 362. The American Novel

(4; 3 in the half-term). May not be repeated for credit. ENGLISH 363. The Modern Novel

(4; 3 in the half-term). May not be repeated for credit.

ENGLISH 364. The Contemporary Novel (*3*; *2* - *3* in the half-term). May not be repeated for credit.

ENGLISH 366 / MEMS 366. Shakespeare's Contemporaries (4; 3 in the half-term). May not be repeated for credit.

ENGLISH 367 / MEMS 367. Shakespeare's Plays: The Elizabethan Years (*4; 3 in the half-term*). (HU). May not be repeated for credit.

ENGLISH 368 / MEMS 368. Shakespeare's Plays: The Jacobean Years (4; 3 in the half-term). (HU). May not be repeated for credit. W.

ENGLISH 373. Literature of the Americas (3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 375. World Literatures in English (*3*; *2 in the half-term*). (*HU*). May not be repeated for credit.

ENGLISH 379 / CAAS 338. Literature in Afro-American Culture *CAAS 201. (3). (HU). May not be repeated for credit.*

ENGLISH 381 / AMCULT 324. Asian American Literature (3). (HU). May not be repeated for credit.

ENGLISH 382 / AMCULT 328. Native American Literature (3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 383. Jewish Literature (3; 2 in the half-term). (HU). May not be repeated for credit.

ENGLISH 384 / AMCULT 406 / CAAS 384. Caribbean Literature *CAAS 202. (3). May be repeated for a maximum of 6 credits.*

ENGLISH 385 / CAAS 385. African Literature CAAS 200. (3). (HU). May be elected twice for credit.

ENGLISH 387 / AMCULT 327 / SPANISH 327. Latino/Latina Literature of the U.S. (3). (HU). May not be repeated for credit. Taught in English.

ENGLISH 388 / AMCULT 325. Pacific Literary and Cultural Studies (3). (HU). May not be repeated for credit.

ENGLISH 389 / CAAS 346 / HISTORY 362. Literature in African History CAAS 111 and 200. (3). (HU). May not be repeated for credit.

ENGLISH 390. Topics in Literary Criticism and Theory (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 398. Junior Seminar in English Studies (4; 3 in the half-term). May not be repeated for credit.

ENGLISH 403. Topics in Language and Rhetorical Studies (*3*; *2 in the half-term*). May be elected twice for credit. May be elected more than once in the same term.

ENGLISH 405. Theories of Writing (3). May not be repeated for credit.

ENGLISH 406 / LING 406. Modern English Grammar (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 407. Topics in English Language and Literature (*3*; 2 in the half-term). May be elected twice for credit. May be elected more than once in the same term.

ENGLISH 408 / LING 408. Varieties of English (*3; 2 in the half-term*). May not be repeated for credit.

ENGLISH 409. Old English (*3; 2 in the half-term*). May not be repeated for credit.

ENGLISH 410. Middle English

(3; 2 in the half-term). May not be repeated for credit. ENGLISH 411. Art of the Film

(3; 2 in the half-term). May not be repeated for credit.

ENGLISH 414. Topics in Gender/Sexuality Studies (*3*; *2 in the half-term*). *May not be repeated for credit.*

ENGLISH 415 / WOMENSTD 414. Studies in Women and Literature (3). May not be repeated for credit.

ENGLISH 416. Topics in Disability Cultures (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 418. The Graphic Narrative (3; 2 in the half-term). May not be repeated for credit. Rackham credit requires additional work.

ENGLISH 420. Technology and the Humanities (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 423. Advanced Fiction Writing Consent of instructor required. Open to seniors and graduate students. (3). May be repeated for a maximum of 6 credits.

ENGLISH 424. Advanced Poetry Writing Consent of instructor required. (3). May be repeated for credit.

ENGLISH 425. Advanced Essay Writing

Open only to seniors who have completed the First-Year Writing Requirement. (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 426. Directed Writing Consent of instructor required. Junior standing. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 6 credits. F, W, Sp/Su, Sp, Su.

ENGLISH 427 / THTREMUS 427. Advanced Playwriting Consent of instructor required. ENGLISH 327. (3; 2 in the half-term). May be repeated for a maximum of 6 credits.

ENGLISH 428. Senior Creative Writing Tutorial

Consent of instructor required. ENGLISH 223, 323, and 423/429. (3). May not be repeated for credit.

ENGLISH 435. Studies in Autobiography (*3*; *2 in the half-term*). *May not be repeated for credit.*

ENGLISH 440. Modern Poetry (*3; 2 in the half-term*). May not be repeated for credit.

ENGLISH 441. Contemporary Poetry (*3*; *2 in the half-term*). *May not be repeated for credit.*

ENGLISH 442. Studies in Poetry (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 443 / THTREMUS 321. History of Theatre I (3). May not be repeated for credit.

ENGLISH 444 / THTREMUS 322. History of Theatre II (3). May not be repeated for credit.

ENGLISH 446. Studies in Performance (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 447. Modern Drama (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 449. Medieval Drama

(3; 2 in the half-term). May not be repeated for credit.

ENGLISH 450. Studies in Medieval and Renaissance Literature (3; 2 in the half-term). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

ENGLISH 451. Studies in Literature, 1600-1830 (3; 2 in the half-term). May be repeated for credit. May be elected more than once in the same term.

ENGLISH 452. Studies in Literature, 1830-Present (*3; 2 in the half-term). May not be repeated for credit.*

ENGLISH 460. Studies in the Novel (3; 2 in the half-term). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ENGLISH 461. English Romantic Literature (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 462. Victorian Literature (3: 2 in the half-term). May not be repeated for credit.

ENGLISH 463. Modern British Literature (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 464. Studies in Individual Authors

(3; 2 in the half-term). May be repeated for credit. May be elected more than once in the same term.

ENGLISH 465 / MEMS 465. Chaucer: The Canterbury Tales (*3*; *2 in the half-term*). May not be repeated for credit.

ENGLISH 467. Topics in Shakespeare

Prior course work in Shakespeare is recommended. (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 469. Milton

(3; 2 in the half-term). May not be repeated for credit.

ENGLISH 470. Colonial and Revolutionary American Literature

(3; 2 in the half-term). May not be repeated for credit. ENGLISH 471. Nineteenth-Century American Literature

(3; 2 in the half-term). May not be repeated for credit.

ENGLISH 472. Twentieth-Century American Literature (*3*; *2 in the half-term). May not be repeated for credit.*

ENGLISH 473. Topics in American Literature (*3*; 2 - 3 in the half-term). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ENGLISH 474. The "New Negro" Renaissance (4). May not be repeated for credit.

ENGLISH 475. Studies in World Literatures in English (3; 2 in the half-term). May not be repeated for credit.

ENGLISH 478 / CAAS 476. Contemporary Afro-American Literature *CAAS 201. (3; 2 in the half-term). May not be repeated for credit.*

ENGLISH 479 / CAAS 489. Topics in Afro-American Literature CAAS 201, ENGLISH 274/CAAS 274 and/or ENGLISH 379/CAAS 338 strongly recommended. (3; 2 in the half-term). May be repeated for a maximum of 6 credits.

ENGLISH 483. Great Works of Literature (1). May be repeated for a maximum of 4 credits. May be elected more than once in the same term.

ENGLISH 490. History of Literary Criticism and Theory (3: 2 in the half-term). May not be repeated for credit.

ENGLISH 492. Special Topics in Language and Literature

(1 - 2; 1 in the half-term). May be elected twice for credit. May be elected more than once in the same term. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term (ENGLISH 496), the final grade is posted for both term's elections.

ENGLISH 495. Honors Colloquium: Drafting the Thesis

Consent of instructor required. Admission to the English Honors Program and permission of instructor. (3). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

ENGLISH 496. Honors Colloquium: Completing the Thesis

Consent of instructor required. ENGLISH 492, admission to the English Honors Program, and permission of instructor. (1 - 3). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. W.

ENGLISH 497. Honors Seminar

Junior or senior standing, and permission of instructor. (3). May be repeated for a maximum of 9 credits.

ENGLISH 498. Directed Teaching

Consent of instructor required. (3: 2 in the half-term). (INDEPENDENT). May be repeated for a maximum of 9 credits.

ENGLISH 499. Directed Study

Consent of instructor required. Junior standing. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 6 credits. F, W, Sp/Su, Sp, Su.

English Language Institute (ELI)

500 East Washington Street Ann Arbor, MI 48104-2028 (734) 764-2413 (phone) (734) 763-0369 (fax) www.lsa.umich.edu/eli

e-mail: eliinfo@umich.edu

Professor Steven N. Dworkin (Romance Languages and Literatures), Director

Not a concentration program

Professors

- Steven N. Dworkin (Romance Languages and Literatures), *Romance linguistics, history of the Spanish language, evolution of Spanish lexicon, and the nature of language change*
- Nick Ellis (Psychology), second language acquisition, psycholinguistics, corpus linguistics, applied cognitive psychology
- Diane Larsen-Freeman (Education and Linguistics), *second language* acquisition, language teacher education, English linguistics and language methodology

Lecturers

- Roann Altman, advanced academic writing and pronunciation and business English
- Elizabeth Axelson, discourse analysis, speaking and interacting skills, GSI training
- Pamela Bogart, GSI training, pronunciation, teacher education, intercultural communication, instructional technology
- Merle Brenner, *speaking clinic, pronunciation and oral communication*
- Deborah Des Jardin, *academic writing and oral communication and migrant education*
- Judy Dyer, *applied linguistics, undergraduate writing and teacher education*
- Christine Feak, *EAP writing materials development, teaching writing skills, research on writing*
- Brenda Imber, GSI training, cross-cultural and socio-professional communication, pronunciation
- Carolyn Madden, ESL methods and materials, academic writing, interactive skills, teacher education, migrant education

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- Melinda Matice, pronunciation, oral and written communication skills, and teacher education
- Sue Reinhart, ESL materials development, legal and business English, oral communications, advanced grammar
- Theresa Rohlck, speaking, listening, and interacting skills, GSI training, ESL materials development
- Julia Salehzadeh, EAP listening materials development, lecture comprehension, oral communications

Professors Emeriti Joan Morley, John Swales

The English Language Institute offers instruction in the English language to non-native speakers enrolled in the University. The main purpose of this instruction is to help non-native speakers to become effective and fully participating members of the academic community. For this reason, the majority of the ELI courses are primarily concerned with English for Academic Purposes. Most of these courses address specific areas such as pronunciation, lecture comprehension, or academic grammar and usually involve no more than 20 contact hours per term. In order to place students into the most suitable courses, students may be asked to take an *Academic English Evaluation* administered by the Testing and Certification Division of the ELI. In major areas such as speaking and writing, a sequence of courses of increasing difficulty and specialization is available.

The ELI offers workshops in the Winter and Summer for International Graduate Students in conjunction with the Center for Research on Learning and Teaching (CRLT) and offers language courses throughout the academic year for non-native speaking GSIs which address the communicative language needs of classroom lab and office hours. The ELI operates a *Writing Clinic* and a *Speaking Clinic* as one-onone facilities for those who have taken or are taking ELI courses in the relevant areas or are deemed not to need regular classroom instruction.

In addition, the ELI offers a number of courses for students interested in the instructional aspects of language learning and teaching.

The ELI offers three Summer English Language Study Programs: English for Academic Purposes, English for Business Studies, and English for Legal Studies.

English for Academic Purposes is designed for students who have been accepted to an English speaking university but wish to improve their language and study skills before beginning their academic program.

English for Business Studies focuses on the special nature of business communications and the language ability needed for exchange between people from different business cultures in both academic and non-academic settings. This course is designed for foreign business majors and international managers who wish to improve communication skills.

English for Legal Studies is designed for students who have been accepted into a U.S. law school. The focus is on the language, culture, and academic skills needed to succeed in a rigorous law school program.

For further information, call (734) 764-2413.

ENGLISH LANGUAGE INSTITUTE COURSES (ELI)

ELI 120. Academic Writing for International Undergraduates

(3). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 300. Writing and Grammar in Academic Contexts

Consent of instructor required. (3). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 312. Spoken and Written Grammar in Academic Contexts

Consent of instructor required. (1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 320. Writing for Academic Purposes I

Consent of instructor required. (1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 321. Writing for Academic Purposes II

Consent of instructor required. Placement based upon performance in ELI 320 or the Academic English Evaluation (AEE). (1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 330. Language and Communication I

Consent of instructor required. (1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 332. Lecture Comprehension

(1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 333. Interactive Listening and Communication

Consent of instructor required. (1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 334. Speaking in Academic Contexts

(3). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 336. Pronunciation I

Consent of instructor required. (1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 337. Pronunciation II

Consent of instructor required. (1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 338. Pronunciation in Context

Consent of instructor required. (1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 351 / LING 351 / PSYCH 344. Second Language Acquisition *LING 111 or 210. (3). (BS). May not be repeated for credit.*

ELI 380. Introduction to Graduate Student Instructor Work

Permission of instructor. (3). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree. Offered mandatory credit/no credit.

ELI 381. GSI Communication Skills

Consent of instructor required. GSI screening and permission of instructor. (1). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree. Offered mandatory credit/no credit.

ELI 390 / EDUC 390 / LING 386 / RCSSCI 390. Community Service and Language, Education, and Culture

(1 - 3). (EXPERIENTIAL). May be elected three times for credit.

ELI 391. English as a Second Language Topics

(3 - 4 in the half-term). May be elected twice for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 392. Topics in English for Non-native Speakers

Consent of instructor required. (2). May not be repeated for credit. A maximum of four ELI credits may be counted toward a degree.

ELI 399. Individual Research and Study

Permission of Instructor. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 4 credits. A maximum of four ELI credits may be counted toward a degree.

Program in the Environment

1120 Undergraduate Science Building 204 Washtenaw Avenue (734) 763-5065 (phone) (734) 647-7892 (fax) www.lsa.umich.edu/pite e-mail: Environment.Program@umich.edu

Professor Robert Owen (Environment, Geological Sciences), Director Professor Paul Webb (Environment, Ecology and Evolutionary Biology, Natural Resources and Environment), Associate Director

Faculty Advisory Committee:

Anne Axel (English, Environment) Deborah Goldberg (Ecology and Evolutionary Biology) Rita Loch-Caruso (Environment, Environmental Health Sciences) Michael Moore (Natural Resources and Environment) Richard Norton (Environment, Urban Planning) Jeremy Semrau (Civil and Environmental Engineering; Environment) Michaela Zint (Natural Resources and Environment; Environment)

Professors Arun Agrawal (Natural Resources and Environment), J. David Allan (Natural Resources and Environment), Stuart Batterman (Environmental Health Sciences; Civil and Environmental Engineering), Rosina Bierbaum (Natural Resources and Environment), Joel Blum (Ecology and Evolutionary Biology; Geological Sciences), Daniel Brown (Natural Resources and Environment), Bunyan Bryant (Natural Resources and Environment; Urban Planning), G. Allen Burton (Natural Resources and Environment), Mary Anne Carroll (Atmospheric, Oceanic and Space Science; Chemistry; Geological Sciences), Margaret Dewar (Urban Planning), James Diana (Natural Resources and Environment), Rodney Ewing (Geological Sciences; Material Science and Engineering; Nuclear Engineering and Radiological Sciences), Thomas Fricke (Anthropology), Thomas Gladwin (Business Administration; Natural Resources and Environment), Deborah Goldberg (Ecology and Evolutionary Biology), Robert Grese (Natural Resources and Environment), Andrew Hoffman (Business Administration; Natural Resources and Environment), Gerald Keeler (Atmospheric, Oceanic and Space Science; Environmental Health Sciences), Greg Keoleian (Civil and Environmental Engineering; Natural Resources and Environment), Stephen Kesler (Geological Sciences), George Kling (Ecology and Evolutionary Biology), Rita Loch-Caruso (Environment, Environmental Health Sciences), Nina Mendelson (Law), Paul Mohai (Natural Resources and Environment), Michael Moore (Natural Resources and Environment), Philip Myers (Ecology and Evolutionary Biology), Knute Nadelhoffer (Ecology and Evolutionary Biology), Robert Owen (Environment; Geological Sciences), Edward Parson (Law, Natural Resources and Environment), Ivette Perfecto (Natural Resources and Environment), Richard Price (Organizational Studies; Psychology), Barry Rabe (Environment; Public Policy; Natural Resources and Environment), Perry Samson (Atmospheric, Oceanic and Space Science), Donald Scavia (Civil and Environmental Engineering; Natural Resources and Environment), Carl Simon (Economics; Mathematics; Public Policy), David Uhlmann (Law), John Vandermeer (Ecology and Evolutionary Biology; Natural Resources and Environment), Ben Van der Pluijm (Environment; Geological Sciences), Rob Van Der Voo (Geological Sciences), Paul Webb (Ecology and Evolutionary Biology; Environment; Natural Resources and Environment), Michael J. Wiley (Natural Resources and Environment), Steven Wright (Civil and Environmental Engineering), Donald Zak (Ecology and Evolutionary Biology; Natural Resources and Environment)

Associate Professors Robyn Burnham (Ecology and Evolutionary Biology; Geological Sciences), M. Clara Castro (Geological Sciences), Aline Cotel (Civil and Environmental Engineering), William Currie (Natural Resources and Environment), Raymond De Young (Natural Resources and Environment), Johannes Foufopoulos (Natural Resources and Environment), Rebecca Hardin (Anthropology; Natural Resources and Environment), Stuart Kirsch (Anthropology), Maria Carmen Lemos (Natural Resources and Environment), Richard Norton (Environment; Urban Planning), Laura Olsen (Molecular, Cellular and Developmental Biology), Thomas Princen (Natural Resources and Environment), Jeremy Semrau (Environment; Civil and Environmental Engineering), Michael Spencer (Social Work), Dorceta Taylor (Afro-American and African Studies; Natural Resources and Environment), Joseph Trumpey (Art and Design; Natural Resources and Environment), Michaela Zint (Education; Environment; Natural Resources and Environment)

Assistant Professors Catherine Badgley (Ecology and Evolutionary Biology), Niladri Basu (Environmental Health Sciences), Marin Clark (Geological Sciences), Gregory Dick (Geological Sciences), Meredith Fowlie (Economics; Public Policy), Ines Ibanez (Ecology and Evolutionary Biology; Natural Resources and Environment), Victoria Johnson (Organizational Studies), Larissa Larsen (Natural Resources and Environment; Urban Planning), Annette Ostling (Ecology and Evolutionary Biology), Shobita Parthasarathy (Public Policy), Nathan Sheldon (Geological Sciences), Chuanwu Xi (Environmental Health Sciences)

Lecturers Emilia Askari, Anne Axel (English, Environment), Rolf Bouma, Sally Churchill, Philip D'Anieri, Marc Gaden, Nardia Haigh, Julie Halpert, Virginia Murphy (Residential College, Environment), Michael Shriberg, Keith Taylor (English)

Research Scientists David Jude (Natural Resources and Environment), Selena Smith (Paleontology)

Assistant Research Scientists Sara Ana Adlerstein-Gonzalez (Natural Resources and Environment), Catherine Riseng (Natural Resources and Environment), Kenneth Sylvester (History)

Associate Curator David Michener (Environment)

Adjunct Professor James Breck (Natural Resources and Environment)

Professors Emeriti John Knott (English), Paul Rasmussen (Chemistry), John Romani (Health Management Policy), James Vincent (Environmental Health Sciences)

The Program in the Environment is an undergraduate degree program offered by the College of Literature, Science, and the Arts (LSA) and the School of Natural Resources and Environment (SNRE). This collaborative venture includes courses taught by faculty in SNRE as well as courses taught by faculty in various departments of LSA and in other schools and colleges. The resulting curriculum presents an expanded range of opportunities for students interested in environmental careers. It draws upon SNRE's history as a leader in environmental and natural resource education and LSA's strength in the liberal arts. The program is housed in the Undergraduate Science Building (USB) and many of its classes and activities are held in the renovated Dana Building, the home of SNRE.

The Program in the Environment attempts to ensure basic scientific literacy, familiarity with advanced problem-solving techniques, and an ability to integrate scientific and social scientific approaches in addressing environmental problems. The program emphasizes the natural sciences and social sciences but requires one course in the humanities, broadly construed, in recognition of the importance of humanistic and cultural perspectives in environmental education. It combines breadth, through exposing students to a variety of disciplines and methodological skills, and depth, through requiring a sequence of courses in one of three specialization areas: **Environmental Sciences, Environmental Sciences**, or **Culture and Environment.** Concentrators are required to spend time off campus in an organized field study or a supervised internship.

Students who complete the concentration in the Environment will earn either a B.S. or an A.B. degree, depending upon their course of study (the B.S. requires 60 credits of courses in science and mathematics). The degree is awarded collaboratively by LSA and SNRE and bears the names of both schools.

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Natural and Earth Systems Science courses for the concentration and **Natural Science Courses** for the academic minor: Choose any natural science course at the 200-level or above in consultation with the concentration advisor.

Breadth Social Studies Courses for the concentration and Environmental Social Science Courses for the academic minor.

ARCH	423
CAAS	322, 332, 396, 477
ECON	309, 330, 360, 370, 471, 472
EDCURINS	382
EHS	588
ENVIRON	211, 222, 302, 306, 312, 313, 335, 336, 345, 350,
	360, 361, 365, 367, 370, 375, 382, 391, 396, 449,
	475, 477, 395
HBEHED	580
NRE	336, 475, 477, 495, 571, 583
POLSCI	380
PSYCH	384, 385
RCIDIV	391
RCSSCI	222, 271
SOC	222, 330
UP	423

[These courses do not necessarily satisfy the SS distribution requirement.]

Culture and Environment Courses for the concentration and the academic minor.

AMCULT	373
ANTHRBIO	361
ARCH	423
ANTHRCUL	256, 356 (section subtitled "Ethnography of
	the Great Plains")
ECON	491
ENVIRON	256, 301, 304, 320, 350, 370, 376, 377
HISTART	301
HISTORY	285, 373, 491
ITALIAN	310
PHIL	355, 361, 366
UP	423

The Environment

May be elected as an interdepartmental concentration program

The concentration in Environment is intended to ensure base scientific literacy, familiarity with advanced problem-solving techniques, and an ability to integrate scientific and social scientific approaches in addressing environmental problems. It serves students interested in environmental literacy as well as those interested in a wide range of career tracks related in some way to the environment.

Prerequisites to Concentration. Prerequisites need not be completed prior to declaring an Environment concentration. To ensure a common background and understanding of disciplines relevant to environmental study, students take all of the following (many of these courses also satisfy LSA area distribution):

- Introductory Interdisciplinary Course (one of the following):
 - ENVIRON 110 / BIOLOGY 110 / GEOSCI 171 / AOSS 171 / ENSCEN 171. Introduction to Global Change I. Physical Impacts
 - ENVIRON 111 / SOC 111 / GEOG 111 / AOSS 172 / ENSCEN 172. Introduction to Global Change II. Human Impacts

- ENVIRON 201. Ecological Issues
- ENVIRON 270. Our Common Future
- CEE 260. Environmental Principles
- BIOLOGY 162 OR 163 OR 171, OR 100 & 111 (Introductory Biology)
- 3. CHEM 130 (General Chemistry)
- ENVIRON 118&119 / GEOSCI 118&119 or ENVIRON 116 / GEOSCI 116 (Introduction to Geology)
- 5. ECON 101 (Principles of Economics I) or ENVIRON 211 (Social Sciences and Environmental Problems)
- 6. MATH 115 (Calculus I)

Concentration Program. A minimum of 32 credits required.

- A. Core Courses. These courses expand students' knowledge of environmental problems and solutions by exposing them to a wide range of natural science, social science, and humanistic disciplines. Students select at the 200 level or above in each of the following categories.
 - 1. *Analytics:* one course from STATS 265, 250 (or 350), 400, 405, 412; ECON 404, 405; or IOE 265.
 - General Ecology. One of the following: BIOLOGY 281 / ENVIRON 281 and BIOLOGY 282 / ENVIRON 282, General Ecology and Lab EEB 381 / ENVIRON 381, General Ecology
 - 3. *Environmental Social Science:* Two courses chosen in consultation with the concentration advisor. One course must be at the 300 level or above.
 - 4. *Natural and Earth Systems Science:* One course at the 200level or above, chosen in consultation with the concentration advisor.
 - 5. *Culture and Environment:* One course chosen in consultation with the concentration advisor.
 - 6. *Senior Capstone Course:* One course chosen in consultation with the concentration advisor.
- B. Field Experience Requirement. Students are required to spend time off-campus participating in a pre-approved Internship or Field/Study Abroad course.
- C. **Specializations.** To gain a deeper understanding of applicable skills in one discipline of environmental study, students take three courses at the 300-level or above, approved by the specialization committee, in one of the following areas: Environmental Science, Environmental Social Science, or Culture and the Environment.

Honors Concentration. The Honors concentration is open to students who have achieved a GPA of 3.5 or better. Request for admission should be made by completing an application available from the Program office by October 15 of the junior year. Honors concentrators will normally take a junior Honors seminar (ENVIRON 399) in which they develop research skills, identify a faculty advisor, and prepare the proposal for the Honors thesis project. In the senior year students enroll in ENVIRON 499 (thesis). The final version of the thesis is due on the last day of classes in the winter term of the senior year.

Teacher Certification. For information about teaching certificates, please contact the Program in the Environment.

Advising. Students interested in declaring either a concentration or academic minor must attend an information session. Information sessions are held through the Fall and Winter terms.

Appointments may be scheduled with advisors online at: https://www-a1.lsa.umich.edu/AdvAppts/AA_StuSelfSvc1.aspx?ctgy=ENV.

Academic Minor in the Environment

An academic minor in the Environment is not open to students concentrating in the Environment, to students in the School of Natural Resources and Environment, nor to those pursuing an academic minor in Global Change.

The goals of this academic minor are to enhance the environmental literacy of undergraduates by exposing them to various disciplinary approaches to environmental issues and problems and by providing opportunities for field-based experience and for the acquisition of analytical skills useful in solving environmental problems.

The intended audience is students seeking some measure of environmental literacy or preparing themselves for careers with an environmental dimension.

Students wishing to pursue an academic minor in the Environment must develop a specific plan for its completion in consultation with the program's academic advisor. Appointments may be scheduled online at:

https://www-a1.lsa.umich.edu/AdvAppts/AA_StuSelfSvc1.aspx?ctgy=ENV.

Prerequisites to the Academic Minor: None for the academic minor *per se,* although individual courses elected to meet the requirements of the academic minor may have course prerequisites.

Academic Minor Program: At least 17 credits of courses, to be elected from five categories as stated (at least two of the required courses must be at the 300-level or above):

ENVIRON 102 / AOSS 102 / GEOSCI 122. Extreme Weather

(3). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AOSS 202.

ENVIRON 105 / AOSS 105 / CHEM 105 / ENSCEN 105. Our Changing Atmosphere (3). (NS). (BS). May not be repeated for credit.

ENVIRON 110 / AOSS 171 / BIOLOGY 110 / ENSCEN 171 / GEOSCI 171. Introduction of Global Change: Physical Processes

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. Satisfies the geography requirement for State of Michigan certification for social studies teachers. F.

ENVIRON 111 / AOSS 172 / ENSCEN 172 / GEOG 111 / GEOSCI 172 / SOC 111. Introduction to Global Change: Human Impacts

(4). (SS). May not be repeated for credit. Satisfies the geography requirement for State of Michigan certification for social studies teachers. W.

ENVIRON 116 / GEOSCI 116. Introductory Geology in the Field

(5 in the half-term). (NS). (BS). May not be repeated for credit. Reduced credit if taken: GEOSCI/ENVIRON 117 receive 2 credits; GEOSCI/ENVIRON 119 or GEOSCI 120, 3 credits; GEOSCI 205 AND GEOSCI/ENVIRON 206, 3 credits; one of GEOSCI 205 OR GEOS-CI/ENVIRON 206, 4 credits. Su at Camp Davis, Wyoming.

ENVIRON 118 / GEOSCI 118. Introductory Geology Laboratory

Prior or concurrent enrollment in GEOSCI 119, or 205 and 206, or 135. (1). (NS). (BS). May not be repeated for credit. No credit if completed an introductory course in geology (GEOSCI/ENVIRON 116, 117, or 218). F, W.

ENVIRON 119 / GEOSCI 119. Introductory Geology Lectures

Concurrent enrollment in ENVIRON or GEOSCI 118 for the lab. (4). (NS). (BS). May not be repeated for credit. No credit granted if completed or enrolled in GEOSCI/ENVIRON 116, 117, 120. No credit granted if completed both GEOSCI 205 AND GEOSCI/ENVIRON 206. Only 3 credits with GEOSCI 205 or GEOSCI/ENVIRON 206. F, W.

ENVIRON 120 / GEOSCI 120. Geology of National Parks and Monuments

(4). (NS). (BS). May not be repeated for credit. No credit if completed GEOS-CI/ENVIRON 116, 117, or 119, or both GEOSCI 205 AND GEOSCI/ENVIRON 206. Only 3 credits with GEOSCI 205 or GEOSCI/ENVIRON 206.

ENVIRON 139. First-Year Seminar in the Environment

Enrollment restricted to first-year students, including those with sophomore standing. (3). (ID). May not be repeated for credit.

ENVIRON 160. Habitats and Organisms: Terrestrial Ecosystems

(3). (NS). (BS). May not be repeated for credit.

ENVIRON 175 / GEOSCI 175. The Microbial World: How Unseen Organisms Shape our Planet

(4). (NS). (BS). May not be repeated for credit.

ENVIRON 201. Ecological Issues

(4). (NS). (BS). May not be repeated for credit.

ENVIRON 203 / BIOLOGY 203 / GEOSCI 203. Introductory Ethnobotany BIOLOGY 171. (3). (NS). (BS). May not be repeated for credit. A. **Introductory interdisciplinary courses.** One course chosen from:

- ENVIRON 110 / BIOLOGY 110 / GEOSCI 171 / AOSS 171 / ENSCEN 171. Introduction to Global Change I. Physical Impacts
- ENVIRON 111 / SOC 111 / GEOG 111 / AOSS 172 / ENSCEN 172. Introduction to Global Change II. Human Impacts
- ENVIRON 201. Ecological Issues
- ENVIRON 240 / RCIDIV 240. Big Questions for a Small Planet
- ENVIRON 270. Our Common Future
- CEE 260. Environmental Principles
- B. Environmental Natural Science. One course chosen in consultation with the concentration advisor.
- C. **Environmental Social Science.** One course chosen in consultation with the concentration advisor.
- D. **Culture and Environment.** One course chosen in consultation with the concentration advisor.
- E. Analytics or Field Experience (one course):
 - Field Experience. The field experience requirement may be satisfied in two ways: by a field course at the UM Biological Station, Camp Davis, or other approved field location; or by an approved off-campus internship that results in academic credit.
 - Analytics. The analytics requirement may be satisfied by electing STATS 250 (or 350) or equivalent (STATS 265, 400, 405, or 412; ECON 404 or 405; or IOE 265).

COURSES IN THE ENVIRONMENT (ENVIRON)

ENVIRON 206 / GEOSCI 206. How the Earth Works: The Water Cycle & Environment (2). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI/ENVIRON 116, 117, 119, or 120. Those with credit for GEOSCI 109 may only elect GEOSCI/ENVIRON 206 for 1 credit.

ENVIRON 209 / GEOG 201 / GEOSCI 201. Introduction to Physical Geography: The Earth System

(4; 3 in the half-term). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 144. Students who have completed GEOSCI 331 will receive only 3 credits. F.

ENVIRON 211. Social Sciences and Environmental Problems

(4). (SS). May not be repeated for credit.

ENVIRON 222. Introduction to Environmental Justice (3). (SS). May not be repeated for credit.

ENVIRON 232 / GEOSCI 222. Introductory Oceanography

(3). (NS). (BS). (QR/2). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AOSS 203.

ENVIRON 233 / GEOSCI 223. Introductory Oceanography, Laboratory

Concurrent enrollment in GEOSCI 222/ENVIRON 232. (1). (NS). (BS). (QR/2). May not be repeated for credit.

ENVIRON 255 / BIOLOGY 255. Plant Diversity (4). (NS). (BS). May not be repeated for credit.

ENVIRON 256 / ANTHRCUL 256. Culture, Adaptation, and Environment (3). (SS). May not be repeated for credit.

ENVIRON 270. Our Common Future: Ecology, Economics and Ethics of Sustainable Development

(4). (ID). May not be repeated for credit.

ENVIRON 281 / BIOLOGY 281. General Ecology

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173 AND a laboratory course in CHEM. BIOLOGY 172 and 173 are strongly recommended. (3). (NS). (BS). May not be repeated. No credit granted to those who have completed or are enrolled in EEB 381.

ENVIRON 282 / BIOLOGY 282. General Ecology Laboratory

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173 AND concurrent or prior enrollment in BIOLOGY 281/ENVIRON 281. (3). (BS). May not be repeated for credit.

ENVIRON 284 / GEOSCI 284. Environmental Geology

(4). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 148. Those with credit for GEOSCI 147 may elect GEOSCI/ENVIRON 284 for only 3 credits.

ENVIRON 300. Special Problems and Research

Consent of instructor required. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits.

ENVIRON 302. Topics in Environmental Social Science

(3 - 4). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

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ENVIRON 303. Topics in Environmental Natural Science

(3 - 5). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

ENVIRON 304. Topics in Culture and Environment

(3 - 4). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

ENVIRON 306. Global Water

(3). May not be repeated for credit.

ENVIRON 309. GIS Explorations of the Past, Present, and Future General computer experience is required, including word processing, spreadsheets, and presentations. (3). (BS). May not be repeated for credit.

ENVIRON 310. Toxicology: The Study of Environmental Chemicals and Disease BIOLOGY 162 or 172. (3). (NS). (BS). May not be repeated for credit.

ENVIRON 311 / EEB 320. Rivers, Lakes, and Wetlands: Introduction to Aquatic Ecosystems

One course in BIOLOGY or permission of instructor. (4; 5 in the half-term). (NS). (BS). May not be repeated for credit.

ENVIRON 312 / POLSCI 380. Environmental Politics and Policy ENVIRON 210 or POLSCI 111. (3). May not be repeated for credit.

ENVIRON 313 / POLSCI 394. Environment and Development: Dilemmas of Power and Place in a Global World

(3). May not be repeated for credit.

ENVIRON 315 / EEB 315. The Ecology and Evolution of Infectious Diseases

BIOLOGY 100 or 162 or 163 or 171 & 172 & 173 or 195 & 173. (3). (NS). (BS). May not be repeated for credit.

ENVIRON 317. Conservation of Biological Diversity (3). (BS). May not be repeated for credit.

ENVIRON 318 / EEB 318 / RCIDIV 318. Food, Land, and Society One year of college-level Biology, Environmental Science or Environmental Studies; General Ecology recommended. (4). (ID). May not be repeated for credit. W.

ENVIRON 319 / EEB 319 / RCIDIV 319. Food, Land and Society Field Study RCIDIV 318/ENVIRON 318/EEB 318. (Prerequisites enforced at registration.) (2). (EX-PERIENTIAL). May not be repeated for credit.

ENVIRON 320. Environmental Journalism: Reporting About Science, Policy, and Public Health

Completion of First-Year Writing Requirement. (3). May not be repeated for credit.

ENVIRON 321. Climate Change and Adaptation

(SS). May not be repeated for credit.

ENVIRON 325 / GEOSCI 325. Environmental Geochemistry Introductory chemistry. (3). (NS). (BS). May not be repeated for credit.

ENVIRON 341 / GEOSCI 341. Ecosystem Science in the Rockies Introductory course in Geology, Ecology, or Global Change. (5 in the half-term). (NS). (BS). May not be repeated for credit. Su at Camp Davis, Wyoming.

ENVIRON 344 / GEOSCI 344. Sustainable and Fossil Energy: Options and Consequences

Consent of department required. At least one previous course in Physical Sciences or Engineering. (3 in the half-term). (NS). (BS). May not be repeated for credit.

ENVIRON 345 / POLSCI 331 / SOC 380. Environmental Public Opinion Analysis (3). (SS). May not be repeated for credit.

ENVIRON 348 / EEB 348. Forest Ecosystems

Consent of department required. BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. (5 in the half-term). (NS). (BS). May not be repeated. Su at Biological Station.

ENVIRON 350. The Built Environment: Introduction to Landscape Change

(3). May not be repeated for credit. ENVIRON 360 / PSYCH 384. Behavior and Environment

(3). May not be repeated for credit.

ENVIRON 361 / PSYCH 385. The Psychology of Environmental Stewardship (3). May not be repeated for credit.

ENVIRON 365. International Environmental Policy

(3). May not be repeated for credit.

ENVIRON 367. Global Enterprise and Sustainable Development Senior Standing. (3). May not be repeated for credit.

ENVIRON 370/ARCH 423/UP 423. Introduction to Urban & Environmental Planning (3). May not be repeated for credit.

ENVIRON 375 / ECON 370. Environmental and Resource Economics

Econ 101. (Prerequisites enforced at registration.) (3). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ECON 471 or 472.

ENVIRON 376. Environmental Ethics

(3). (HU). May not be repeated for credit.

ENVIRON 377. Literature and the Environment (3). (HU). May not be repeated for credit.

ENVIRON 380 / GEOSCI 380. Mineral Resources, Economics, and the Environment No previous courses in Geology or other sciences are required. (4). (NS). (BS). (QR/2). May not be repeated for credit. ENVIRON 381 / EEB 381. General Ecology

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173, AND a laboratory course in CHEM. (5 in the half-term). (BS). May not be repeated for credit.

ENVIRON 382 / EDCURINS 382. Introduction to Environmental Education for Sustainable Development

(4). May not be repeated for credit.

ENVIRON 391 / RCIDIV 391. Sustainability and the Campus An introductory course in Environmental Studies, Global Change, or related field (e.g., ENVIRON 201, 240, 270). (3). May not be repeated for credit.

ENVIRON 398. Environment Internship Program Consent of instructor required. (1 - 3). (EXPERIENTIAL). May be repeated for a maximum of 9 credits. Pass/Fail with Narrative Evaluation.

ENVIRON 399. Junior Honors Seminar

Consent of instructor required. (3). May not be repeated for credit.

ENVIRON 401. Modeling Coupled Human-Natural Systems Junior or Senior standing. (3). May not be repeated for credit.

ENVIRON 404. Cars, Energy, and Chemistry CHEM 130 or equivalent. (3). (BS). May not be repeated for credit.

.new 150 of equivalent. (5). (B5). Way not be repeate

ENVIRON 407. Sustainable Cities

Junior or Senior standing and two environmental science classes. (3). May not be repeated for credit.

ENVIRON 408. Land Use Policy, Law, and the Environment Junior or senior status. (3). May not be repeated for credit.

ENVIRON 409 / EEB 487 / NRE 409. Ecology of Fishes

BIOLOGY 162 or 171, 172 and 173. (3 - 4). (BS). May not be repeated for credit. W. (Lectures: 3 credits; lectures and lab: 4 credits).

ENVIRON 410. American Environmentalism and the Frontier West Consent of instructor required. One ENVIRON course. (3). May not be repeated.

ENVIRON 412. Environmental Values in Public Policy

(3). May not be repeated for credit. ENVIRON 415 / EEB 424 / NRE 415. Behavioral Ecology and Conservation Biology BIOLOGY 162 or 171 and completion or concurrent enrollment in either ENVIRON 415 or EEB 424 or NRE 415. (4). (BS). May not be repeated for credit. No credit granted for students who have taken or are enrolled in EEB 492.

ENVIRON 416 / EEB 425 / NRE 416. Field Skills in Wildlife Behavior

BIOLOGY 162 or 171 and prior or concurrent enrollment in ENVIRON 415. (2). (BS). May not be repeated for credit. No credit granted for students who have taken or are enrolled in EEB 492.

ENVIRON 422 / EEB 440 / NRE 422. Biology of Fishes

BIOLOGY 162 or 171, 172 and 173. (3). (BS). May not be repeated for credit. F.

ENVIRON 423 / EEB 441 / NRE 423. The Biology of Fishes Laboratory

BIOLOGY 162 or 171, 172 and 173. (1). (BS). May not be repeated for credit.

ENVIRON 430 / EEB 489 / NRE 430. Soil Ecology

BIOLOGY 162 or 171 and 172 and 173, and General Chemistry. Concurrent enrollment in ENVIRON 436/EEB 436 and ENVIRON 435/NRE 435 highly recommended. (3). (BS). May not be repeated for credit. F.

ENVIRON 436 / EEB 436 / NRE 436. Woody Plants: Biology and Identification *BIOLOGY 162 or 171. (4). (BS). May not be repeated for credit. Rackham credit requires additional work.*

ENVIRON 437 / GEOSCI 427. Environmental and Technological Applications of Mineralogy

GEOSCI 231/232, comparable courses in the solid-state, or permission of instructor. (3). (BS). May not be repeated for credit.

ENVIRON 442 / GEOSCI 442. Earth Surface Processes and Soils

MATH 115 and CHEM 130. (4). (BS). May not be repeated for credit.

ENVIRON 449 / NRE 449. Organizational Theory and Change (3). May not be repeated for credit.

ENVIRON 451 / EEB 451 / NRE 451. Biology of Mammals BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. (4). (BS). May not be repeated.

ENVIRON 467 / AOSS 467 / CHEM 467 / ENSCEN 467 / GEOSCI 465. Biogeochemical Cycles

MATH 116, CHEM 210, & PHYSICS 240 or 260. (3). (BS). May not be repeated.

ENVIRON 475 / EHS 588 / NRE 475. Environmental Law

(3). May not be repeated for credit.

ENVIRON 476 / EEB 476 / NRE 476. Ecosystem Ecology

General Ecology and a 400-level course in Aquatic or Terrestrial Ecology. (3). (BS). May not be repeated for credit. W.

ENVIRON 479 / GEOSCI 477. Hydrogeology

High school knowledge of PHYSICS, CHEMISTRY, and GEOSCI or equivalent. MATH 116. (4). (BS). May not be repeated for credit.

ENVIRON 490 / POLSCI 463. War and the Environment: A Lethal Reciprocity Coursework in environment or political science. (3). May not be repeated for credit.

ENVIRON 499 / NRE 499. Senior Honors Thesis

Consent of instructor required. ENVIRON 399. (1 - 6). (INDEPENDENT). May be repeated for a maximum of 6 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

Center for European Studies – European Union Center (CES-EUC)

1080 South University Avenue, Suite 3668 (734) 764-0351 (phone) (734) 763-4765 (fax) www.ii.umich.edu/ces-euc e-mail: ces-euc@umich.edu Associate Professor Dario Gaggio (History), Director

Not a concentration program

The Center for European Studies-European Union Center (CES-EUC) is a multi-disciplinary research, education, and outreach program that strengthens the understanding of modern, integrated Europe at U-M and in the United States.

Modern European Studies Academic Minor

The academic minor in Modern European Studies is open to students with any kind of academic background who wish to better understand European societies from a variety of disciplinary perspectives. After gaining a solid knowledge of European history, students can branch out in many directions: they can further explore historical processes, delve into economic problems, investigate social relations, or examine Europe's cultural achievements and conflicts, among other possibilities. The academic minor encourages a broad understanding of Europe, both geographically and thematically. With the European Union now extending from Portugal to the Russian borderlands, and with global processes reconfiguring Europe's relationships with the rest of the world, the academic minor offers a unique opportunity for students to familiarize themselves with an enormously diverse continent that is constantly re-examining its roots and discussing its future.

Constraints: Students may not use more than one course to meet the requirements of both a concentration plan and an academic minor. No course may be used to satisfy the requirements of more than one academic minor. **Advising:** Advising appointments can be scheduled by calling (734) 764-0351, or by sending and e-mail to ces.advising@umich.edu.

Prerequisites to the Academic Minor: Fourth-term proficiency in a language of the European Union (other than English) or other European language by permission of the advisor.

Academic Minor Program: At least 15 credits of courses from the following categories.

- 1. Modern European history: HISTORY 318 or 319.
- Elective courses: Three courses chosen in consultation with, and approved by, the CES academic advisor, from one of the following tracks:
 - a. Politics, Economy, and Society of Europe and the EU
 - One upper-level course on modern European or EU politics, society, or economics.
 - Two additional social science courses on modern Europe.
 - b. European Arts and Culture
 - One upper-level course on art, literature, or culture of modern Europe
 - Two additional humanities courses on modern Europe
- 3. Capstone: A fourth elective course (3 credits), chosen at the discretion of the student and the advisor and taken during the final two academic terms of study, that offers an opportunity to synthesize what the student has learned about modern Europe. It should involve researching and writing a paper of at least 12 pages in length. Possible themes include EU expansion, colonialism/post-colonialism, economic development, migration and immigration, European identity, and European literary traditions.

At least two courses must be upper-level (300 or above). Courses must be distributed over at least three of the following fields: anthropology, economics, history, history of art, literature, music, philosophy, political science, screen arts and cultures, and sociology.

Geography

Not a concentration program

COURSES IN GEOGRAPHY (GEOG)

GEOG courses are offered by faculty in other department across the University.

GEOG 111 / AOSS 172 / ENSCEN 172 / ENVIRON 111 / GEOSCI 172 / SOC 111. Introduction to Global Change: Human Impacts

(4). (SS). May not be repeated for credit. May not be included in a concentration plan. Satisfies the geography requirement for State of Michigan certification for social studies teachers. W.

GEOG 145 / CICS 101 / UC 145. Introduction to International Studies

(3). (SS). May not be repeated for credit. Meets the geography requirement for public teacher certification in the School of Education.

GEOG 201 / ENVIRON 209 / GEOSCI 201. Introduction to Physical Geography: The Earth System

(4; 3 in the half-term). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 144. Students who have completed GEOSCI 331 will receive only 3 credits. F.

GEOG 406 / UP 406. Introduction to Geographic Information Systems

Introductory statistics (UP 503 or equivalent). (3). May not be repeated for credit. F, Sp.

GEOG 472 / UP 572. Transportation and Land Use Planning *Permission of instructor. (3). May not be repeated for credit. W.*

GEOG 591. Special Work in Human Geography

Consent of instructor required. (2 - 3). (INDEPENDENT). May be repeated for credit. Rackham credit requires additional work.

Geological Sciences

2534 C.C. Little Building 1100 North University Avenue (734) 764-1435 (phone) (734) 763-4690 (fax) www.lsa.umich.edu/geo e-mail: GeoSci@umich.edu Professor Samuel B. Mukasa, Chair Associate Professor Chris Poulsen, Associate Chair for Curriculum Professor Rebecca Lange, Associate Chair for Graduate Studies

Professors

- Tomasz R. Baumiller, Paleontology, biomechanics
- Joel D. Blum (Arthur F. Thurnau Professor; John D. MacArthur Professor of Geological Sciences), *Isotope geochemistry, environmental geochemistry, hydrogeochemistry*
- Mary Anne Carroll, *Atmospheric chemistry and atmosphere*biosphere interactions
- Rodney C. Ewing (Edward H. Kraus Distinguished University Professor), *Mineralogy, materials science and nuclear materials*
- Daniel C. Fisher (Claude W. Hibbard Collegiate Professor of Paleontology), *Invertebrate paleontology, evolutionary functional morphology*
- Philip D. Gingerich (Ermine Cowles Case Collegiate Professor of Paleontology), *Vertebrate paleontology and mammalian evolution*
- Gerald J. Keeler, Chemistry and geochemistry of the atmosphere
- Stephen E. Kesler, *Economic geology, exploration geology and geochemistry, environmental geochemistry*
- Rebecca Lange, Igneous petrology, volcanology
- Kyger C Lohmann, Sedimentology, trace element and isotope geochemistry
- Samuel B. Mukasa (Eric J. Essene Collegiate Professor of Geological Sciences), *Igneous petrology, isotope geochemistry*
- Robert M. Owen (Arthur F. Thurnau Professor), *Marine and lacu*strine geology and geochemistry
- Larry J. Ruff, Geophysics, seismology
- Ben A. van der Pluijm (Bruce R. Clark Collegiate Professor of Geology), *Structural geology*
- Rob Van der Voo (Frank H.T. Rhodes Collegiate Professor of Geological Sciences; Arthur F. Thurnau Professor), *Geophysics, paleomagnetism and its application to pre-Mesozoic plate tectonics*
- Peter van Keken, Geophysics, geodynamics
- Lynn M. Walter, Geochemistry of natural waters, experimental lowtemperature geochemistry
- Donald Zak (Burton V. Barnes Collegiate Professor), *Microbial ecology and ecosystem ecology*

Youxue Zhang, Mineral physics, chemical thermodynamics

Associate Professors

- Udo Becker, *Mineralogy, mineral surface chemistry, computational mineralogy*
- Robyn J. Burnham, Paleobotany
- M. Clara Castro, Hydrogeology, noble gas geochemistry
- Jie (Jackie) Li, *Mineral physics, experimental geochemistry, Earth and planetary interiors*
- Chris Poulsen, Paleoclimate, paleoceanography, and climate modeling
- Jeroen Ritsema, Global geophysics and earthquake seismology

Assistant Professors

- Sarah Aciego, *Glaciochemistry, geochronology, chemical weathering* and global change
- Brian Arbic, Physical oceanography, ocean and solid earth tides, oceanic turbulence, numerical modeling
- Marin Clark, Geomorphology, tectonics and crustal dynamics
- Gregory Dick, *Geomicrobiology, marine microbiology and oceanography*

- Ingrid L. Hendy, Oceanography, paleoclimatology, micropaleontology, marine geochemistry
- Eric Hetland, Lithospheric dynamics and crustal mechanics
- David C. Lund, Paleoceanography, paleoclimatology, and biogeochemical cycles
- Nathan Niemi, Neotectonics and structural geology
- Nathan Sheldon, *Paleoclimatology, global change, and biosphereclimate interactions*
- Jeffrey A. Wilson, Paleontology

Research Scientists

Jeffery C. Alt, Water-rock interaction and hydrothermal geochemistry

Catherine Badgley, Vertebrate paleontology

Associate Research Scientists

Chris M. Hall, *Isotope and noble gas geochemistry, argon geochronology*

Shaopeng Huang, Geophysics, paleoclimatology

Assistant Research Scientists

James Gleason, Oceanography

Maik Lang, *High pressure mineralogy and materials science* Anja Schleicher, *Clay mineralogy and structural geology* Fuxiang Zhang, *High pressure mineralogy and materials science* Jiaming Zhang, *Materials science and electron microscopy*

Adjunct Professors

John W. Geissman, *Geophysics, paleomagnetism* William B. Simmons, *Mineralogy and petrology*

Adjunct Assistant Professor

Karen L. Webber, Petrology, volcanology

Visiting Assistant Professor

Brian Kennedy, Aquatic ecology Selena Smith, Plant systematics and anatomy, paleobotany, taphonomy, role of plants in ancient environments

Visiting Research Scientist

Edward H. Poindexter, Mineralogy

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Our innovative and flexible concentration programs provide an interesting path for students to follow on their way to an LSA degree. From our field camp at Camp Davis in Wyoming, to lab work on campus, Michigan students have an opportunity to explore the geological sciences in exciting ways.

The Department of Geological Sciences offers:

- 1. a Geological Sciences Concentration Program;
- 2. an *Earth Systems Science Concentration Program;*
- 3. Honors Concentrations in either of the above programs;
- 4. a *Teacher's Certificate Program,* for prospective science teachers who are candidates for a secondary teaching certificate in earth science and general science; and,
- 5. Academic minors in *Earth Sciences, Environmental Geology, Geochemistry, Oceanography,* and *Paleontology.*

Awards and Prizes. The Department of Geological Sciences offers several awards for undergraduate students. Winners of these awards are selected by the faculty with advice from the student body and are presented in the Spring at the annual Dorr awards banquet. These include:

Undergraduate Academic Excellence Award, which is presented to a fourth-year student whose overall academic performance, including course grades and class participation, is judged to have been excellent.

Alumni Undergraduate Award, which is presented to a junior or senior nominated by the faculty or Geology Club who displays a high level of involvement and commitment to the intellectual life of the department.

Eugene and Elizabeth Singer Award for Academic Excellence in Geology, which is presented to a junior in Geology before their final year of coursework, whose overall academic performance is judged to have been excellent.

Camp Davis Field Geologist Award, which is presented to a student who excels during the advanced field course offered at the Department's field school at Camp Davis, Wyoming.

Upper-Level Writing Requirement. The College requires that every student satisfy an upper-level writing requirement before graduation. Students in concentration programs in Geological Sciences must satisfy this requirement by completion of GEOSCI 380 or by a program of writing that is explained in detail on the Geological Sciences web page: www.lsa.umich.edu/geo/undergrad.

Advising and Advance Approval of Program and Elections. A concentration plan in the Department of Geological Sciences is developed in consultation with a concentration advisor. A proposed plan *must be approved* in its entirety by the appropriate advisor prior to registration for the first term of concentration. Thereafter, progress through the plan and future elections *must be reviewed, and approved in advance,* whenever a change is proposed and in any case no less frequently than at the beginning of each new academic year of residence. Certification must also be obtained from an advisor, on an official LSA *Concentration Release Form,* immediately prior to submission of the application for the degree.

Information about appointments with concentration advisors is available at 2534 C.C. Little Building or on the web at: www.lsa.umich.edu/geo/undergrad/advising.

Teaching Certificate. The Department of Geological Sciences offers prospective secondary school science teachers an opportunity to earn a bachelor's degree from the College with a concentration in Geological Sciences while satisfying the requirements for a provisional secondary school teaching certificate with a teaching major in earth science or general science. An outline with specific information about the teaching major and minor in earth science, general science, and the other teaching certificate requirements should be obtained from the School of Education Office of Academic Services. Interested students should consult the teaching certificate advisor as early as possible.

Summer Field Courses. The Department of Geological Sciences considers field education fundamental to all of its academic programs. To this end, it provides students with a variety of opportunities to learn outside of the classroom. Many of these opportunities are centered around the University's *Rocky Mountain Field Station, Camp Davis.* Nestled along the Hoback River south of Jackson, Wyoming, Camp Davis provides easy access to spectacularly exposed geologic structures, sedimentary strata, and igneous and metamorphic rocks. See the web for complete information about Camp Davis at:

www.lsa.umich.edu/geo/undergrad/campdavis.

The Department offers an introductory course in geological sciences (GEOSCI 116) at Camp Davis. Although similar in scope to introductory geological sciences courses taught on campus, this course offers students an opportunity for direct observation of geological

phenomena. GEOSCI 116, as all at Camp Davis, is open to any student in good health, of sound academic standing, and with a lust for adventure!

Three advanced summer field courses (GEOSCI 440, 341, and 344) are also offered at Camp Davis. GEOSCI 440 is the capstone course of the Geological Sciences concentration and involves field mapping and measurement of geologic units and structures. GEOSCI 341 provides students with field experiences in the collection and analysis of environmental data. GEOSCI 341 is recommended to students electing a teaching certificate. GEOSCI 344 introduces students to concepts and environmental consequences of sustainable and fossil energy sources through hands-on experiments using alternate energy systems at Camp Davis.

Field Trips. The Department also offers a two-week Spring Field Trip yearly in May that travels to different locations around the United States. Recent trips have visited West Texas and New Mexico, the Grand Canyon, national parks of Southern Utah, Nevada, Death Valley, Florida Coral Reefs, the Appalachians. The Department is also committed to a yearly International Field Trip, which in recent years has visited Iceland, Scotland, New Zealand, and the Spanish Pyrenees. Details on all of these field trips are available at www.lsa.umich.edu/geo/undergrad or by visiting the Department's Main Office, 2534 C.C. Little Building, and on the main Geological Sciences web page.

The Museum of Paleontology provides the facilities enabling direct hands-on study of plants and animals preserved as fossils, and study of the environmental, ecological, and paleogeographical conditions in which they lived. These can be studied statically at fixed times in the past or present, and dynamically as they are seen to change through evolutionary and geological time. Because of the Museum and what it facilitates in terms of hands-on experience, our teaching and research programs have long been known for their empirical focus, with an emphasis on testing new ideas as well as generating them.

The Mineralogical Collections of the Department include a study collection of minerals and rocks for use by advanced undergraduate and graduate students. Some specimens and suites of minerals, crystals, rocks, and ores are on exhibit in hall cases in the C.C. Little Building.

Departmental Teaching Collections. Many courses in Geological Sciences involve "hands-on" science! The Department oversees a large collection of minerals, rocks, and fossils used specifically for teaching. This library of specimens allows students to build familiarity with materials they might see during field courses or in their own back yard.

Michigan Geology Club. GeoClub has been an active undergraduate-graduate student organization for over 40 years. It provides a forum for students concentrating in the Geological Sciences at the University of Michigan and other students with a strong interest in geology and who want to learn more about this exciting field. Its mission is to increase the involvement of undergraduate and graduate geology students within the Department of Geological Sciences and to introduce new students to the Department in a fun and casual setting. GeoClub has biweekly meetings during the semester with presentations and discussions of geoscience topics including professional and internship opportunities, student research projects, and recent geological field adventures. Students in GeoClub also coordinate student educational camping trips, and are responsible for coordinating several yearly departmental social functions, Additional information about the Geology Club is available at: www.lsa.umich.edu/geo/undergrad/geoclub.

Geological Sciences

May be elected as a departmental concentration program

The Geological Sciences Concentration trains students to receive a broad foundation in natural and physical sciences related to envi-

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ronmental and Earth sciences. Students are required to learn material from several core areas of the Earth sciences. The program also includes a field requirement that takes students off campus to study and apply their knowledge. Finally, students are encouraged, but not required, to complete a specialization in a subject area of their choosing. Students in this program of study can earn either a Bachelor of Arts or Bachelor of Science degree. A Bachelor of Science degree requires students complete at least 60 credits in science and math courses.

Prerequisites to Concentration. Prerequisites to the concentration provide students with background knowledge in topics related to Earth and environmental science and in core natural science areas. These should be completed as soon as possible.:

- 1. Earth and Environmental Science Requirements. Choose one from each of the following two categories:
 - Category I: An introductory geoscience course with a laboratory (GEOSCI 116, 119&118, 120, or 201), or an introductory geosciences course without a laboratory (GEOSCI 119, 284 or 205+206) combined with a laboratory course (GEOSCI 118 or 207).
 - Category II: An introductory course in global change, oceanography, or Earth system science (GEOSCI 171, 222&223, or 320).

2. MATH 115 (Calculus I)

- 3. **Choose at least 2** out of the following 4 options for chemistry, physics, math, and biology courses:
 - Option I: CHEM 130 and 125 (General Chemistry and Lab)
 - Option II: PHYSICS 140 and 141 (Physics I and lab)
 - Option III: BIOLOGY 162, 171, or 172 (Introductory Cell Biology or Ecology)
 - Option IV: Choose one from MATH 116 (Calculus II), MATH 214 or 216 (Differential Equations), CHEM 230 (Physical Chemistry) or 210/211 (Organic Chemistry and Lab), or PHYSICS 240/241 (Physics II and Lab).

Recommended Prerequisites: Recommended introductory field experience. Students are encouraged in their first year of declaring

the concentration to participate in a departmental international or domestic field trip over spring break or summer.

Students interested in continuing on to graduate school or professional work in the geosciences are encouraged to choose their prerequisites in consultation with a concentration advisor. See also the other recommendations listed below.

Concentration Program. The concentration program requirements are:

- 1. **Core Courses:** Core courses in the Geological Sciences Concentration are designed to provide students with training in the physical, chemical, and biologic processes relevant to the present form, and evolution of the Earth. Students should choose four courses from the following eight **Core Course Options**:
 - Solid Earth Physics: GEOSCI 314
 - Solid Earth Structure: GEOSCI 351
 - Solid Earth Geochemistry: GEOSCI 310
 - Earth Materials: GEOSCI 315
 - Paleontology and Geobiology: GEOSCI 313
 - Earth's Surface and Sediments: GEOSCI 305
 - Ocean and Atmosphere: GEOSCI 321
 - Environmental Geoscience: GEOSCI 325
- Field Experience Requirement. A fundamental aspect of studying the Earth sciences is exposure to hands-on approaches for data collection and problem solving. For this reason, the Geological Sciences concentration requires students to complete a field-based course at Camp Davis, Wyoming, where students

learn how to collect and interpret Earth and Environmental science data.

Students must choose one course from GEOSCI 341 or 440. Students interested in completing GEOSCI 440 are strongly recommended to complete GEOSCI 305, 310, and 351 prior to taking GEOSCI 440. Students interested in a career in Oceanography may elect to take, with approval from a concentration advisor, a marine based field course.

3. Geoscience Electives: Nine GEOSCI credit hours at the 300 or higher level. Geological Sciences concentrators are required to take these additional GEOSCI credit hours at the 300 or higher level to develop additional expertise in a specialization or area of their choosing. Students may wish to consider a specialization in an area listed in the core courses, or create their own specialization in consultation with a concentration advisor.

Remaining core courses listed above may be elected as well as other department course offerings. Students interested in graduate school and/or professional employment in the geosciences are encouraged to take as many 400 level courses as possible.

Sample specializations: Students are encouraged to build a specialization that suits their own interests by taking additional upper level courses in the Geological Sciences department, and elect to use additional relevant courses from other departments as well. Students are asked to build their specialization in close consultation with their department advisor.

The following includes titles of a few example specializations that students may consider pursuing. Recommended courses associated with each of these specializations are available on the department website. These are only examples, and other specializations may be considered in consultation with a concentration advisor.

- Geological Sciences
- Environmental Geoscience
- Environmental Policy
- Energy Resources
- Geophysics
- Geochemistry
- Geobiology and Paleontology
- Oceanography

Other recommendations: Students interested in graduate school or a career in geological and environmental sciences, or oceanography, are strongly encouraged to plan their curriculum in close consultation with a Geological Sciences concentration advisor as soon as possible. Example curricula are given below.

Recommended courses for students interested in graduate study or professional employment in **Geological Sciences** include:

- MATH 116 (Calculus II), MATH 214 or 216 (Differential equations).
- CHEM 230 (Physical Chemistry) or CHEM 210 and 211 (Organic Chemistry)
- PHYSICS 240 and 241 (Physics II and Lab)
- GEOSCI 305, 310, 313, 315, 351, 418, 420, 422, 440
- Completion of a senior or Honors thesis after at least two terms of research with faculty in the department.

Recommended courses for students interested in graduate study or professional employment in **Environmental Geology** include:

- MATH 116 (Calculus II), MATH 214 or 216 (Differential equations).
- CHEM 230 (Physical Chemistry) or CHEM 210 and 211 (Organic Chemistry)
- PHYSICS 240 and 241 (Physics II and Lab) or BIOLOGY 162, 171, or 172.
- GEOSCI 305, 315, 325, 341, 380, 420, 442, 465, 477.
- Completion of a senior or Honors thesis after at least two terms of research with faculty in the department.

Recommended courses for students interested in graduate study or professional employment in **Oceanography** include:

- MATH 116 (Calculus II), and one of MATH 214, 215, or 216 (Differential equations)
- STATS 250 (or 350)
- CHEM 230 (Physical Chemistry) or CHEM 210 and 211 (Organic Chemistry)
- PHYSICS 240 and 241 (Physics II and Lab)
- GEOSCI 222 and 223, 305, 310, 320, 321, 325 or 422, 409, 420, 449, 452
- Completion of a senior or Honors thesis after at least two terms of research with faculty in the department.

Earth Systems Science

May be elected as a departmental concentration program

Earth Systems Science is a departmental concentration designed to prepare students for graduate study in the Earth Sciences and for later professional work. This program of study is conducted in cooperation with the Department of Atmospheric, Oceanic and Space Science in the College of Engineering.

Each student concentrating in Earth Systems Science may choose one of three options in which to specialize: Earth Science, Atmospheric Science, or Biogeochemistry. To ensure the breadth required by the science of the Earth's natural systems, each student must complete a minimum of ten courses distributed as follows:

- 1. Four core courses (MATH 216 and GEOSCI 320, 321, 409).
- 2. One class from each of the options, not included in (1).
- 3. At least three additional courses [not included in (1) and (2)] from any one of the options.

Prerequisites (should be completed as soon as possible):

- 1. Three terms of mathematics, ordinarily MATH 115, 116, 214 or 215.
- 2. One year of introductory physics with laboratory, ordinarily PHYSICS 140, 141, 240 and 241.
- 3. One term of introductory chemistry with laboratory, either CHEM 125 and 130 or CHEM 210 and 211.
- 4. At least one introductory course selected from:
 - GEOSCI 119 & 118, 116, 120, 171, 201, 202, 222/223, 284 & 118,
 - AOSS 171 or 202,
 - BIOLOGY 162 or 171 or 172.

Core courses: MATH 216; and GEOSCI 320, 321, and 409 (or AOSS 320, 321, and 410).

Earth Science Option. Choose among:

- ENVIRON 325, 341, 344, 380, 442, 479;
- GEOSCI 325, 341, 344, 380, 420, 421, 422, 442, 443, 446, 449, 452, 472, 477, 483.

Atmospheric Science Option. Choose among:

- AOSS 323, 350, 370, 380, 401, 411, 414, 420, 422, 440, 451, 475;
- ENSCEN 451, 475;
- GEOSCI 323, 350, 370, 381, 401, 411, 414, 423, 446, 454, 457, 475.

Biogeochemistry Option. Choose among:

- AOSS 467;
- BIOLOGY 445;
- CHEM 467;
- EEB 381, 445, 489;
- ENSCEN 467;
- ENVIRON 325, 381, 430, 435, 441, 467;
- GEOSCI 325, 445, 465, 473, 478, 479.
- NRE 430, 435, 441

Honors Concentration

The Honors concentration consists of a series of special academic opportunities supplementary to any of the regular Concentration Programs listed above. The Honors concentration is tailored to fit the needs and interests of individual students. GEOSCI 490 is elected for one credit during two of the four terms of the junior and senior years for:

- 1. reading and discussion of the professional literature;
- 2. library research and reporting on a special research problem;
- 3. research as an assistant to a faculty member or as part of a graduate seminar; or
- 4. individual research and reporting on a problem or graduate seminar.

A thesis is required to complete the program. The Honors concentration offers well-qualified students an opportunity to increase the breadth and depth of their undergraduate experience. To be eligible for the Honors concentration, students must have at least: (1) a 3.4 grade point average in geological sciences courses elected in the department; and (2) a cumulative grade point average of at least 3.4 at the time of acceptance. Students admitted to the Honors concentration must complete the requirements for their principal concentration program.

Ideally, the selection of candidates for Honors concentration is made at the beginning of the junior year, but qualified students may be admitted to the program as late as the end of the junior year. *Interested students should contact the departmental office for referral to the Honors advisor, 2534 C.C. Little Building, (734) 764-1435.*

Geological Sciences Academic Minors

Academic minors in Geological Sciences are not open to students with any concentration or any other academic minor in Geological Sciences.

Students wishing to pursue an academic minor in Geological Sciences must develop a specific plan for its completion in consultation with the department's designated advisor. Appointments are scheduled online www.lsa.umich.edu/geo/undergrad/advising

Earth Sciences – General

The Earth Sciences – General academic minor is designed to give students a broad introduction to geology, oceanography and related sciences. It allows a wide selection of courses to suit both general and specific interests. The Earth Sciences – General academic minor would be particularly suitable for non-science concentrations, such as pre-law, business, economics, history, and English.

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 15 credits of courses, to be chosen from the following three categories as stated:

1. **One introductory Geology course** (including laboratory) must be taken from one of the following two groups:

Group 1. Courses with laboratory: GEOSCI 116, 119 & 118, 120, and 201.

Group 2. Courses without laboratory (GEOSCI 119, 135, 205+206, or 284) plus a laboratory course (GEOSCI 118 or 207).

- 2. **Introductory and general interest courses.** No more than four additional credits may be elected from the 100- and 200-level courses in Geological Sciences, excluding courses listed in Category One above. One first-year seminar and one mini-course may be included in the credits from Category Two.
- Specialized courses: The remainder of the credits for the academic minor must be elected from 300- and 400-level courses in Geological Sciences.

Environmental Geology

The Environmental Geology academic minor is designed to give students a broad introduction to processes shaping the Earth's surface, its physical and biochemical environment, and potential response to anthropogenic influences. Because society and the Earth's surface environment are intimately linked, students with concentrations such as pre-law, business, economics, history, and English may find the academic minor in Environmental Geology an attractive complement to their training. As well, students concentrating in other areas of the Natural Sciences may find the academic minor in Environmental Geology a way to diversify their background and apply fundamental scientific principles in an interdisciplinary way. Note that by LSA rules, only one course may be elected in common to an academic minor and a concentration.

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 15 credits of courses, to be chosen from the following three categories as stated:

1. **One introductory Geology course** (including laboratory) must be taken from one of the following two groups:

Group 1. Courses with laboratory: GEOSCI 116, 119 & 118, 120, and 201.

Group 2. Courses without laboratory (GEOSCI 119, 135, 205+206, or 284) plus a laboratory course (GEOSCI 118 or 207).

- 2. Core courses: GEOSCI 380 and 442 are required.
- 3. **Elective courses:** GEOSCI 325, 477, or 478. One first-year seminar and one mini-course may be included, with the departmental advisor's approval, in this category.

Geochemistry

The academic minor in Geochemistry is designed to provide students with a broad introduction to geochemistry, to the application of chemical principles to geological problems and the chemical understanding of the earth system.

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 15 credits of courses, to be chosen from the following three categories as stated:

1. **One introductory Geology course** (including laboratory) must be taken from one of the following two groups:

Group 1. Courses with laboratory: GEOSCI 116, 119 & 118, 120, and 201.

Group 2. Courses without laboratory (GEOSCI 119, 135, 205+206, or 280) plus a laboratory course (GEOSCI 118 or 207).

- 2. Core courses: GEOSCI 315 and 422 are required.
- 3. **Elective courses:** The remaining credits for the academic minor are to be elected from GEOSCI 426, 455, or 478.

Oceanography

The academic minor in Oceanography is designed to provide students with broad introductions to oceanography, to the geological processes active on the seafloor and the seashore, and to the geological evolution of the ocean basins and their sediment records of past climates. Note that by LSA rules, only one course may be elected in common to an academic minor and a concentration.

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 15 credits of courses, to be chosen from the following three categories as stated:

1. **One introductory geoscience course** must be taken from one of the following two groups:

Group 1. Courses with laboratory: GEOSCI 116, 119 & 118, 120, or 201.

Group 2. Courses without laboratory (GEOSCI 119, 205+206, or 284) plus a laboratory course (GEOSCI 118 or 207).

- 2. Core courses: GEOSCI 222, 223.
- 3. Elective courses (5-7 credits): to be elected from the following, at least one of which must be at the 400-level:
 - CHEM 465
 - GEOSCI 305, 320, 321, 325, 351, 409, 418, 419, 420, 421, 422, 446, 449, 452, 465, 467, 478, 479, 483, 486;
 - AOSS 320, 321, 410, 420, 467
 - ENSCEN 420, 455, 467
 - NAVARCH 420, 455

Paleontology

The academic minor in Paleontology is designed for students interested in the history of life on Earth. Entry and core courses will provide students with insight into the major features of the fossil record, the methods used in historical sciences, and the theoretical issues dealt with by paleontologists. The advanced courses are meant to satisfy more specific interests.

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 15 credits of courses, to be chosen from the following three categories as stated:

- 1. **Entry courses** (0-4 credits required). The "entry point" into the academic minor may, but need not, include two, but no more than two courses (no more than 4 credits) chosen from GEOSCI 103, 106, 116, 119 & 118, 120, 125, 135, 149, 150, 201, 205, 206, 207, and RCNSCI 232.
- 2. **Core courses** (4 credits required). GEOSCI 418 and 419 are required.
- 3. **Elective courses** (at least 8 credits required). Students may choose from: GEOSCI 416, 431, 437, 438, 439, 498 (for 1-3, but no more than 3 credits), 510, 511, 513; EEB 390, and EEB 461.

COURSES IN GEOLOGICAL SCIENCES (GEOSCI)

GEOSCI 100-115 and 170 are short (half-term) courses. They consist of detailed examinations of restricted geologic topics. The department lists the specific courses from this series in the *Schedule of Classes* for the terms they are offered (fall and winter terms only). Each course, when offered, meets twice weekly for half of the term (first half or second half), and the specific dates for each course are printed in the *Schedule of Classes*. These courses are designed primarily for students with no prior geologic training and they are open to all interested persons. GEOSCI 100-115 and 170 are offered on the graded pattern (*optional* pass/fail).

GEOSCI 100. Coral Reefs

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 156.

GEOSCI 102. Energy from the Earth (1). (NS). (BS). May not be repeated for credit.

GEOSCI 103. Dinosaurs and Other Failures

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 149.

GEOSCI 104. Ice Ages, Past and Future

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 151.

GEOSCI 105. Continents Adrift

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 205 or 146.

GEOSCI 106. Fossils, Primates, and Human Evolution

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 125.

GEOSCI 107. Volcanoes and Earthquakes

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 205, 146, or 147.

GEOSCI 108. When Earth Attacks: The Science Behind Natural Disasters

(1). (NS). (BS). May not be repeated for credit. No credit earned by students enrolled in or who have completed GEOSCI 147.

GEOSCI 109. Water and Society

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 206.

GEOSCI 110. History of the Oceans

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 222.

GEOSCI 111. Climate and Humankind

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 151 or 331.

GEOSCI 112. Life in Extreme Environments

(1 in the half-term). (NS). (BS). May not be repeated for credit. No credit granted to students who have completed or are enrolled in GEOSCI 175.

GEOSCI 113. Planets and Moons

(1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 204 or 153.

GEOSCI 114. Global Warming

High School math, physics, and chemistry. (1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 151.

GEOSCI 116 / ENVIRON 116. Introductory Geology in the Field

(5 in the half-term). (NS). (BS). May not be repeated for credit. Reduced credit if taken: GEOSCI/ENVIRON 117 receive 2 credits; GEOSCI/ENVIRON 119 or GEOSCI 120, 3 credits; GEOSCI 205 AND GEOSCI/ENVIRON 206, 3 credits; one of GEOSCI 205 OR GEOS-CI/ENVIRON 206, 4 credits. Su at Camp Davis, Wyoming.

GEOSCI 118 / ENVIRON 118. Introductory Geology Laboratory

Prior or concurrent enrollment in GEOSCI 119, or 205 and 206, or 135. (1). (NS). (BS). May not be repeated for credit. No credit if completed an introductory course in geology (GEOSCI/ENVIRON 116, 117, or 218). F, W.

GEOSCI 119 / ENVIRON 119. Introductory Geology Lectures

Concurrent enrollment in ENVIRON or GEOSCI 118 for the lab. (4). (NS). (BS). May not be repeated for credit. No credit granted if completed or enrolled in GEOSCI/ENVIRON 116, 117, 120. No credit granted if completed both GEOSCI 205 AND GEOSCI/ENVIRON 206. Only 3 credits with GEOSCI 205 or GEOSCI/ENVIRON 206. F, W.

GEOSCI 120 / ENVIRON 120. Geology of National Parks and Monuments

(4). (NS). (BS). May not be repeated for credit. No credit if completed GEOS-CI/ENVIRON 116, 117, or 119, or both GEOSCI 205 AND GEOSCI/ENVIRON 206. Only 3 credits with GEOSCI 205 or GEOSCI/ENVIRON 206. W.

GEOSCI 122 / AOSS 102 / ENVIRON 102. Extreme Weather

(3). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AOSS 202.

GEOSCI 125. Evolution and Extinction

(3). (NS). (BS). May not be repeated for credit. Those with credit for GEOSCI 106 may only elect GEOSCI 125 for 2 credits. May not be included in a concentration plan in Geological Sciences.

GEOSCI 130 / CHEM 108 / PHYSICS 119. The Physical World

High-school algebra. (4). (NS). (BS). (QR/2). May not be repeated for credit.

GEOSCI 142. From Stars to Stones

High school math and science. Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit. Those with credit for GEOSCI 114 may only elect GEOSCI 142 for 2 credits.

GEOSCI 146. Plate Tectonics

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed three of GEOSCI 105, 107, and 205. Those with credit for one of GEOSCI 105 and 107 may only elect GEOSCI 146 for two credits. Those with credit for GEOSCI 205, or both GEOSCI 105 and 107, may only elect GEOSCI 146 for one credit.

GEOSCI 147. Natural Hazards

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit. Those with credit for GEOSCI 107 or 205 may only elect GEOSCI 147 for 2 credits. Those who have credit for both GEOSCI 107 and 205 may only elect 147 for 1 credit.

GEOSCI 148. Seminar: Environmental Geology

High school math and science. Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 284. Those with credit for GEOSCI 109 may only elect GEOSCI 148 for 2 credits.

GEOSCI 150. Dinosaur Extinction and Other Controversies

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit.

GEOSCI 151. The Ice Ages: Past and Present

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit. Those with credit for GEOSCI 104 may only elect GEOSCI 151 for 2 credits. F.

GEOSCI 153. Earthlike Planets

High school science and math recommended. Only first-year students (including firstyear students with sophomore standing) may pre-register for this course. All other students need permission of instructor. (3). (NS). (BS). May not be repeated for credit. Those with credit for GEOSCI 113 may only elect GEOSCI 153 for 2 credits.

GEOSCI 154. Ocean Resources

High school science and math recommended. Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit.

GEOSCI 171 / AOSS 171 / BIOLOGY 110 / ENSCEN 171 / ENVIRON 110. Introduction of Global Change: Physical Processes

(4). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. Satisfies the geography requirement for State of Michigan certification for social studies teachers. F.

GEOSCI 172 / AOSS 172 / ENSCEN 172 / ENVIRON 111 / GEOG 111 / SOC 111. Introduction to Global Change: Human Impacts

(4). (SS). May not be repeated for credit. Satisfies the geography requirement for State of Michigan certification for social studies teachers. W.

GEOSCI 175 / ENVIRON 175. The Microbial World: How Unseen Organisms Shape our Planet

(4). (NS). (BS). May not be repeated for credit.

GEOSCI 201 / ENVIRON 209 / GEOG 201. Introduction to Physical Geography: The Earth System

(4; 3 in the half-term). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 144. Students who have completed GEOSCI 331 will receive only 3 credits. F.

GEOSCI 203 / BIOLOGY 203 / ENVIRON 203. Introductory Ethnobotany BIOLOGY 171. (3). (NS). (BS). May not be repeated for credit.

GEOSCI 205. How the Earth Works: The Dynamic Planet

(2). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 116, 117, 119, 120, or 146. No credit granted to those who have completed both GEOSCI 105 and 107. Those with credit for one of GEOSCI 105 and 107 may only elect GEOSCI 205 for 1 credit.

GEOSCI 206 / ENVIRON 206. How the Earth Works: The Water Cycle and Environment

(2). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI/ENVIRON 116, 117, 119, or 120. Those with credit for GEOSCI 109 may only elect GEOSCI/ENVIRON 206 for 1 credit.

GEOSCI 208. Hot Topics in the Earth Sciences

(1). (BS). May be elected twice for credit. Offered mandatory credit/no credit.

GEOSCI 210. Scientific Discovery in Earth Sciences: A Research Experience (3). (NS). (BS). May not be repeated for credit.

GEOSCI 222 / ENVIRON 232. Introductory Oceanography

(3). (NS). (BS). (QR/2). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AOSS 203.

GEOSCI 223 / ENVIRON 233. Introductory Oceanography, Laboratory

Concurrent enrollment in GEOSCI 222/ENVIRON 232. (1). (NS). (BS). (QR/2). May not be repeated for credit.

GEOSCI 238 / AAPTIS 238 / ACABS 238 / HISTORY 238. A History of Everything (4; 3 - 4 in the half-term). (ID). May not be repeated for credit.

GEOSCI 284 / ENVIRON 284. Environmental Geology

(4). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 148. Those with credit for GEOSCI 147 may elect GEOSCI/ENVIRON 284 for only 3 credits.

GEOSCI 298. Geological Sciences Internship

Consent of instructor required. (EXPERIENTIAL). May be repeated for a maximum of 3 credits. Offered mandatory credit/no credit.

GEOSCI 299. Independent Study and Research

Consent of instructor required. (1 - 6). (INDEPENDENT). May be repeated for a maximum of 12 credits.

GEOSCI 305. Sedimentary Geology

An introductory geological sciences laboratory course. (4). (NS). (BS). May not be repeated for credit. F.

GEOSCI 310. Petrology

GEOSCI 231 and permission of instructor. (4). (BS). May not be repeated for credit. W. GEOSCI 311. Geology of Michigan

(3). (NS). (BS). May not be repeated for credit.

GEOSCI 313. Geobiology

(4). (BS). May not be repeated for credit.

GEOSCI 314. Applied Geophysics

Introductory physics (1st year university of AP level without calculus). (4). (BS). May not be repeated for credit.

GEOSCI 315. Elements of Mineralogy

CHEM 125/126/130 or CHEM 210/211 or CHEM 230. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 431. Those with credit for GEOSCI 232 may elect GEOSCI 231 for only 2 credits.

GEOSCI 320 / AOSS 320. Earth Systems Evolution

MATH 116. (4). (BS). May not be repeated for credit.

GEOSCI 321 / AOSS 321. Earth Systems Dynamics

Preceded or accompanied by MATH 215 or 216. (4). (BS). May not be repeated for credit.

GEOSCI 323 / AOSS 323. Earth System Analysis

(4). (BS). May not be repeated for credit.

GEOSCI 325 / ENVIRON 325. Environmental Geochemistry

Introductory chemistry. (3). (NS). (BS). May not be repeated for credit.

GEOSCI 331. Climate and Climate Change

A working knowledge of high school algebra and physical sciences. (4). (NS). (BS). May not be repeated for credit. Students enrolled in or having completed GEOSCI 111, 144, or 201 will earn only 3 credits for this course

GEOSCI 341 / ENVIRON 341. Ecosystem Science in the Rockies

Introductory course in Geology, Ecology, or Global Change. (5 in the half-term). (NS). (BS). May not be repeated for credit. Su at Camp Davis, Wyoming. Satisfies the Geological Sciences concentration Field Experience requirement.

GEOSCI 344 / ENVIRON 344. Sustainable and Fossil Energy: Options and Conseauences

Consent of department required. At least one previous course in Physical Sciences or Engineering and permission of instructor. (3 in the half-term). (NS). (BS). May not be repeated for credit. Su at Camp Davis, Wyoming.

GEOSCI 350 / AOSS 350. Atmospheric Thermodynamics

MATH 216 or 256 or 286 or 316, with a C or better. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit.

GEOSCI 351. Structural Geology

One introductory geological sciences laboratory course. (4). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 451. W.

GEOSCI 370 / AOSS 370. Solar-Terrestrial Relations

MATH 216 and PHYSICS 240. (4). (BS). May not be repeated for credit.

GEOSCI 380 / ENVIRON 380. Mineral Resources, Economics, and the Environment No previous courses in Geology or other sciences are required. (4). (NS). (BS). (QR/2). May not be repeated for credit.

GEOSCI 381 / AOSS 380. Introduction to Atmospheric Radiation

MATH 216 or 256 or 286 or 316, with a C or better. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit.

GEOSCI 401 / AOSS 401. Geophysical Fluid Dynamics

PHYSICS 240, MATH 215, MATH 216, AOSS 323. (4). (BS). May not be repeated for credit.

GEOSCI 409 / AOSS 410. Earth System Modeling

GEOSCI 320 and 321; or AOSS 320 and 321. (4). (BS). May not be repeated for credit.

GEOSCI 411 / AOSS 411. Cloud and Precipitation Processes

350, MATH 216. (3). (BS). May not be repeated for credit.

GEOSCI 414 / AOSS 414. Weather Systems

AOSS 350, AOSS 401, AOSS 551. (3). (BS). May not be repeated for credit.

GEOSCI 418. Paleontology

An introductory course in Geology (GEOSCI 116, 119, 120 or 205/206/118) or BIOLOGY 162 or 171 or 172. (3). (BS). May not be repeated for credit. F.

GEOSCI 419. Paleontology Laboratory

Prior or concurrent enrollment in GEOSCI 418. (1). (BS). May not be repeated for credit. F.

GEOSCI 420. Introductory Earth Physics

MATH 116, 156, 176, 186, or 295. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

GEOSCI 422. Principles of Geochemistry

GEOSCI 231, 305, 310 and CHEM 125/126/130. (3). (BS). May not be repeated for credit. W.

GEOSCI 423 / AOSS 422. Boundary Layer Meteorology

AOSS 350 or equivalent. (4). (BS). May not be repeated for credit.

GEOSCI 427 / ENVIRON 437. Environmental and Technological Applications of Mineralogy

GEOSCI 231/232, comparable courses in the solid-state, or permission of instructor. (3). (BS). May not be repeated for credit.

GEOSCI 428. Mineral Surface Chemistry

One course in mineralogy, petrology, solid state chemistry, solid state physics, or materials science. (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

GEOSCI 436. Field Studies in Stratigraphy, Paleontology, and Sedimentology

Permission of instructor. (1 - 4). (BS). May be repeated for credit.

GEOSCI 437. Evolution of Vertebrates

GEOSCI 125 or BIOLOGY 162 or 171 or 172. (4). (BS). May not be repeated for credit.

GEOSCI 440. Field Course in Geology

Successful completion of courses in two or more of the following topics: mineralogy, sedimentary geology, igneous and metamorphic petrology, and structural geology. (8 in the half-term). (BS). May not be repeated for credit. Students interested in completing GEOSCI 440 are strongly recommended to complete GEOSCI 305, 350, and 351 prior to taking GEOSCI 440. Su at Camp Davis, Wyoming. Satisfies the Geological Sciences concentration Field Experience requirement. Rackham credit requires additional work.

GEOSCI 442 / ENVIRON 442. Earth Surface Processes and Soils

MATH 115 and CHEM 130. (4). (BS). May not be repeated for credit. F.

GEOSCI 445 / EEB 445. Biogeography

BIOLOGY 162 or 163 or 171 & 172 & 173 or 195 & 173. One course in historical geology is recommended. (3). (BS). May not be repeated for credit.

GEOSCI 449. Marine Geology

GEOSCI 222/223 or introductory physical geology (GEOSCI 116, 117, 120 or 205/206/118). (3). (BS). May not be repeated for credit.

GEOSCI 451. Introductory Earth Structure

Permission of Instructor. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GEOSCI 351. Geology and Oceanography concentrators should not enroll in GEOSCI 451, but elect GEOSCI 351.

GEOSCI 452. Paleoceanography

GEOSCI 117/119, GEOSCI 222. (3). (BS). May not be repeated for credit. Rackham credit requires additional work

GEOSCI 454 / AOSS 440. Meteorological Analysis Laboratory

AOSS 350, AOSS 401. (4). (BS). May not be repeated for credit. **GEOSCI 455.** Determinative Methods in Mineralogical and Inorganic Materials

One term of Chemistry and Physics. (4). (BS). May not be repeated for credit. W.

GEOSCI 457 / AOSS 451 / ENSCEN 451. Atmospheric Dynamics I AOSS 401 or MATH 450. (4). (BS). May not be repeated for credit.

GEOSCI 465 / AOSS 467 / CHEM 467 / ENSCEN 467 / ENVIRON 467. Biogeochemical Cvcles

MATH 116, CHEM 210, and PHYSICS 240 (or 260). (3). (BS). May not be repeated for credit. F, W.

GEOSCI 467. Stratigraphy and Basin Analysis

GEOSCI 116 or [119 and 118] or 120 or 201, or [205 and 206 and 207], or graduate standing. (Prerequisites enforced at registration.) GEOSCI 305, 310, and 351. (4). (BS). May not be repeated for credit. F.

GEOSCI 468. Data Analysis and Model Estimation

MATH 115. (Prerequisites enforced at registration.) Knowledge of, or willingness to learn, a programming language (e.g., Matlab, Mathematica). (2). (BS). (QR/2). May not be repeated for credit.

GEOSCI 475 / AOSS 475 / ENSCEN 475. Earth System Interactions

Senior standing in science or engineering. (4). (BS). May not be repeated for credit.

GEOSCI 477 / ENVIRON 479. Hydrogeology High school knowledge of PHYSICS, CHEMISTRY, and GEOSCI or equivalent. MATH 116. (4). (BS). May not be repeated for credit.

GEOSCI 483. Geophysics: Seismology

Prior or concurrent election of MATH 215 and PHYSICS 240 (or 260). (4). (BS). May not be repeated for credit.

GEOSCI 489. Geological Sciences Honors

Consent of instructor required. Permission of instructor. (1 - 6). (BS). (INDEPENDENT). May be repeated for a maximum of 6 credits.

GEOSCI 490. Geological Sciences Honors

Consent of instructor required. Permission of instructor. (1 - 6). (BS). (INDEPENDENT). May be repeated for a maximum of 6 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of GEOSCI 490, the final grade is posted for both term's elections. F, W, Sp.

GEOSCI 494. Experiential Learning in the Earth Sciences

Consent of instructor required. One of the following: GEOSCI 116, 119 and 118, 120, 201, 205/206/207, 222 & 223, or 284. Junior or senior standing. (1 - 4). (BS). (EXPE-RIENTIAL). May be repeated for a maximum of 8 credits. Offered mandatory credit/no credit.

GEOSCI 497. William T. Smith Lecture Seminar

Two required Geological Sciences concentration core courses. (1). May be elected twice for credit. Offered mandatory credit/no credit.

GEOSCI 498. Research or Special Work

Consent of instructor required. Permission of instructor. (1 - 6). (INDEPENDENT). May be repeated for a maximum of 6 credits.

GEOSCI 499. Research or Special Work

Consent of instructor required. Permission of instructor. (1 - 6). (INDEPENDENT). May be repeated for a maximum of 6 credits. F, W, Sp/Su, Sp, Su.

GEOSCI 515. Tectonics of Oceans and Continents

GEOSCI 351. (4). (BS). May not be repeated for credit.

GEOSCI 531. Seminar in Geologic Problems

Permission of instructor. (1 - 3). (BS). May be elected three times for credit. May be elected more than once in the same term.

GEOSCI 532. Seminar in Climate, Tectonics, and Surface Processes

Permission of instructor. (1 - 2). (BS). May be repeated for credit. May be elected more than once in the same term.

GEOSCI 534. Seminar in Geophysics, Tectonics, or Structure

Permission of instructor. (1 - 2). (BS). May be repeated for credit. May be elected more than once in the same term.

GEOSCI 535. Seminar in Mineralogy, Petrology, or Geochemistry

Permission of instructor. (1 - 2). (BS). May be repeated for credit. May be elected more than once in the same term

GEOSCI 536. Seminar in Stratigraphy, Paleontology, or Sedimentology

Permission of instructor. (1 - 2). (BS). May be repeated for credit. May be elected more than once in the same term.

Germanic Languages and Literatures

3110 Modern Languages Building 812 East Washington Street (734) 764-8018 (phone) (734) 763-6557 (fax) www.lsa.umich.edu/german e-mail: german.dept@umich.edu Associate Professor Julia Hell, Chair

Professors

- Kathleen Canning (Arthur F. Thurnau Professor), Modern Germany, modern European women and gender, labor and social movement
- Geoff Eley (Sylvia L. Thrupp Collegiate Professor of Comparative History; Karl Port Distinguished University Professor of Contemporary History), *German history, modern Europe, historiography, cultural studies*
- Andrei S. Markovits (Carl W. Deutsch Collegiate Professor of German and Comparative Politics, Arthur F. Thurnau Professor), German and European Politics, Comparative Political Sociology, Sociology of Culture and Sports
- George Steinmetz (Charles H. Tilly Collegiate Professor of Sociology and Germanic Languages and Literatures), *Social Theory, Historical Sociology, German Colonialism, Political Sociology*

Associate Professors

- Vanessa Agnew, Postcolonial Studies, German and Music, Eighteenth-Century German Literature and Culture
- Frederick Amrine (Arthur F. Thurnau Professor), Age of Goethe, Philosophy, Literature and Science
- Kerstin Barndt, Weimar Culture; Museum Studies; Feminist Theory
- Andreas Gailus, Literature and Philosophy, German Literature, 1770-1945, Textual Theory; Psychoanalysis
- Julia Hell, Twentieth-Century German Literature and Culture; Literary and Cultural Theory; Psychoanalysis and Feminist Theory
- Helmut Puff (Richard Hudson Research Professor of History), Early Modern German Literature and History, Gender Studies
- Robin Queen (Arthur F Thurnau Professor), *Sociolinguistics, Intonation, Language Contact, Bilingualism, Language and Gender, Germanic Linguistics*
- Scott Spector, Cultural History, Intellectual History, Film, German-Jewish Culture
- Johannes von Moltke, *Film Theory, Cultural studies, and German Film History; connections between German Film and Popular Culture*
- Silke-Maria Weineck, *Comparative literature, literary theory, aesthetics*

Assistant Professor

Kader Konuk, Comparative Literature, Turkish-German Studies, Postcolonial Studies

Lecturers

- Ton Broos, Dutch Language, Literature, and Culture
- Johanna Eriksson, Swedish Language, Literature, and Culture
- Karl-Georg Federhofer, *Foreign Language Acquisition, Contemporary Popular Culture*

Andrew Mills, 19th-Century Literature, Contemporary German Culture

- Hartmut Rastalsky, Language Pedagogy, Comparative Literature, Scientific German
- Janet VanValkenburg, Business German, 19th-Century Literature

Professors Emeriti Roy C. Cowen, Mary Crichton, Gerhard Dünnhaupt, Werner Grilk, Hans Fabian, Erich Hofacker, Robert L. Kyes, Robert Paslick, Hansjoerg Schelle, Ingo Seidler, Hermann F. Weiss

Germany has emerged as the strongest economy in Europe, and the State of Michigan has especially deep economic ties to Germany: Thus German is one of the most important languages for business and engineering. German is also centrally important for gaining a first-hand, fundamental knowledge of the aesthetic, philosophical, and scientific foundations of modern thought. By a wide margin, German is the most frequently required or recommended academic language.

At every level of our language program, we strive to appeal to the cognitive abilities and intellectual curiosity of adult students. Our language courses focus systematically on the development of all four basic language skills (listening, speaking, reading, and writing), while emphasizing context and meaning at all levels and in all spheres of the language acquisition process. It is fundamental to our program that all language courses encourage students to explore other worldviews and learn to think critically about culture.

The goals for the first two years of language study include increasing the level of proficiency in beginning and intermediate language students and meeting the needs and interests of the majority of students so that they will find the language requirement stimulating and useful. We believe that language learning is and should be fun in every sense of the word, and we hope that our courses live up to this expectation. Our special topics courses (GERMAN 232) are meant to provide an introduction to the discourse and substance of various disciplines in German and thus become stepping stones to coursework outside of the German concentration proper. These special topics include courses on German politics and economics, history, music, art, anthropology, film, engineering, and mathematical and scientific German. Upon completion of the fourth-term course, students are strongly encouraged to pursue an internship or study abroad in Germany. The German department and the Center for Global and Intercultural Study (CGIS) provide extensive assistance to students interested in doing this: students who go come back excited about their experience and speak excellent German.

Intermediate and advanced courses are designed both to enhance language skills and to explore central issues in all areas of German Studies. These courses are open not just to concentrators and academic minors but also to all students who meet prerequisites regardless of concentration area.

Students who enter the University with a background in the German language are strongly urged to continue their study of the language without interruption during their first and second years.

Placement Test and Retroactive Credit. Students with highschool credit for German who intend to complete the A.B./B.S. language requirement in German must take a placement test administered by Germanic Languages. The placement test is advisory: students may attempt a higher course than their placement indicates without departmental permission, but must obtain departmental permission to take a lower-level course than their score indicates. Students who have attained fourth-term proficiency (GERMAN 232 or the equivalent) are considered to have satisfied the language requirement and may elect more advanced courses. LSA students whose first German course at the U-M is GERMAN 232 are normally eligible for four additional retroactive credits if they complete the course with a grade of "B" or better. LSA students whose first course is at or above the 300-level are normally eligible for 8 additional retroactive credits. For details, consult the "Guidelines for Retroactive Credits" in Chapter IV of this Bulletin.

Questions regarding placement and the placement test should be directed to Hartmut Rastalsky.

German Studies in Translation. In the spirit of the Great Books courses, the German department regularly offers a number of courses based on the use of translations. These courses include selected literary classics from the Middle Ages to modern times, but also many other subjects, such as German film, German history, and

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German thought. Offerings vary from term to term: please consult the departmental website and the *Schedule of Classes*.

Prizes. The *Bronson-Thomas Prize* is awarded annually to an undergraduate student enrolled in junior-level or senior-level German courses. *The Kothe-Hildner Fund* provides many prizes each year in competitions open to students enrolled in first- and second-year German. The German Department's *Martin Haller Prize* is awarded annually to the student who submits the best senior Honors thesis. *Arati Sharangpani Scholarships* and *Charles Hubbs Scholarships* are available for study abroad. Awards for summer language study are provided by the *Sturm Family Endowment*.

Student Organizations. The undergraduate *German Club* sponsors a variety of activities aimed at promoting interest in German culture, language, and society.

The Max Kade German Residence Program (734) 764-8018 (phone) e-mail: maxkade@umich.edu www.lsa.umich.edu/german/german/kade

Residents of the Kade Program have the opportunity to learn and practice German in an informal setting: students at all levels are welcome. They are also able to participate in the many activities in the residence, such as film series, *Kaffeestunden*, and a mini-course featuring guest lectures by faculty. The Program also organizes and subsidizes trips to local cultural events, and to Berlin, Vienna, Munich or Hamburg over Spring Break. The *George Valenta Scholarship* is available each year for an upperclass concentrator residing in the Kade Program. The Max Kade House is now located in North Quad.

German

May be elected as a departmental concentration program

The objectives of the concentration program in German are:

- 1. to develop facility in the use of German;
- 2. to provide an integrated knowledge of major German writers in various disciplines; and
- 3. to gain insight into all aspects of German culture.

Concentration in German provides valuable background for work in all areas of today's global economy, and in the traditional areas of application of language study, such as international relations, teaching, translating, and the tourism industry. Consequently, dual concentrations in German and another subject (History, Political Science, *etc.*) are strongly encouraged.

Information about graduate opportunities and careers specifically available to students concentrating in German may be obtained from the department office.

Advising. A concentration plan in German is developed in consultation with and must be approved by Karl-Georg Federhofer (kallimz@umich.edu) or Andrew Mills (ajmills@umich.edu), the concentration advisors. Appointments can be scheduled by calling (734) 764-8018. German Department faculty are also available to students during regularly scheduled office hours which are posted on the bulletin board outside 3110 Modern Languages Building.

Prerequisites to Concentration. GERMAN 232, or the equivalent.

Concentration Program. Required are 30 credits in GERMAN beyond GERMAN 232. Courses in GERMAN must include GERMAN 325 or 326; three 300-level courses, at least two of which must be taught in German; GERMAN 425 or 426 or the equivalent; three additional 400-level GERMAN courses, at least two of which must be taught in German; and at least two additional GERMAN courses numbered 300 or higher, which may include courses taught in English. A minimum of 15 of the required 30 credits must be taken either in residence at Michigan or through a study abroad program affiliated with the University of Michigan. For further information,

contact Karl-Georg Federhofer (kallimz@umich.edu) or Andrew Mills (ajmills@umich.edu).

Honors Concentration. In meeting the requirements stated above, students admitted to the Honors concentration must include GERMAN 491 and 492 (Honors proseminar and thesis). Completion of preliminary work with distinction is a prerequisite to acceptance in the Honors concentration in German. Admission is granted to qualified students at the end of the junior year. For further information, consult Professor Barndt at (734) 764-8018.

Teaching Certificate. To secure departmental recommendation for a teaching major, students should elect at least three additional credits of senior or advanced work (GERMAN 531 or equivalent work in the School of Education) beyond the required concentration courses. To meet the requirements for a teaching minor in German, students should complete GERMAN 325 or 326, any two courses selected from among GERMAN 381, 382, 383, 384, 385, and eight additional credits of senior work (GERMAN 425, 426 and 531 are particularly recommended). All teaching certificate candidates should consult Kalli-Georg Federhofer (kallimz@umich.edu) or Andrew Mills (ajmills@umich.edu).

Internships. One of the most effective ways for students to immerse themselves in another culture is to work there. Moreover, internships provide real training, contacts, impressive lines for resumes, and sometimes even a foot in the door to a full-time job. Germanic Languages offers its students help in finding internships in German-speaking countries, and it makes numerous awards each year to subsidize internships. We attempt to find jobs that match students' abilities, interests, and career choices. The department has entered into a collaboration with the prestigious internship organization CDS International, which has opened a Midwest office inside the department. CDS has also established a special section on its website solely for U–M students. To learn more details about the program and the application process, see:

www.cdsintl.org/fromusa/umich.html or

contact Peggy Wunderwald-Jensen at (734) 615-6336.

Study Abroad. The department and the Center for Global and Intercultural Study offer two UM-affiliated study abroad programs for students of German, in Freiburg (Fall and Winter terms) and Tübingen, Germany (Winter term). See the Center for Global and Intercultural Study (CGIS) website for further information about these programs. Thanks to the generosity of the Sturm family, the department is able to give numerous scholarships each year in support of summer language study in Germany.

To learn more details about these study-abroad programs and the application process, contact Karl-Georg Federhofer at (734) 764-8018.

Dutch and Flemish Studies

Ton Broos, Director

Not a concentration program

Dutch Studies has been an integral part of the Department of Germanic Languages and Literatures since the early 1970s. The program offers both language and literature courses. The first- and secondyear courses satisfy the language requirement. Upper-level courses have ranged from the most modern literature to medieval genres, the literature of Rembrandt's time, and Vincent van Gogh's letters or Dutch colonial literature from The East Indies. Independent studies in combination with for instance European or World History, Anthropology, South African, or Indonesian Studies are encouraged. Hovering between English and German, Dutch is easy to learn for English speakers. Tutorials in the closely-related South African language Afrikaans are available on request.

A special course is offered: "Anne Frank in Past and Present" (DUTCH 492), in which the famous diary and its impact are studied and compared to other Holocaust writings. The first-year seminar

entitled "Colonialism and its Aftermath" (DUTCH 160) enhances and emphasizes the wide scope of Dutch and Flemish Studies, as the history of the low countries is examined in contacts with new worlds in East and West.

Each year in May, students of Dutch have the opportunity to acquire the internationally recognized certificate of proficiency in Dutch, on four levels.

The *Martin Zwart Scholarship for Study in the Netherlands and Belgium* is awarded each year. Grants are also available from the Dutch and Belgian Government for summer courses in Zeist (The Netherlands) and Hasselt (Belgium).

Scandinavian Studies

Johanna Eriksson, Director

Not a concentration program

Lecturers J. Eriksson (Swedish Language, Literature, and Culture), Maria Gull (Swedish Language, Norse Mythology)

Scandinavian countries have made important contributions to Western civilization, from the Sagas of the medieval period to the pioneers of modern drama, Ibsen and Strindberg, the children's literature of Astrid Lindgren, cinema, design, and other art forms. Scandinavian thinkers have also made crucial contributions to the development of the social welfare state, biotechnology, and engineering. Scandinavian companies such as Nokia, IKEA, and ABB are a major presence in international business, and it is a little-known fact that Sweden invest a higher percentage of it GDP in research than any other country in the world, including the U.S. Sweden is the thirdlargest exporter of music. According to the United Nations, the Scandinavian countries rank highest in the world in quality of life, and they offer revealing comparisons with other industrial and postindustrial societies. The study of these contributions deserves to be strongly represented at a great research university such as the University of Michigan. We are proud to recall that the Swedish diplomat Raoul Wallenberg, who saved tens of thousands of Hungarian Jews during the Holocaust, was a University of Michigan alumnus.

The Scandinavian program offers courses that take the pan-Scandinavian view in literature, history, culture, society, architecture, and the arts, plus courses that focus in depth on Swedish language and literature. Opportunities to study at the University of Uppsala during a junior year abroad program and to secure a summer internship in a Scandinavian country further enhance students' career options for graduate study, teaching, international business, or nonprofit work. Students enrolled in the fourth-term Swedish course have the opportunity to travel to Sweden as a group over Spring Break each year.

Summer Internships in Sweden. The department offers help in negotiating summer internships with Swedish companies, and is able to offer limited financial assistance to students who have secured an offer. Interested students should contact Johanna Eriksson.

Study Abroad. The University of Michigan has an exchange program with the University of Uppsala (Sweden) in which two students from each university are exchanged for the academic year, as well as with Stockholm University. Second-year competence in Swedish is desirable. The University also has an exchange program with Turku University in Turku, Finland. Finnish may be studied but is not required for this one-semester or academic year program. Students should apply in February for the following fall. Intensive Swedish classes are offered at Uppsala in the summer. Applications and information are available at the Center for Global and Intercultural Study (CGIS), 1712 Chemistry Building. The Swedish lecturer / program director and students who have been at Uppsala are available for consultation. Students intending to study at another university can consult program materials at the International Center.

Scandinavian Courses in Other Departments. The following courses are offered by other departments and programs:

ENGLISH 407, Reading Old English PHIL 371, Existentialism (Kirkegaard) SAC 330, Major Directors (Bergman) SAC 441, National Cinemas

Yiddish

Not a concentration program

There is no concentration in Yiddish, but students can select courses from the beginning level, YIDDISH 101-102, through 301-302, as well as a Yiddish literature course in English translation (JUDAIC 333).

Germanic Languages and Literatures Academic Minors

An academic minor in the Department of German Languages is not open to students with a concentration or another academic minor in the Department of Germanic Languages and Literatures.

Students wishing to pursue an academic minor in German Studies must develop a specific plan for its completion in consultation with concentration advisor Karl-Georg Federhofer. Students wishing to pursue an academic minor in Scandinavian Studies must develop a specific plan for its completion in consultation with Johanna Eriksson. Appointments may be scheduled at 3110 Modern Languages Building or by calling (734) 764-8018.

German Studies

The academic minor in German Studies provides students with an opportunity to gain and demonstrate competence in the German language above and beyond the level specified by the College language requirement. It also provides an opportunity for students to gain a deeper knowledge of a specific topic within the overarching discipline of German studies.

Prerequisites to the Academic Minor: GERMAN 231 or equivalent, as determined by the departmental placement examination.

Academic Minor Program: 18 credits of courses at the level of GERMAN 232 or higher, but GERMAN 305, 306, 405, and 406 may not be counted towards the academic minor. The 18 credits must include either GERMAN 325 or 326, and at least four courses within the 18 credits must be taught in German. At least one of the courses must be numbered 400 or above.

Scandinavian Studies

Prerequisites to the Academic Minor: SCAND 234 or equivalent, as determined by the departmental placement examination.

Academic Minor Program: At least 15 credits and five courses, to be chosen from the following categories as stated below.

- 1. Required Scandinavian courses: SCAND 331, 325, and 375.
- 2. **Electives:** Two courses chosen from among:
 - SCAND 351, 421, 430, 442, 460, 480; PHIL 371;
 - Appropriate (Scandinavian topic) sections of: ENGLISH 407, SAC 330, and SAC 441.

GERMANIC LANGUAGES AND LITERATURES

DUTCH (DUTCH)

DUTCH 111. First Special Speaking and Reading Course

(4). May not be repeated for credit. Graduate students should elect DUTCH 511. No credit granted to those who have completed or are enrolled in DUTCH 100. F.

DUTCH 112. Second Special Speaking and Reading Course

DUTCH 111. (4). May not be repeated for credit. Graduate students should elect DUTCH 512. No credit granted to those who have completed or are enrolled in DUTCH 100. W.

DUTCH 160. First Year Seminar: Colonialism and its Aftermath

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit. Taught in English. F.

DUTCH 231. Second-Year Dutch

DUTCH 112 or 100. (4). May not be repeated for credit. Graduate students should elect DUTCH 531. F.

DUTCH 232. Second-Year Dutch

DUTCH 231. (4). (Lang Req). May not be repeated for credit. Graduate students should elect DUTCH 532. W.

DUTCH 339. Independent Study

Consent of instructor required. Permission of instructor. (2 - 4). (INDEPENDENT). May be repeated for credit. F, W, Sp.

DUTCH 492. Colloquium on Modern Dutch Culture and Literature

(3). May be repeated for a maximum of 6 credits. Taught in English. W.

GERMAN (GERMAN)

GERMAN 100. Intensive Elementary Course

(8). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 101, 102 or 103.

GERMAN 101. Elementary Course

All students with prior coursework in German must take the placement test. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 100 or 103. F, W, Su.

GERMAN 102. Elementary Course

GERMAN 101. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 100 or 103. F. W. Sp.

GERMAN 103. Review of Elementary German

Assignment by placement test or permission of department. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 100, 101, or 102.

GERMAN 111. First Special Reading Course

Permission of the department. (4). May not be repeated for credit.

GERMAN 112. Second Special Reading Course

GERMAN 111 or placement test. (4). May not be repeated for credit. W, Su.

GERMAN 191 / RCLANG 191. Intensive German I

(8). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 100, 101, 102, or 103. Conducted in German. Pass/Fail with Narrative Evaluation.

GERMAN 205. Conversation Practice

GERMAN 102 or 103. (1). May not be repeated for credit. Students previously enrolled in a 300- or 400-level GERMAN conversation course may not register for GERMAN 205 or 206. May not be included in a concentration plan or minor in German. Offered mandatory credit/no credit.

GERMAN 206. Conversation Practice

GERMAN 102 or 103. (1). May not be repeated for credit. Students previously enrolled in a 300- or 400-level GERMAN conversation course may not register for GERMAN 205 or 206. May not be included in a concentration plan or minor in German. Offered mandatory credit/no credit.

GERMAN 212 / SOC 212. Sports and Society

(3). (SS). May not be repeated for credit. Taught in English.

GERMAN 221. Accelerated Third Semester German

GERMAN 102 and assignment by placement test. (5). May not be repeated for credit. No credit granted to those who have completed GERMAN 230 or 231. Four credits aranted to those who have completed GERMAN 102 or 103.

GERMAN 230. Intensive Second-Year Course

GERMAN 102 or 103 or equivalent and assignment by placement test, or permission of instructor. (8). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 221, 231, or 232.

GERMAN 231. Second-Year Course

GERMAN 102 or 103 and assignment by placement test. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 230 or 221.

GERMAN 232. Second-Year Course

GERMAN 221 or 231 and assignment by placement test. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 230. All sections of GERMAN 232 address special topics, e.g., music, philosophy, science, current political issues, etc. F, W, Sp, Su.

GERMAN 243. Faust

(3; 2 in the half-term). (HU). May not be repeated for credit. Taught in English.

GERMAN 291 / RCLANG 291, Intensive German II

RCLANG 191/GERMAN 191, GERMAN 102, 103, or 221. (8). (Lang Reg). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 230, 231, or 232. Pass/Fail with Narrative Evaluation.

GERMAN 300. German Grammar and Composition

GERMAN 230 or 232. (4). May not be repeated for credit. Taught in German.

GERMAN 302. German, Politics, History, and Society

Consent of department required. (3). (SS). May be elected three times for credit.

GERMAN 303. German Culture, Literature, and the Arts

Consent of department required. (3). (HU). May be elected three times for credit. **GERMAN 305.** Conversation Practice

GERMAN 230, 231, or 232; concurrent enrollment in a 300-level course is encouraged but not necessary. (1). May be elected twice for credit. Students who have previously participated in a 400-level GERMAN conversation course may not register for GER-MAN 305 or 306. This course does not satisfy the language requirement. May not be included in a concentration plan or academic minor in German. Taught in German. Offered mandatory credit/no credit.

GERMAN 306. Conversation Practice

GERMAN 230, 231, or 232; concurrent enrollment in a 300-level course is encouraged but not necessary. (1). May not be repeated for credit. Students who have previously participated in a 400-level GERMAN conversation course may not register for GER-MAN 305 or 306. This course does not satisfy the language requirement. May not be included in a concentration plan or academic minor in German. Offered mandatory credit/no credit.

GERMAN 308. Preparation for Study Abroad

GERMAN 231 or permission of instructor. (2). May not be repeated for credit.

GERMAN 310. Studies in German Culture

Residence in Max Kade German House; others by permission of instructor. (1). May be repeated for a maximum of 4 credits. Taught in English. Offered mandatory credit/no credit.

GERMAN 312. Study Tour Abroad

Consent of department required. Max Kade Resident or GERMAN 221/231 or 310. (1). (EXPERIENTIAL). May be elected twice for credit.

GERMAN 322 / HISTORY 322. The Origins of Nazism

(4). (HU). May not be repeated for credit. Taught in English.

GERMAN 325. Intermediate German

GERMAN 230 or 232, or the equivalent (placement test) or permission of instructor. (3). May be elected twice for credit. May be elected more than once in the same term. Tauaht in German

GERMAN 326. Intermediate German

GERMAN 230, 232, or the equivalent (placement test) or permission of instructor. (3). May be elected twice for credit. May be elected more than once in the same term. W.

GERMAN 329, Independent Study

Consent of instructor required. PER. CHRM. (1 - 4; 1 - 2 in the half-term). (INDEPEN-DENT). May be repeated for credit. F, W, Sp, Su.

GERMAN 330. German Cinema

(3; 2 in the half-term). (HU). May not be repeated for credit. Taught in English.

GERMAN 349. Working in Germany

GERMAN 231. (1). May not be repeated for credit.

GERMAN 350. Business German

GERMAN 230 or 232, or the equivalent (placement test) or permission of instructor. (3). May not be repeated for credit. Taught in German.

GERMAN 351. Practice in Business German

Internship in a German-speaking country. (3). (EXPERIENTIAL). May not be repeated for credit.

GERMAN 356. Introducing German to Elementary and Middle School Students

GERMAN 230, 232, or GERMAN 291 or RCLANG 291. (Prerequisites enforced at registration.) (3). (EXPERIENTIAL). May not be repeated for credit.

GERMAN 357. Tutoring High-School German Students

Sophomore Standing or beyond. Completion of one graded German course beyond GERMAN 300. (Prerequisites enforced at registration.) (3). (EXPERIENTIAL). May not be repeated for credit.

GERMAN 375 / MEMS 375 / SCAND 375. Celtic and Nordic Mythology (3). (HU). May not be repeated for credit. Taught in English.

GERMAN 380. Introduction to German Literature

GERMAN 232. (3). (HU). May not be repeated for credit.

GERMAN 383. Learning to Read German Lyric Poetry

GERMAN 230 or 232, or the equivalent (placement test) or permission of instructor. (3; 2 in the half-term). (HU). May not be repeated for credit.

GERMAN 384. Short Fiction: Romanticism to Realism

GERMAN 230, 232, or the equivalent (placement test) or permission of instructor. (3; 2 in the half-term). (HU). May not be repeated for credit.

GERMAN 385. Short Fiction: Naturalism to the Present

GERMAN 230, 232, or the equivalent (placement test) or permission of instructor. (3; 2 in the half-term). (HU). May not be repeated for credit.

GERMAN 386. Fairy Tales

(3). (HU). May not be repeated for credit.

GERMAN 390. Thinking Hard: Readings in the History of German Theory (3). May not be repeated for credit.

GERMAN 398. German Studies Topics in English Translation

(3). May be elected twice for credit. May be elected more than once in the same term. **GERMAN 399. Special Topics in German Studies**

GERMAN 230, 232, 291 or equivalent. (3). May be elected twice for credit. May be elected more than once in the same term.

GERMAN 401 / HISTORY 416. Nineteenth-Century German and European Intellectual History

(3). May not be repeated for credit. Tauaht in Enalish.

GERMAN 402 / HISTORY 417. Twentieth-Century German and European Thought (3). May not be repeated for credit. Taught in English.

GERMAN 403. Nineteenth-Century German and European Thought (LAC)

GERMAN 231, and concurrent enrollment in GERMAN 401. (1). May not be repeated for credit.

GERMAN 405. Conversation Practice

GERMAN 305 or 306. (1). May not be repeated for credit. May not be included in a concentration plan or academic minor in German. F. Offered mandatory credit/no credit.

GERMAN 406. Conversation Practice

GERMAN 305 or 306. (1). May not be repeated for credit. May not be included in a concentration plan or academic minor in German. W. Offered mandatory credit/no credit.

GERMAN 425. Advanced German

GERMAN 325, 326 or permission of instructor. (3). May not be repeated for credit. Taught in German, Rackham credit requires additional work.

GERMAN 426. Advanced German

GERMAN 325, 326 or permission of instructor. (3; 2 in the half-term). May not be repeated for credit. W. Rackham credit requires additional work.

GERMAN 430 / BA 499. Doing Business in German

GERMAN 350 or one 300-level course beyond GERMAN 232, and permission of instructor. (3). May not be repeated for credit. W.

GERMAN 431. Business German: Management and Marketing

GERMAN 350 or 430. (3). May not be repeated for credit. Taught in German.

GERMAN 449. Special Topics in English Translation

(3). May be elected three times for credit. May be elected more than once in the same term. Tauaht in Enalish. Rackham credit requires additional work.

GERMAN 450. Medieval German Literature in Modern German Translation

One year beyond GERMAN 232. (3; 2 in the half-term). May not be repeated for credit. Rackham credit requires additional work.

GFRMAN 454. German Romanticism

One year beyond GERMAN 232. (3; 2 in the half-term). May not be repeated for credit. Rackham credit requires additional work.

GERMAN 455. Nineteenth-Century German Fiction

One year beyond GERMAN 232. (3; 2 in the half-term). May not be repeated for credit. Rackham credit requires additional work.

GERMAN 457. Twentieth Century German Fiction

One year beyond GERMAN 232. (3; 2 in the half-term). May be elected twice for credit. Taught in German. Rackham credit requires additional work.

GERMAN 460. Islam and the West: Critical Perspectives on European Literature (3). May not be repeated for credit.

GERMAN 464. Postwar German Ethnicities in Literature and Culture

One year beyond GERMAN 232. (3). (R&E). May not be repeated for credit. Taught in German.

GERMAN 490. Topics in German Culture

Junior or senior standing. (1). May be elected twice for credit. May be elected more than once in the same term

GERMAN 491. German Honors Proseminar

Senior Honors standing. (3; 2 in the half-term). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of GERMAN 492, the final grade is posted for both term's elections. F.

GERMAN 492. German Honors Proseminar

Senior Honors standing. (3; 2 in the half-term). May not be repeated for credit. W. **GERMAN 499. Seminar in German Studies**

One year beyond GERMAN 232. (3; 2 in the half-term). May be repeated for credit. May be elected more than once in the same term.

GERMAN 517 / ANTHRCUL 519 / LING 517. Principles and Methods of Historical Linguistics

Graduate standing, or permission of instructor. (3; 2 in the half-term). May not be repeated for credit.

GERMAN 531 / EDCURINS 431. Teaching Methods

Senior standing; and candidate for a teaching certificate. (3). May not be repeated for credit. F.

GERMAN 540. Introduction to German Studies Permission of instructor. (3). May not be repeated for credit.

SCANDINAVIAN (SCAND)

SCAND 103. Elementary Swedish

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SCAND 100.

SCAND 104. Elementary Swedish

SCAND 103. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SCAND 100.

SCAND 233. Second-Year Swedish SCAND 104 or 100. (4). May not be repeated for credit.

SCAND 234. Second-Year Swedish

SCAND 233. (4). (Lang Req). May not be repeated for credit.

SCAND 305. Conversation Practice SCAND 234. (1). May not be repeated for credit. Offered mandatory credit/no credit.

SCAND 325. Third Year Swedish SCAND 234. (Prerequisites enforced at registration.) (4). May be elected twice for credit.

SCAND 331. Introduction to Scandinavian Civilization (3). (HU). May not be repeated for credit. Taught in English.

SCAND 349. Independent Study

Consent of instructor required. Permission of instructor. (2 - 4). (INDEPENDENT). May be repeated for credit. F. W. Sp.

SCAND 351. Practice in Business Swedish

SCAND 234, plus internship in a Scandinavian country. (3). (EXPERIENTIAL). May not be repeated for credit.

SCAND 375 / GERMAN 375 / MEMS 375. Celtic and Nordic Mythology (3). (HU). May not be repeated for credit. Taught in English. F.

SCAND 405. Conversation Practice

SCAND 305. (1). May not be repeated for credit. Offered mandatory credit/no credit.

SCAND 442. The Icelandic Saga (in English Translation) Upperclass standing or permission of instructor. (3). May not be repeated for credit. Taught in English.

YIDDISH (YIDDISH)

YIDDISH 101 / JUDAIC 101. Elementary Yiddish I

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 431/YIDDISH 431. F.

YIDDISH 102 / JUDAIC 102. Elementary Yiddish II

JUDAIC/YIDDISH 101. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 432/YIDDISH 432. W.

YIDDISH 201 / JUDAIC 201. Intermediate Yiddish I

JUDAIC/YIDDISH 102. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 531/YIDDISH 531. F.

YIDDISH 202 / JUDAIC 202. Intermediate Yiddish II

JUDAIC/YIDDISH 201. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 532/YIDDISH 532. W.

YIDDISH 301 / JUDAIC 301. Advanced Yiddish I

JUDAIC/YIDDISH 202. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 631/YIDDISH 631.

YIDDISH 302 / JUDAIC 302. Advanced Yiddish II

JUDAIC/YIDDISH 301. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 632/YIDDISH 632.

Center for Global and Intercultural Study (CGIS)

1712 Chemistry 930 North University Avenue (734) 764-4311 (phone) (734) 764-3229 (fax) www.lsa.umich.edu/cgis e-mail: cgis@umich.edu Dr. A.T. Miller, Faculty Director

Not a concentration program.

Established in July 2009, the Center for Global and Intercultural Study (CGIS) was created to provide a wide variety of global engagement and learning opportunities to the University of Michigan community. CGIS programming serves students with diverse academic interests at sites in all regions of the world, international and domestic.

CGIS also offers administrative and academic support to departments and units across campus hoping to launch their own individualized programs.

Advising. Every day of the academic term, CGIS conducts peerfacilitated sessions, called *Ready, Set...Go Global,* which identify global opportunities available to all U-M students. CGIS program advisors also assist students in determining the opportunity most consistent with their academic and professional goals as well as their personal interests. Students should attend a Ready, Set...Go Global session and meet with a CGIS program advisor to better understand the different advantages of various types of CGIS-supported programming.

Financial Aid. Students may apply Michigan awarded financial aid to CGIS program costs. Please contact the Office of Financial Aid for details.

Programs. CGIS staff support student participation in four different program areas.

- Global Course Connections
- Spring/Summer Language Study
- Global Intercultural Experience for Undergraduates
- Michigan Global Academic Programs

Global Course Connections

These short-term programs offer an excellent and affordable opportunity for students interested in field-based extensions to on-campus courses. Students enroll for selected courses on campus in the winter or fall terms and then travel (2-4 weeks) with classmates to a field site where they can put into practice or experience what they have learned. Students receive additional 1-2 credit hours for the projects they complete on site. Registration for the field study component requires permission from the instructor. Recent courses have taken students to observe labor practices on the Mexican border, experience Thai culture related to their language study, and look at social conditions in contemporary South Africa. These courses are offered through their home departments. Consult the CGIS website for course details.

Spring/Summer Language Study

These spring or summer term programs allow students to complete their third *and* fourth term language requirement in one intensive half term in the field. Students deepen their comfort and fluency in a non-English language through direct immersion as they live with host families and/or participate in internship/volunteer placements. These special language programs are offered during the spring/summer terms enabling students to complete their language requirement during their first year, if desired. Students register for these courses through the departments offering the language. Consult the CGIS website for course details or speak to an undergraduate advisor.

Global Intercultural Experience for Undergraduates

GIEU expands learning beyond traditional classroom boundaries through intercultural, short-term (3 or 4 week summer) service projects. Small groups of diverse students called GIEU Student Scholars are mentored by U-M faculty members and travel to culturally-rich locations in the U.S. and around the world. Projects benefit local communities and give students the opportunity to work closely with local community members. GIEU emphasizes gaining intercultural skills, and as such, students are matched with field sites after being admitted to the program. Participation involves a year-long commitment, and students receive a paid internship and academic credit. Students apply to the program in early November and are registered for UC 275 or UC 276 (in winter and fall terms) by the instructor following acceptance.

COURSES

UC 275. Global Intercultural Experience for Undergraduates

UC 275 is an interdisciplinary experiential introduction to intercultural learning that prepares diverse undergraduate students from various colleges for field experience interactions, and then helps students bring these experiences back to campus in socially and academically productive ways. It is a series of concentrated seminars of orientation, debriefing, and symposium.

UC 276. GIEU Leadership Seminar

The Global Intercultural Experience for Undergraduates (GIEU) Leadership Seminar provides leadership training and experience for exceptional students nominated by faculty from those having completed UC 275.

Michigan Global Academic Programs

These programs offer global opportunities for students to study off campus during the entire academic year, spring, summer, fall or winter terms. Educational opportunities are categorized into exchange programs at institutions where students take university-level courses with locals or in programs structured specifically for a variety of American university students.

For courses not taught in English, these extended, in-depth opportunities allow students to achieve a higher degree of fluency. Please note that is often possible to take courses in English even in non-English speaking countries. Many of the programs also have academic themes best explored on site, such as Art History in Paris, France or Health and Nutrition in the Dominican Republic.

Students can earn Michigan in-residence credit for their coursework. Students apply to desired program. Following acceptance, students register for the appropriate STDABRD course.

COURSES

Courses organized by country then course number.

AUSTRALIA

STDABRD 369. UM at University of Western Australia, Perth.

Students enroll directly in classes covering a broad range of subjects. Fall, winter, and academic year.

STDABRD 468. UM at University of New South Wales, Australia.

Students enroll directly in classes chosen from a broad range of subjects. Fall, winter, and academic year.

STDABRD 489. UM at University of Melbourne, Australia.

Students enroll directly in classes spanning the full range of liberal arts subjects. Fall, winter, and academic year.

BRAZIL

STDABRD 404. UM/CIEE in Bahía, Brazil.

Students with intermediate levels of Portuguese take courses in intensive language and Brazilian contemporary culture. Summer.

STDABRD 491. UM at Universidade Federal de Bahía, Brazil.

Students attend classes taught in Portuguese at the Federal University of Bahía (UFBa). Fall or winter.

STDABRD 492. UM/CIEE at Universidade Católica de Salvador, Bahía, Brazil.

Students with strong Portuguese language skills enroll directly at the university. The program also offers several courses specifically designed for program participants and taught by local faculty. These include a mandatory language course and electives on Brazilian culture. Fall or winter.

CANADA

STDABRD 359. UM/CIC at Université Laval, Québec, Canada.

This program offers courses in French language and literature. Summer.

CHILE

STDABRD 363. UM at Pontifícia Universidad Católica de Chile, Santiago.

Students take classes taught in Spanish alongside Chilean students. Fall, winter, and academic year.

CHINA

STDABRD 250. UM/Beijing Intensive Language Studies, Beijing, China.

The program offers an intense language immersion program, where students complete one year of language instruction in eight weeks. Language levels from first-year to advanced are available in Standard Mandarin (simplified characters). Summer.

STDABRD 320. Contemporary Issues in China, Beijing, China.

Students attend a series of month-long module courses on contemporary Chinese issues (history, economics and culture) taught in English. In addition to Chinese language instruction, the program includes field trips and experiential learning. Both Honors and regular academic tracks are available. Winter.

STDABRD 321. Beijing Chemistry (Peking University).

Students enroll in three courses at Peking University: Analytical Chemistry (with lab), Chinese culture (taught in English), and Chinese language (required). Completion of Chinese 101 is required. Winter only.

STDABRD 325. UM/Beijing Chinese Studies, Beijing, China.

Students take Chinese language (beginning to advanced), a mandatory Chinafocused core course, and one area studies elective. Summer.

COSTA RICA

STDABRD 303. UM at Institute for Central American Development Studies, San Jose, Costa Rica.

Students take classes in intensive language, tropical ecology, Latin American political economy, and development theory. Fieldwork in sustainable development and resource management, plus an independent research project, required. Fall or winter.

CUBA

STDABRD 375. Havana, Cuba.

The program focuses on Cuban cultural arts, ethnography, and Spanish language. Students will take courses on Cuban culture, history, art and literature at a local institute, plus courses taught by a U-M faculty member. Winter.

CZECH REPUBLIC

STDABRD 332. UM/CERGE-EI at Charles University, Czech Republic.

In addition to mandatory Czech language, students choose from a selection of English-taught offerings focusing on the Czech Republic and Central Europe. Fall, winter, and academic year.

DOMINICAN REPUBLIC

STDABRD 366. UM/CIC Health & Nutrition, Dominican Republic.

Designed for pre-health majors, this program offers Spanish language training and an interdisciplinary seminar taught in English on Latin American and Caribbean Health and Nutrition. Summer.

EGYPT

STDABRD 307. American University in Cairo (AUC).

AUC offers a broad range of courses in the humanities, social sciences, and sciences. With the exception of Arabic language, all courses are taught in English. Summer, fall or winter.

FINLAND

STDABRD 464. UM at University of Turku, Finland.

Students take classes, taught in English, in business, economics, Scandinavian, Baltic, and East European studies. Fall, winter, and academic year.

FRANCE

STDABRD 230. UM Summer at Université Stendhal, Grenoble, France. *Students with intermediate and advanced level French enroll in a language class taught by U-M faculty and classes taught in French. Summer.*

STDABRD 280. UM Art History in Paris, France.

Students enroll in two art history courses, taught in English by U-M faculty, a core course, and a French language course. Winter.

STDABRD 350. UM at Université d'Aix Marseille, France.

After a special four-week intensive program, students enroll directly in courses in disciplines such as economics, history, political science, and literature, taught in French. Winter or academic year.

STDABRD 486. UM at Institut d'Etudes Politiques (Sciences Po) Paris, France.

Students with advanced French enroll in a full-range social sciences curriculum. All courses taught in French. Academic year.

GERMANY

STDABRD 345. UM at Universität Tübingen, Germany.

Intermediate and advanced-level students enroll in an intensive preparatory language course and then select classes from a full range of options. Winter.

STDABRD 351. UM at Universität Freiburg, Germany.

After a four-week intensive language program, students enroll in humanities and social science courses taught in German, with supplementary courses offered at the program center. Academic year.

GREAT BRITAIN

STDABRD 312. UM/MSU Nursing in London.

This program covers nursing education in the UK, historical development of nursing and health care, and nursing practice as a social institution. Lectures are combined with clinical observation. Summer.

STDABRD 333. UM at St. Peter's College, Oxford, England.

Students may enroll in a series of tutorials at St. Peter's College in Oxford University. Academic year.

STDABRD 344. UM Summer in London, England.

Students enroll in three classes focusing on modern British society, culture and the arts. Summer.

STDABRD 358. UM/CIC Political Science Internships in British Government and Politics, London, England.

Students spend eight weeks working with Members of Parliament, in other government offices, or with various non-governmental political action groups. Spring.

STDABRD 364. UM at Sussex University, England.

Students may enroll in a full range of classes. Winter or academic year.

STDABRD 452. UM at St. Peter's College, Oxford, England.

Students take seminars in either medieval or environmental studies with integrated field trips. Summer only.

STDABRD 455. UM at University of Essex, England.

Students may enroll in a full range of classes. Winter or academic year.

STDABRD 456. UM at London School of Economics, England.

Students enroll directly in classes as part of the General Course at the London School of Economics (LSE). Academic year.

STDABRD 458. UM at University of St Andrews, Scotland. Students may enroll in a full range of classes. Winter or academic vear.

STDABRD 481. UM at Queen Mary – University of London, England. Students may enroll in a full range of classes. Winter or academic year.

STDABRD 483. UM at University College London, England.

Students may enroll in a full range of classes. Winter or academic year.

GREECE

STDABRD 340. UM/College Year Athens, Greece.

Students take courses in history, literature, philosophy and archaeology, among other fields, as well as ancient and modern Greek language. Summer, fall, winter, and academic year.

STDABRD 473. UM/Penn State University in Athens, Greece.

The curriculum in classical and contemporary Greek studies includes courses on modern Greek language and on Greek history, architecture, and philosophy. Winter.

INDIA

STDABRD 476. UM/U Wisconsin in Varanasi, India.

UM participants study Hindi plus area studies topics through tutorials and extensive field research. The academic year program is preceded by a mandatory 10-week summer program in Wisconsin. Academic year plus summer.

IRELAND

STDABRD 368. UM Summer at Trinity College, Dublin, Ireland.

The program focuses on Irish studies, literature, theatre and history. Summer.

ITALY

STDABRD 304. UM Spring in Florence - Honors.

Students and faculty live and study at the Villa Corsi-Salviati. Students take two Honors classes this program. Spring plus winter coursework at U-M.

STDABRD 330. Padova (Università di Padova).

Students enroll directly in classes chosen from a broad range of subjects. All courses are in Italian. Winter or academic year.

STDABRD 353. UM at the Intercollegiate Center for Classical Studies, Rome.

Students majoring in classics, classical history, or archeology take four classes in Latin, Greek, art history, and Italian. Knowledge of Latin or Greek required. Fall, winter, and academic year.

STDABRD 355. UM at the Intercollegiate Center for Classical Studies, Sicily.

Students majoring in classics, classical history, or archeology take four classes on Mediterranean Culture, Greek or Latin, art history and Italian language. Knowledge of Latin or Greek required. Fall, winter, and academic year.

STDABRD 403. UM Spring in Florence - Music.

Students and faculty live and study at the Villa Corsi-Salviati. Courses focus on the history of opera, voice performance, and Italian for opera singers. Spring.

STDABRD 453. UM in Florence, Italy.

Students and faculty live and study at the Villa Corsi-Salviati. Classes, taught in English, focus on art history, Italian politics, and literature. An Italian language class is required. Summer, fall, winter and academic year.

JAPAN

STDABRD 348. UM at Kyoto Consortium for Japanese Studies, Kyoto, Japan.

A program for intermediate and advanced Japanese language study and courses in Japanese society and culture. Fall, winter, and academic year.

STDABRD 349. UM at Japan Center for Michigan Universities, Hikone, Shiga, Japan.

The program offers coursework in Japanese language as well as Japanese culture, business, and environmental studies. No Japanese required. Fall, winter, and academic year.

STDABRD 466. UM at Kyushu University, Fukuoka, Japan.

Students study Japanese language and take a variety of Japan-related courses, taught in English. Academic year.

STDABRD 467. UM at University of Tokyo, Komaba campus, Japan.

This program offers Japanese language study and a selection of classes in Japanese area studies, taught in English. Academic year.

KOREA

STDABRD 373. UM at Ewha Woman's University, Seoul, South Korea.

The program offers Korean language training and area studies coursework in English. Program is not limited to female participants. Summer, fall, winter, and academic year.

STDABRD 374. UM at Yonsei University, Seoul, South Korea.

Students take Korean language courses, plus chose from a wide range of courses in the Underwood International College, taught in English. Fall, winter, and academic year.

MEXICO

STDABRD 356. UM/CIC at University of Guanajuato, Mexico.

Students take advanced Spanish language, Latin American literature, and Spanish-American history and culture. Instruction is in Spanish. Summer.

THE NETHERLANDS

STDABRD 402. UM at Leiden University, the Netherlands.

The program offers courses in Dutch language and culture, government, European politics, and global studies. Students with no previous knowledge of Dutch are required to take Dutch language. Fall, winter, and academic year.

NEW ZEALAND

STDABRD 308. UM at EcoQuest, New Zealand.

Students take interdisciplinary coursework in ecology and environmental policy, combined with field work and a directed research project. Fall or winter.

POLAND

STDABRD 463. UM/CIEE at Warsaw School of Economics, Poland.

This program offers specially designed courses in East and Central European politics, literature, history, business, and economics, plus Polish language. Fall, winter, and academic year.

RUSSIA

STDABRD 346. UM-Middlebury in Russia.

Students with advanced level competence in Russian study at the State Universities of Moscow, Yaroslavl, or Irkutsk. Classes are chosen from a wide range of disciplines. Fall, winter, and academic year.

STDABRD 362. UM/CIEE at University of St Petersburg, Russia.

Students take Russian language and area studies classes. Fall, winter, and academic year.

SENEGAL

STDABRD 310. UM at Université Cheikh Anta Diop, Dakar, Senegal.

Students with advanced French take classes in African languages, and West African history, art, and literature. All courses taught in French. Winter.

SINGAPORE

STDABRD 352. UM at National University of Singapore.

Students select courses taught in English through the Faculty of Arts & Science and the Faculty of Social Science. Fall, winter, and academic year.

SOUTH AFRICA

STDABRD 487. UM at University of Cape Town, South Africa.

Students take a wide range of liberal arts and science courses taught in English. Fall or winter.

STDABRD 488. UM at University of KwaZulu-Natal, South Africa.

This program enrolls students in courses on either the Durban or the Pietermaritzburg campus. Instruction in English. Fall or winter.

SPAIN

STDABRD 240. UM Summer at Universidad de Salamanca, Spain.

Students study intermediate or advanced Spanish with UM faculty members and enroll in classes at the university. Summer.

STDABRD 306. UM/IES at Universidad Complutense de Madrid.

Students take intensive Spanish classes at the IES Center and regular classes at the Complutense. A credit-bearing internship option is available. All classes taught in Spanish. Winter.

STDABRD 390. UM/UI-UC at Universidad de Granada, Spain.

Students take liberal arts courses at the Universidad de Granada and language courses at the Centro Granadí de Español. All classes taught in Spanish. Winter,

STDABRD 459. UM at Universidad de Sevilla, Spain.

Students take classes in all disciplines at the University of Seville, as well as courses at the program center. All classes taught in Spanish. Winter or academic year.

SWEDEN

STDABRD 461. UM at Uppsala University, Sweden.

Students take liberal arts classes offered in Swedish and English. Fall, winter, and academic year.

STDABRD 462. UM at Stockholm University, Sweden.

Students take liberal arts and science classes offered in Swedish and English. Fall, winter, and academic year.

SWITZERLAND

STDABRD 410. Geneva, Switzerland.

Upper level students do research with teams, make presentations, and attend seminars at CERN and/or UN agencies, with the opportunity to take additional course work at the University of Geneva.

STDABRD 465. UM at Université de Lausanne, Switzerland.

Students with advanced French enroll in courses, taught in French, from a wide variety of disciplines. Fall, winter, and academic year.

TAIWAN

STDABRD 360. UM/CIEE at National Chengchi University, Taiwan.

This program offers Chinese language training and area studies courses. Fall, winter, and academic year.

THAILAND

STDABRD 361. UM/CIEE in Khon Kaen, Thailand.

This program offers Thai language study and area studies, with special focus on environmental and development fieldwork with local NGO interaction. Fall and winter.

TURKEY

STDABRD 470. UM at Bilkent University, Ankara, Turkey.

Students attend a wide range of classes taught in English. Special strengths include art history and archaeology. Fall, winter, and academic year.

STDABRD 471. UM at Middle East Technical University, Ankara, Turkey.

Students attend classes taught in English, including Turkish language, engineering, history, urban planning, and architecture. Summer, fall, winter, and academic year.

STDABRD 472. UM at Boğaziçi University, Istanbul, Turkey.

Students attend classes taught in English with a full range of courses in the humanities and social sciences; other courses focus on Turkish language and area studies. Summer, fall, winter, and academic year.

VIETNAM

STDABRD 361. UM/CIEE in Ho Chi Minh City, Vietnam.

This program offers Vietnamese language and area studies. Students volunteer with local NGO or aid organizations and complete an independent study project. Students study in both Ho Chi Minh City and Phnom Penh, Cambodia. Fall, winter, and academic year.

Faculty and Graduate Students. Funding and training opportunities are available for faculty members and graduate students interested in leading projects for these programs.

CGIS will be launching a series of graduate and faculty seminars in 2010-11.

Faculty seminars will provide a forum for participants to share their research and expertise and discuss best practices for, as well as the theories behind global and intercultural pedagogy and programming. Specific faculty sessions on risk management and experiential learning will also be offered for those leading programs.

Graduate seminars will prepare students to design their own global research programs or serve as intercultural assistants for other off-campus programs. At the undergraduate level, CGIS will offer a series of one-credit courses to guide student learning before, during, and after travel.

STDABRD 601. Supervised Graduate Study in Latin America.

Independent study abroad, by arrangement with instructor and with the Program in Latin American and Caribbean Studies (LACS).

Global Change Program

2534 C.C. Little Building 1100 North University Avenue (734) 764-1435 (phone) (734) 763-4690 (fax) globalchange.umich.edu e-mail: globalchange@umich.edu Professor Ben van der Pluijm (Environment), Director

Not a concentration program

Faculty Affiliates

Professors: J. David Allan (Natural Resources & Environment), Thomas N. Gladwin (Business), George W. Kling (Biology), Ben A. van der Pluijm (Environment)

Associate Professor: Christopher Poulsen (Geological Sciences / AOSS)

Assistant Professor: Catherine E. Badgley (Biology, Geology), Rebecca O. Hardin (Anthropology, Natural Resources and Environment)

Global Change represents one of the most pressing scientific and societal issues of our times. When one contemplates the phrase "global change," topics such as global warming, human population, biodiversity, water resources and the ozone hole come to mind, but also natural phenomena like earthquakes, volcanoes, and extreme weather increasingly affect our lives. Every day, the activities of billions of humans are altering the planet on which we live. Over the past century, through our ever-increasing population and mastery of technology, humans are changing the global environment at a pace unknown to natural history. The prospects of global warming, environmental degradation, and rapid population growth today constitute a series of changes that may drastically alter our way of life, and could even threaten the very survival of the human species. Understanding the underlying processes of global change is one of the challenges facing us today. Since our world is increasingly pervaded, shaped and influenced by science and technology, all students require a knowledge of the natural world, the processes of science and social science, and an understanding of the role of human activity in shaping our world. Furthermore, since global change affects the citizens and the policy makers of every nation, there is a growing need for scientists working in the area of global change to learn to communicate their findings to the public and translate them into programmatic documents useful to policy makers.

The University of Michigan's Global Change Curriculum is a modern approach in undergraduate natural and social science education, offering an interdisciplinary, introductory course sequence that investigates the causes and potential impacts of global change, from physical and human perspectives, using a combination of traditional lecture-based and modern computer-based teaching methodologies, and hands-on exercises. Theoretical background, case studies, and computer simulations are used to explore various conditions for sustainability. These courses are aimed at first- and second-year students who want to understand the historical and modern aspects of Global Change, and paths to sustainability.

In order to develop our understanding of the processes that sustain life on Earth, it is necessary to draw on the knowledge and viewpoints of several schools and departments at the University of Michigan, including the Departments of Anthropology, Biology, Geology, Sociology in the College of LSA, the Department of Atmospheric, Oceanic and Space Science in College of Engineering, the School of Natural Resources and Environment, and the Ross School of Business.

Global Change Academic Minor

An academic minor in Global Change is not open to students pursuing an academic minor in Biology or Environment.

Students wishing to pursue an academic minor in Global Change must develop a specific plan for its completion in consultation with Prof. Ben van der Pluijm (e-mail: vdpluijm@umich.edu) of the Program in the Environment.

The academic minor in Global Change provides a broad understanding of the problems and challenges that humanity faces as it wrestles with the urgent need to develop a more sustainable relationship with the Earth and its resources, the complex issues involved in global change and global sustainability, as well as exposure to some of the approaches and strategies for effective economic development and resource management.

Details at: globalchange.umich.edu/globalchange_minor

Prerequisites to the Academic Minor: None.

Academic Minor Program: Five courses totaling at least 17 credits, to be chosen from the following categories as stated:

- 1. Global Change: ENVIRON 110 and 111.
- 2. One 200-level course from the four below:
 - ANTHRCUL 256/ENVIRON 256
 - BIOLOGY 281/ENVIRON 281
 - ENVIRON 270
 - GEOSCI 284/ENVIRON 284

3. Two 300- or 400-level courses from two of the areas of Biosphere, Geosphere, and Sociosphere that are selected in consultation with the Program Director. Example courses:

A. Biosphere

- BIOLOGY 482
- EEB 320, 381, 390, 436 (or 355), 451, 455, 476, 481, 483, 498
- ENVIRON 311, 337, 411, 432, 451, 453, 476
- NRE 411, 451, 453, 476

B. Geosphere

- AOSS 300, 304, 335, 432, 467, 475
- CHEM 467
- ENVIRON 325, 341, 380, 467, 479
- ENSCEN 304, 475
- GEOSCI 325, 341, 380, 442, 446, 465, 475, 477, 478

C. Sociosphere

- ARCH 423
- ECON 471, 472
- ENVIRON 312, 360, 361, 370, 391
- GEOG 432
- NRE 571, 583
- POLSCI 380
- RCIDIV 391
- SOC 305, 330
- UP 423, 532

One Field Studies course (Biological Station or Camp Davis) may be substituted, where appropriate. Courses not listed may be selected after approval of the Program Director is obtained.

Global Scholars Program

Global Scholars Program The Program on Intergroup Relations 3000 Michigan Union 530 S. State Street Ann Arbor, MI 48109-1308 (734) 936-1875 (phone) (734) 647-4133 (fax) e-mail: globalscholars@umich.edu www.lsa.umich.edu/globalscholars Jennifer Young Yim, Director

The Global Scholars Program (GSP) prepares sophomore, junior, and senior University of Michigan students to be interculturally competent global citizens, champions for meaningful change, and innovative leaders of tomorrow. GSP is an academically supported living-learning community that provides sophomore, junior, and senior University of Michigan students the opportunity to engage with both U.S. and international students on campus and around the world.

Students will learn about global issues from multiple cultural perspectives. Also, coursework and collaborative projects will assist students as they begin to develop and hone their intercultural communication skills.

Finally, Global Scholars residents are encouraged to study, intern, or work abroad to reap the full rewards of the program – learning from intercultural experiences and engaging with the world.

Great Books

Classical Studies 2160 Angell Hall 435 South State Street (734) 764-0360 (phone) (734) 763-4959 (fax)

Not a concentration program

Great Books is the heading for a small number of humanities courses that do not fit within traditional departments. These courses introduce significant and influential works of literature and philosophy from various traditions and cultures.

COURSES IN GREAT BOOKS (GTBOOKS)

GTBOOKS 191. Great Books

FR.H.PRG. (4). (HU). (FYWR). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GTBOOKS 201 or CLCIV 101. F.

GTBOOKS 192. Great Books

Freshman honors program. (4). (HU). May not be repeated for credit. W.

GTBOOKS 201. Great Books of the Ancient World (4). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GTBOOKS 191 or CLCIV 101.

GTBOOKS 204 / PHYSICS 204. Great Books in Physics (4). (NS). (BS). May not be repeated for credit.

GTBOOKS 212 / COMPLIT 222. Great Books in World Literatures (3). (HU). May not be repeated for credit.

GTBOOKS 221 / ASIAN 221. Great Books of China

A knowledge of Chinese is not required. (4). (HU). May not be repeated for credit. Taught in English. II (in even years).

GTBOOKS 291. Great Books of Modern Literature

Sophomores, juniors, and seniors in the College Honors Program. (4). (HU). May not be repeated for credit. F.

Health Sciences Scholars Program (HSSP)

Alice Crocker Lloyd Residence Hall 100 Observatory (734) 763-6091 (phone) (734) 763-6098 (fax) www.lsa.umich.edu/hssp e-mail: HSSP@umich.edu Andrew R. Barnosky, D.O., MPH (Associate Professor of Emergency Medicine, University of Michigan Medical School), Director

Not a concentration program

Created in 2001 as a collaborative effort between LSA, University Housing, and U-M's health schools, the Health Sciences Scholars Program (HSSP) is a University of Michigan Living/Learning community, offering first-year students interested in pursuing the health sciences and professions an excellent academic experience set in a supportive and focused residence hall community. The goal of the program is to enrich our students' preparation for study in the health sciences, fostering exploration of a wide range of health career opportunities, encouraging understanding of and engagement in U-M's diverse community, and supporting students in their transition to the University of Michigan.

The program brings students together with faculty and practitioners from schools and programs with significant offerings in healthrelated fields, including LSA, Dentistry, Engineering, Information, Kinesiology, Medicine, Nursing, Pharmacy, Public Health, and Social Work. By providing academic coursework and guidance, co-curricular programming and activities, and on-site academic advising tailored to students exploring careers in the health sciences, the program provides rich opportunities for close interaction among students, faculty, and health science professionals.

HSSP students participate in a required, rigorous, two-credit, twoterm course (UC 105 and UC 106) that combines examination of current issues in health care and exposure to a variety of health care professionals and settings with analysis and writing. Through "direct observations" of health science professionals, students learn firsthand the importance of working collaboratively with those from many disciplines and backgrounds to develop multi-faceted approaches to many problems.

Approximately 120 first-year students and 31 advanced students participate in a variety of co-curricular activities and programs.

History

1029 Tisch Hall 435 South State Street (734) 764-6305 (phone) (734) 647-4881 (fax) www.lsa.umich.edu/history e-mail: umhistory@umich.edu Professor Geoff Eley, Chair Professor Joel D. Howell, Associate Chair

Professors

Francis X. Blouin, Archives administration

Michael Bonner, medieval Islamic history

- Howard Brick (Louis Evans Professor of History), 20th-century U.S. history, history of social theory and American intellectual history, history of social movements and politics in the U.S. since 1865
- Charles Bright (Arthur F. Thurnau Professor), 20th-Century World History, History of Punishment, History of Detroit
- Kathleen M. Canning (Arthur F. Thurnau Professor), *Modern German* and European social history, gender/women's history
- Chun-shu Chang, Ancient and early imperial China, early modern, Chinese historical literature
- David W. Cohen, *Pre-colonial and 20th-Century Africa eastern and southeastern*
- Juan R. Cole, Modern Middle East, Muslim South Asia, social, cultural
- Philip Deloria (Richard Hudson Research Professor of History; Carroll Smith-Rosenberg Collegiate Professor of History and American Culture), *19th- and 20th-Century U.S., cultural history*
- Gregory Dowd, Native American, early North America
- Geoff Eley (Sylvia L. Thrupp Collegiate Professor of Comparative History; Karl Port Distinguished University Professor of Contemporary History), *Modern Europe, Germany, nationalism and socialism*
- Todd M. Endelman (William Haber Professor of Modern Jewish History), *Modern Jewish*
- John V. A. Fine, Medieval and modern Balkans, Byzantium
- Kevin Gaines, U.S. and African American Cultural and Intellectual history, race and gender politics in post-World War II America
- Dena Goodman (Lila Miller Collegiate Professor of History and Women's Studies), *French Culture, Gender*
- Thomas A. Green, England, U.S. constitutional and legal

- Myron Gutmann, Methodology of historical demography
- David J. Hancock, early America, economic history
- Joel D. Howell (Victor Vaughan Collegiate Professor in the History of Medicine), *History of medicine*
- Susan Juster, Early American, gender, religion
- Carol Karlsen, U.S. women's history
- Mary Kelley (Ruth Bordin Professor of History), 19th- and 20th-Century intellectual U.S., gender studies
- Valerie A. Kivelson (Arthur F. Thurnau Professor), Early modern Russia

David L. Lewis, United States business

- Gerard Libaridian (Alex Manoogian Chair in Armenian History), Armenian history, politics, Turkish Armenian relations
- Victor B. Lieberman, Southeast Asia, pre-modern Burma
- Rudi P. Lindner, Ottoman, inner Asia, Byzantium
- Michael MacDonald, *Early modern England, social and cultural, histo*ry of medicine
- Howard Markel (George E. Wantz Professor of the History of Medicine), medicine and public health, U.S. immigration
- Tomoko Masuzawa, Religion, European intellectual
- Terrence McDonald (Arthur F. Thurnau Professor) (Dean, College of Literature, Science, and the Arts), U.S., political, urban, historiography
- Barbara Metcalf (Alice Freeman Palmer Professor of History), Indian subcontinent colonial period
- Jeffrey Mirel, History of American urban education
- Deborah Dash Moore, twentieth-century Urban Jewish history
- Regina Morantz-Sanchez, *women, gender, family, sexuality, medicine* Rudolf Mrázek, *Southeast Asia*
- Martin Pernick, History of medicine
- William G. Rosenberg (Alfred G. Meyer Collegiate Professor of History), *Russia, comparative revolutionary movements*
- Rebecca J. Scott (Charles Gibson Distinguished University Professor; Arthur F. Thurnau Professor), *Latin America, slavery and emancipation, labor systems*
- Margaret Somers, comparative history

- Ronald Suny (Charles Tilly Collegiate Professor of Social and Political History), *history and politics of Soviet Union and post-Soviet Russian, nationalism*
- Hitomi Tonomura, Premodern Japan, East Asia, social, women's history
- J. Mills Thornton, U.S. South, U.S. 1815-1877
- Thomas R. Trautmann (Marshall Sahlins Collegiate Professor of History and Anthropology), *Ancient India, kinship, history of anthropology*
- Raymond Van Dam, Roman and early medieval history
- Martha J. Vicinus (Eliza M. Mosher Distinguished University Professor of English), *British women's history*
- Maris A. Vinovskis (A.M. and H.P. Bentley Professor of History), U.S. social, family, demographic
- Penny Von Eschen, African-American, U.S. Empire

Associate Professors

- John Carson, American intellectual culture
- Sueann Caulfield, Modern Latin America, Brazil, gender studies
- Rita Chin, late modern Europe, ethnic minorities
- Joshua Cole, modern France, modern Europe, social/cultural
- James Cook, 19th-Century U.S.
- Matthew Countryman, African American, American culture
- Sara Forsdyke, Greek historiography, Greek political thought and ideology, Greek orators, Greek law, Greek history
- Dario Gaggio, Modern Southern European, Italy, Science and Technology
- Gabrielle Hecht, technology, colonialism
- Jesse Hoffnung-Garskof, *Modern Latin America and Caribbean, Co-*Ionial Latin America
- Diane O. Hughes, Medieval
- Nancy Hunt, Africa, women's history, history of medicine
- Kali Israel, Modern Britain, women's history, modern Europe
- Paul Johnson, theories of religion, religion and race, modern history of Brazil
- Martha Jones, African American History
- Scott Kurashige, Asian/Pacific American, comparative ethnic, social movements
- Matthew Lassiter, 20th-Century U.S.
- Tiya Miles, African American and Native American Comparative and interrelated histories, women of color history, literature and feminist history
- Douglas Northrop, Central Asia, social and cultural
- Derek Peterson, intellectual history of colonial eastern Africa
- Leslie Pincus, modern Japan, intellectual, cultural
- Brian Porter-Szucs, East Europe, intellectual
- Helmut Puff (Richard Hudson Research Professor of History), *early* modern Europe, history of sexuality
- Damon Salesa, Asian/Pacific U.S. History
- Scott Spector, German intellectual
- Paolo Squatriti, Medieval
- Alexandra Stern (Zina Pitcher Collegiate Professor in the History of Medicine) (Associate Director, Center for History of Medicine), *History of Medicine and Science, modern Americas, Southwest and American West*
- Richard Turits, Hispanic Caribbean, race; slavery
- Wang Zheng, Feminism in China; socioeconomic, political and cultural transformations

Assistant Professors

Paulina Alberto, *Latin America, Black activism in Brazil* Micah Auerback, *Japanese Religion*

- Pär Cassel, late imperial and modern China, legal and institutional history of China
- Deirdre de la Cruz, *Religion, Colonialism and Post-Colonialism, the Philippines, History and Anthropology, Modernity and Mass Culture*
- Christian de Pee, Tang-Song-Yuan China, text and writing, archaeology

Farina Mir, colonial and post-colonial South Asia

- Anthony Mora, 19th-Century U.S.; historical construction of race, gender and sexuality
- Ian Moyer, Ancient Greek; Hellenistic period; Late Period; ethnicity and culture in the ancient world; religion and magic
- Rachel Neis, Jewish Studies, late antiquity, visuality
- Sherie Randolph, African American, African Diaspora and women and gender
- Rudolph Ware, Africa, West Africa, Islam, Sufism, slavery, African-American/African Diaspora, race
- Michael Witgen, American Indian and Early America, North American west

Lecturers

Jonathan Marwil, *modern European* Julius Scott, *African American, early America, the Atlantic*

Julie Skurski, Latin America, historical anthropology, gender, race

Post-Doctoral Fellows Hussein Fancy, Miranda Johnson

Professors Emeriti Robert Berkhofer, David Bien, Jerome Clubb, Elizabeth Eisenstein, Albert Feuerwerker, Raymond Grew, Roger Hackett, Sarah C. Humphreys, Gerald Linderman, Shaw Livermore, Kenneth Lockridge, Rhoads Murphey, Bradford Perkins, Jacob Price, Sonya Rose, John Shy, Carroll Smith-Rosenberg, Nicholas H. Steneck, Roman Szporluk, Thomas N. Tentler, Stephen Tonsor, Robert Warner, Ernest Young

The field of historical study embraces all recorded expressions of human activity. History includes the record of the political experiences of a people in its internal and external phases, and it also surveys the social and economic aspects of life, forms of artistic expression, intellectual achievements, scientific progress, and religious beliefs. Because of its broad scope, history provides an excellent approach to all studies that emphasize human activities.

History

May be elected as a departmental concentration program

The history concentration allows students flexibility to chart their own program within the requirements. Students can choose to focus on one aspect of history, electing courses that build on each other, to develop a greater grasp of a particular region or time period. Other students prefer to experience a wide range of history studies and tailor their program to draw on the wide variety of course offerings.

Prerequisites to Concentration. One of the six introductory survey sequences: HISTORY 110-111, 200-201, 204-205, 206-207, 246-247, 260-261(160-161). AP credit may not be used to satisfy the prerequisite to concentration.

Concentration Program. Concentration in History requires eight additional history courses (3 or more credits) beyond the prerequisite, and six cognate credits. Four of the eight HISTORY courses must be taken in residence at the University of Michigan–Ann Arbor. At least five of the eight courses must be elected at the 300-level or above and none can be numbered below 200. Credits from survey sequences that are not used to satisfy the prerequisite requirement may be counted for concentration *if elected at the 200-level or above.*

- Geographic distribution requires at least one course in U.S. history, one course in European history, and two courses in non-Western history (Africa, Asia, Latin America, Middle East, or Pacific Islands). One of the two non-Western courses may be satisfied by taking an approved course in transregional or comparative history. Prerequisite courses and colloquia may be used to satisfy this requirement.
- Chronological distribution requires at least one course that focuses on pre-1800 history. Courses taken to satisfy the prerequisite may not be used to satisfy this requirement.

- 3. One of the eight concentration courses must be a junior-senior history colloquium (HISTORY 396 or 397).
- 4. Six cognates credits (usually two courses) at the 300-level or above must be taken in one department or program outside the History Department. A course is cognate only if it deepens a student's understanding of history. *Students should consult a history concentration advisor for cognate approval.*

Cognates are generally elected in the social sciences or humanities, although courses with historical content in other fields may be acceptable in some cases. Some departments have many courses that are acceptable and some that are not; English literature courses are cognate, but expository and creative writing courses are not. In language departments, courses in the literature or culture of a people are cognate, but courses that train one to speak a language are not.

These requirements can overlap. A colloquium about ancient Greece satisfies the pre-1800, European, and colloquium requirements and also counts as one of the upper-level history courses. Aside from the necessity to satisfy the requirements listed above, there is no single focus or pattern of courses for concentration. Students develop a plan in consultation with a history concentration advisor. For the purposes of history concentration credit, no more than eight credits may be elected from HISTORY 395 (Independent Study).

Honors Concentration. The Junior-Senior Honors Program in the Department of History is open to juniors concentrating in history who have maintained at least a 3.4 grade point average overall and a 3.5 average in history courses. Applications are accepted annually in October. The usual applicant is a first-term junior for the three-term program. Admission decisions will be based on a student's academic performance, background in history, demonstrated ability to write, and recommendations by history faculty. High grade point average alone does not guarantee admission. Accepted students will be notified in November and will begin their participation in the program the following January in HISTORY 398, the Junior Honors Colloquium.

Members of the Honors Program must fulfill all the usual requirements for concentration in History. The two Honors courses they are required to take, HISTORY 398 (4 credits) and HISTORY 399 (6 credits), count toward the fulfillment of these requirements. Completion of the HISTORY 398-399 Honors sequence also satisfies the "colloquium" requirement for history concentration, described above.

HISTORY 398, the Junior Honors Colloquium, provides a rigorous introduction to historical research in general and Honors thesis topics and research in particular. During this course students must arrive at a topic and obtain an advisor for their senior Honors thesis. This course also provides intensive training in writing and generally satisfies the ULWR requirement. Students are expected to achieve at least a B+ in this course in order to go on to the Senior Honors Colloquium.

HISTORY 398 is offered only in the winter term and is the foundation for work on the senior thesis. Students who cannot fit this course into their schedules will generally not be admitted to the program with exceptions for study abroad. Admitted juniors studying abroad during the winter term will have HISTORY 398 waived, but will be expected to consult with the Honors advisor about finding an advisor and writing a prospectus while they are away. They will also need to complete HISTORY 396 or 397 in its place.

HISTORY 399, the Senior Honors Colloquium, is a year-long writing workshop led by a faculty member which includes all seniors writing Honors theses. Although the thesis is written primarily under the guidance of the faculty advisor, students help one another with projects in the workshop by sharing experiences, advice, interests, and, ultimately, portions of their theses. Completed theses, which must be submitted in late March, usually range anywhere from 60 to 100 pages. They are evaluated by the advisor and one or more other faculty, on the basis of the quality of the research, analysis, and writing. The letter grade for HISTORY 399 and the level of Honors with which the student will be graduated *(i.e.,* "Honors," "High Honors," "Highest Honors") are based on the evaluations of the thesis.

Theses handed in more than two weeks past the due date are not eligible for an Honors rank.

Advising. Appointments with history advisors are scheduled online from the department's webpage: www.lsa.umich.edu/history/ug

Students should see an advisor as soon as they decide on their concentration or academic minor.

Teaching Certificate. The general requirements for a teaching certificate are described elsewhere in the *Bulletin*. Students must consult the School of Education Teacher Education office, 1228 School of Education, and check their website (www.soe.umich.edu) for certification program information and general information meeting schedules.

The teaching major and minor for certification differ from the academic history concentration and minor.

History courses required for a teaching certificate with a major in History must include HISTORY 260 and 261, one course in European history, HISTORY 396 or 397, and specific world and non-Western history courses listed on the SOE website. History electives are chosen to reach the minimum 30 credits of HISTORY.

Teaching minor requirements are the same as the teaching major with a minimum of 20 credits of HISTORY.

The Eisenberg Institute of Historical Studies. The endowed Frances and Kenneth Eisenberg Institute for Historical Studies at the University of Michigan in Ann Arbor advances historical research and teaching with powerful new tools for supporting visiting scholars, enriching the intellectual climate for faculty and graduate students, and extending knowledge across campus. Through lectures, workshops and other programs designed to foster scholarly exchange, the Eisenberg Institute promises to transform the teaching and study of history at Michigan.

Student Associations. History concentrators with an average of 3.5 or better in their history courses are encouraged to join the history honor society, *Phi Alpha Theta*, a group which fosters an exchange of ideas between students and faculty, and among students, about common historical interests. Two members of the society are elected to sit on the Department's curriculum committee.

The *Michigan Journal of History* is an undergraduate publication of historical scholarship whose papers and essays come entirely from the University of Michigan student body. The *Journal* is staffed by students who make all editorial and organizational decisions with the support of the History Department. For more information, visit the *Journal* on-line at: www.umich.edu/~historyj

History Academic Minor

An academic minor in History is not open to students with any concentration or any other academic minor in the Department of History, nor to those pursuing an academic minor in Modern European Studies.

History academic minor programs must be planned with a concentration advisor. Students outline a topical focus and cluster their courses within that topical field. The framework includes a twocourse sequence that provides an orientation to the topic, followed by four related courses. The topical possibilities are numerous but include geographic area studies, time periods, or focused thematic subjects. Some possible options within the academic minor are:

- *Area Studies:* history of Africa, Asia, Europe, Latin America and Caribbean, Russia, Britain, U.S., *etc.*
- *Time Period:* ancient, medieval and renaissance, early modern, modern history, *etc.*
- *Focused Thematic Studies:* religion, gender and sexuality, empire and colonialism, nationalism, African-American, Latina/o history, *etc.*

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 18 credits and six courses, to be chosen in consultation with a concentration advisor, within the following framework:

- Two-Course Survey Sequence. A survey sequence covering a broad chronological span relevant to the topic or area of the academic minor.
- II. Four additional HISTORY courses. Four additional 3- or 4credit HISTORY courses relevant to the proposed track of focus.

Medieval and Early Modern Studies (MEMS)

1029 Tisch Hall 435 South State Street (734) 763-2066 (phone) (734) 647-4881 (fax) www.lsa.umich.edu/mems

Executive Committee Bonner (Near East), de Pee (History), Hoffmann (Romance Languages and Literatures), Holmes (History of Art), Mallette (Romance Languages and Literatures), Squatriti (History, Romance Languages and Literatures), Timmermann (History of Art), Tonomura (History), Trevor (English)

Medieval and Early Modern Studies

May be elected as an interdepartmental concentration program

Medieval and Early Modern Studies (MEMS) is an interdisciplinary Honors concentration administered by the History Department. MEMS offers cross-listed courses at all levels in history, philosophy, religion, history of art and architecture, archaeology, literature, law, music, anthropology, and sociology pertinent to the period from late Antiquity through early modern times in Europe, Asia, the Middle East, Africa, and the Americas. MEMS develops awareness of cultural connections among the diverse cultural zones of the pre-industrial world.

The MEMS concentration is a liberal arts concentration that allows students to exploit the extraordinary richness of courses about this time period at the University of Michigan. MEMS fosters geographic and cross-cultural breadth of its concentrators, but also allows them to specialize their learning, especially through the senior thesis. By focusing on a defined historical period, but requiring interdisciplinary study of it, the MEMS concentration has both the coherency and the breadth necessary to advance students in the humanities and social sciences.

The MEMS concentration will often be selected as part of a double concentration. It is designed to accommodate study abroad, either at University of Michigan programs or elsewhere; one of this program's goals is to provide an education that will make study abroad an especially rewarding experience.

The required courses are intended to deepen familiarity with premodern history, art, and literature, while leaving to concentrators the ability to focus on the discipline they prefer (literary studies, archaeology, *etc.*). The requirement includes the obligation to reach beyond a single geographical zone, and to develop understanding of the medieval and early modern period in three cultural areas. Students will be induced to see connections between major cultures of this time period, as well as singling out original developments. The required courses will contribute to the breadth of their comprehension and to the subtlety of the understanding of individual cultures. The requirement that students take a course each in history and art history, combined with the literature prerequisite, will encourage organic visions of past cultures as wholes, rather than the fragmentary At least three of these four courses must be at the 300-level or above.

AP credit: AP credits may not be used to satisfy requirements of the academic minor. Students admitted to U-M prior to Fall 2001 who have been granted AP credit for specific courses (HISTORY 160, 161, 111) should discuss the credit with an advisor.

Conditions: Four of the six courses must be taken in-residence at the University of Michigan, Ann Arbor, or must count as in-residence credit *(i.e.,* relevant courses taken through U of M-sponsored CGIS programs abroad).

vision which ensues from isolating a single aspect of past cultures for study (only art, or only literature).

Prerequisites to Concentration

- 1. Successful completion of two three- or four-credit introductory courses from a long, interdisciplinary list for example:
 - AAPTIS 100, 262, 296, 473;
 - ANTHRCUL 222;
 - ASIAN 220, 221, 222, 223, 224;
 - CLARCH 221, 222;
 - CLCIV 101, 102;
 - ENGLISH 267, 350, 367, 370;
 - GTBOOKS 191, 192, 201;
 - HISTORY 204, 206, 207, 210, 211, 213, 220, 225, 250, 263, 286, 287;
 - HISTART 101, 102, 103, 240, 250, 251, 284;
 - JUDAIC 270;
 - MUSICOL 239;
 - PHIL 230, 263;
 - RCHUMS 310, 311;
 - RELIGION 308.
- Language proficiency (4th-term college-level) in a language directly pertinent to the geographic area on which students choose to focus (for example, Latin, French, Arabic, Hebrew for Europe and the Middle East; Chinese, Sanskrit, or Japanese for Asia) by the beginning of the senior year; plus two upper-level literature courses in that same language or a related one.

Concentration Program. Eight (8) three- or four-credit courses in the medieval and early modern periods. A minimum of five must be 300-level or higher.

- 1. *Geographic courses.* Select one course from three of the five areas listed below:
 - a. At least three credits in African cultures.
 - b. At least three credits in American cultures.
 - c. At least three credits in Asian cultures.
 - d. At least three credits in European cultures.
 - e. At least three credits in Middle Eastern cultures.
- 2. Disciplinary courses.
 - a. At least three credits in historical studies.
 - b. At least three credits in art historical or archaeological studies.
- 3. The MEMS Thesis. In the Fall term of the senior year, the MEMS concentrator is required to register for MEMS 491. A senior thesis of at least 30 pages, written under the direction of an appropriate faculty member, is due at the end of the student's final term. The MEMS director serves as the second reader. If the MEMS Director is the thesis director, another faculty member will be asked to serve as second reader. This requirement obliges students to delve into individualized projects of research on subjects of their fashioning. They thus develop data-retrieval and data-analysis skills, and develop their own approach to one aspect of medieval or early modern cultures. Working with a specialist in their chosen field, and receiving advice also from the program

director, ensures that timely progress is made and that the work is carried out according to exacting standards of scholarship.

Honors Concentration. Concentrators who maintain a 3.4 GPA overall, and a 3.5 in the MEMS concentration courses, are eligible to be considered for graduation with Honors. The grades of "Highest Honors," "High Honors," and "Honors" are determined by the Director (and faculty advisors when appropriate) on the basis of gradepoint average in the college, grade-point average in MEMS, and the grade on the thesis.

Advising. MEMS Honors concentrators will have academic advising by the program director to support their individually constructed programs of study. The administrator (Terre Fisher, Program Coordinator) located in the MEMS program office (2713 Haven Hall), housed in the Department of History, will be the primary point of contact for students in MEMS.

Study Abroad. Students are encouraged to study abroad, and one of the program's goals is to provide an education that will make this experience especially rewarding. The concentration advisor works with each student to determine what courses can be counted for concentration. Because of MEMS' historical and interdisciplinary identity, most study-abroad programs offer a wide variety of courses that can be counted for a MEMS concentration.

Double Concentration. Students often will combine concentration in Medieval and Early Modern Studies with concentration in another department or program - in the natural sciences as well as in the social sciences and humanities. Students who plan a double concentration should see the concentration advisor early to work out a plan for completion of requirements.

Student Association. The MEMS Society is student run and cooperates with the Program in planning academic and social events. There is a social gathering of all MEMS concentrators and friends near the beginning of each term in which general policy questions are discussed.

Academic Minor in Medieval and Early Modern Studies (MEMS)

The academic minor in MEMS is designed to provide a basic, interdisciplinary familiarity with the pre-modern world. The academic minor fosters geographic and cross-cultural breadth, but also allows students to integrate their interdisciplinary studies with a defined historical, geographical, or topical focus planned with the concentration advisor. Possibilities include pre-modern cultural areas (Africa, the Americas, Asia, Europe, the Middle East) or focused thematic subjects (e.g., material culture; women and gender; science, technology, and medicine; Jewish studies; religion and philosophy; music, theatre and performance; colonialism).

Constraints: Not open to MEMS concentrators.

Prerequisite to the Academic Minor: none

Academic Minor Program: 15 credit hours (and five courses), including at least two upper-division courses, in the medieval and early modern periods, chosen in consultation with the MEMS academic minor advisor. These courses must include:

- 1. Geographic area courses. Select one course each from two of these five areas:
 - a. African cultures
 - b. American cultures
 - c. Asian cultures
 - d. European cultures
 - e. Middle Eastern cultures
- 2. Disciplinary courses. Select one course each from three of these four disciplines:
 - a. historical studies
 - b. art historical or archaeological studies
 - c. language or literary studies
 - d. musicological studies

A single course may count toward both geographic and disciplinary distribution requirements. With the approval of the academic minor advisor, students whose concentration includes a medieval and early modern studies course in one of these disciplinary categories may substitute one course from a discipline different from that of the concentration.

Students wishing to pursue an academic minor in Medieval and Early Modern Studies must develop a specific plan for its completion in consultation with the Program's designated advisor. Appointments are scheduled at the Program Office.

COURSES IN HISTORY

HISTORY (HISTORY)

HISTORY 110 / MEMS 110. Medieval, Renaissance, and Reformation Europe (4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 111. Modern Europe HISTORY 110. (4; 3 in the half-term). (SS). May not be repeated for credit. W.

HISTORY 132 / AAPTIS 100 / ACABS 100 / HJCS 100. Peoples of the Middle East

(4). (HU). May not be repeated for credit. Taught in English. HISTORY 195. The Writing of History

(4). (FYWR). May not be repeated for credit. This course may not be included in a History concentration. F.

HISTORY 196. First-Year Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (SS). May not be repeated for credit.

HISTORY 197. First-Year Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit.

HISTORY 200. Ancient Greece to 323 B.C.E.

(4). (HU). May not be repeated for credit. F.

HISTORY 201, Rome

(4). (HU). May not be repeated for credit. W. HISTORY 203 / ASIAN 200. Introduction to Japanese Civilization

A knowledge of Japanese is not required. (4). (HU). May not be repeated for credit. HISTORY 204 / ASIAN 204. East Asia: Early Transformations

(4; 3 in the half-term). (HU). May not be repeated for credit.

HISTORY 205 / ASIAN 205. Modern East Asia

(4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 206 / ASIAN 206. Indian Civilization

(4; 3 in the half-term). (HU). May not be repeated for credit. HISTORY 207 / ASIAN 207. Southeast Asian Civilization

(4; 3 in the half-term). (SS). May not be repeated for credit. **HISTORY 208. Topics in History**

(3; 2 in the half-term). May be elected twice for credit.

HISTORY 210 / MEMS 210. Early Middle Ages, 300-1100

(4; 3 in the half-term). (SS). May not be repeated for credit. F. HISTORY 211 / MEMS 211. Later Middle Ages, 1100-1500

(4). (SS). May not be repeated for credit. W.

HISTORY 212 / MEMS 212. Renaissance Europe (4). (HU). May not be repeated for credit.

HISTORY 213 / MEMS 213. The Reformation (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTORY 218. The Vietnam War, Referencing Iraq (4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 219 / ASIAN 210. The Philippines: Culture and History (3). (HU). May not be repeated for credit.

HISTORY 220. Survey of British History to 1688 (4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 221. Survey of British History from 1688 (4). (SS). May not be repeated for credit.

HISTORY 224 / PUBPOL 224. Global Nuclear Proliferation (4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 226 / AMCULT 226. The Latin Tinge: Latin Music in Social Context in Latin America and the U.S.

(4; 3 in the half-term). (HU). May not be repeated for credit. HISTORY 227. The Rise and Fall of the British Empire

(4). May not be repeated for credit.

HISTORY 229 / ANTHRCUL 226. Introduction to Historical Anthropology (4). (SS). May not be repeated for credit.

HISTORY 230. Humanities Topics in History (3 - 4; 3 in the half-term). (HU). May be elected twice for credit.

HISTORY 231. Social Science Topics in History (3 - 4; 3 in the half-term). (SS). May be elected twice for credit.

HISTORY 234. History of Medicine in the Western World from the 18th Century to the Present

(4; 3 in the half-term). (ID). May not be repeated for credit.

HISTORY 238 / AAPTIS 238 / ACABS 238 / GEOSCI 238. A History of Everything (4; 3 - 4 in the half-term). (ID). May not be repeated for credit.

HISTORY 240. The World Since 1492 (4; 3 in the half-term). (SS). (R&E). May not be repeated for credit. Meets pre-1800 and transregional requirements in History.

HISTORY 241. America and Middle Eastern Wars (4). (SS). May not be repeated for credit.

HISTORY 244 / AAPTIS 244 / HJCS 244 / JUDAIC 244 / MENAS 244. The Arab-Jewish Conflict in the Middle East, c. 1880 to the Present

(4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.
HISTORY 246 / CAAS 246. Africa to 1850
(4). (SS). May not be repeated for credit.

HISTORY 247 / CAAS 247. Modern Africa (4). (SS). (R&E). May not be repeated for credit.

HISTORY 249 / ASIAN 249. Introduction to Korean Civilization (3). (HU). May not be repeated for credit.

HISTORY 250. China from the Oracle Bones to the Opium War (3). (HU). May not be repeated for credit. F.

HISTORY 251 / ASIAN 241. The Chinese Renaissance: Cultural Transformations in Eleventh-Century China

(3). (ID). May not be repeated for credit.

HISTORY 252 / ASIAN 260. Introduction to Chinese Civilization (4). (HU). (R&E). May not be repeated for credit. No assumed knowledge of Chinese history, culture, or language required.

HISTORY 255 / ASIAN 259. Gandhi's India (4; 3 in the half-term). (HU). (R&E). May not be repeated for credit. W.

HISTORY 257. Law in the Pre-Modern World (3). (HU). May not be repeated for credit.

HISTORY 260. United States to 1865 (4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 261. United States, 1865 to the Present (4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

HISTORY 262. The American South HISTORY 260 and 261 are recommended but not required. (3). (SS). May not be repeated for credit.

HISTORY 263. Encountering America: 1492-1607 (3). (SS). May not be repeated for credit.

HISTORY 264. Exploring America, 1607-1815 (3). (SS). May not be repeated for credit.

HISTORY 266. Twentieth-Century American Wars as Social and Personal Experience (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTORY 268. European Intellectual History, 1500-1800 (3). (HU). May not be repeated for credit.

HISTORY 270 / AMCULT 270. Religion in America (4). (HU). May not be repeated for credit.

HISTORY 271 / ANTHRCUL 221 / RELIGION 271. Religions of Latin America (3). (HU). May not be repeated for credit.

HISTORY 272. The Civil Rights Movement, 1954-1974 At least sophomore standing. (3). May not be repeated for credit.

HISTORY 274 / CAAS 230. Survey of Afro-American History I CAAS 111. (3). (SS). May not be repeated for credit.

HISTORY 275 / CAAS 231. Survey of Afro-American History, II CAAS 111. (3). (SS). May not be repeated for credit.

HISTORY 276. History of Canada (3). May not be repeated for credit.

HISTORY 277 / AAPTIS 277 / ACABS 277 / HJCS 277 / JUDAIC 277 / RELIGION 277. The Land of Israel/Palestine through the Ages (4; 3 in the half-term). (HU). May not be repeated for credit. Taught in English.

HISTORY 278 / AAPTIS 269. Introduction to Turkish Civilizations (4). (HU). May not be repeated for credit. Taught in English. HISTORY 284. Sickness and Health in Society: 1492 to the Present First-year students must obtain permission of the instructor. (3 - 4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 285 / RCSSCI 275. Science, Technology, Medicine, and Society Sophomore standing. (4). (SS). May not be repeated for credit.

HISTORY 286 / RELIGION 286. A History of Eastern Christianity from the 4th to the 18th Century

(3). (HU). May not be repeated for credit.

HISTORY 287 / ARMENIAN 287. Armenian History from Prehistoric Times to the Present

(3). May not be repeated for credit. Taught in English.

HISTORY 299. Pedagogies of History Consent of department required. (1). May be elected three times for credit.

HISTORY 301. Discovery of the Universe (3). (ID). May not be repeated for credit.

HISTORY 302. Topics in History

(3). May be elected three times for credit. HISTORY 303. Topics in History

(4; 3 in the half-term). May be elected twice for credit.

HISTORY 304 / AMCULT 317. History of the Pacific Islands (3). May not be repeated for credit.

HISTORY 305 / CAAS 305. Histories of the Modern Caribbean (3). May not be repeated for credit.

HISTORY 306 / ACABS 321 / RELIGION 358. Israel Before the Exile (587 BCE): Its History & Religion

(3). (HU). May not be repeated for credit.

HISTORY 307 / ACABS 322 / RELIGION 359. History and Religion of Ancient Judaism May be elected independently of ACABS 321/HISTORY 306/RELIGION 358. (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTORY 313. The Revolutionary Century: France, 1789-1900 (*4*; *3 in the half-term*). (SS). May not be repeated for credit.

HISTORY 314. Empire, War, and Modernity: France and the World in the 20th Century

(4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 318. Europe in the Era of Total War, 1870-1945 (4; 3 in the half-term). (SS). May not be repeated for credit. F.

HISTORY 319. Europe Since 1945 (4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 320. Britain, 1901-1939: Culture and Politics (4; 3 in the half-term). (R&E). May not be repeated for credit.

HISTORY 321. Britain Since 1945 HISTORY 221. (4; 3 in the half-term). May not be repeated for credit.

HISTORY 322 / GERMAN 322. The Origins of Nazism (4). (HU). May not be repeated for credit. Taught in English.

HISTORY 323 / FRENCH 343. French Enlightenment

(3). (HU). May not be repeated for credit.

HISTORY 324 / ACABS 324 / ANTHRARC 384. Ancient Mesopotamia: History and Culture

Junior standing. (4; 3 in the half-term). (ID). May not be repeated for credit.

HISTORY 325 / AAPTIS 325 / ASIAN 324 / RELIGION 325. The History of Islam in South Asia

(4). (HU). (R&E). May not be repeated for credit.

HISTORY 326 / ITALIAN 314. Modern Italy: 1815 to Present (3). May not be repeated for credit.

HISTORY 327 / WOMENSTD 327. The History of Sexuality (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTORY 328. Humanities Topics in History (3 - 4; 3 in the half-term). (HU). May be elected twice for credit.

HISTORY 329. Social Science Topics in History (3 - 4; 3 in the half-term). (SS). May be elected twice for credit.

HISTORY 330. Poland from the Medieval to the Modern

(4; 3 in the half-term). (HU). May not be repeated for credit. HISTORY 332 / POLSCI 395 / REES 395 / SLAVIC 395 / SOC 392. Survey of Russia: The

Russian Empire, the Soviet Union, and the Successor States (4; 3 in the half-term). (SS). May not be repeated for credit. May not be counted in a Slavic Department academic minor. F.

HISTORY 333 / POLSCI 396 / REES 396 / SLAVIC 396 / SOC 393. Survey of Central and Eastern Europe and the Enlarged European Union

(4; 3 in the half-term). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in REES 397. May not be counted in a Slavic Department academic minor.

HISTORY 334 / AAPTIS 364 / MENAS 334. Selected Topics in Near and Middle Eastern Studies

(1 - 3). May not be repeated for credit.

HISTORY 335. The Ottoman Enterprise HISTORY 110. (3). May not be repeated for credit. HISTORY 336 / CAAS 336 / WOMENSTD 336. Black Women in America CAAS 201. (3). (SS). May not be repeated for credit.

HISTORY 337 / CAAS 337 / WOMENSTD 337. Black Women in the United States, Part I: From the American Revolution through the Women's Era CAAS 201. (4). May not be repeated for credit.

HISTORY 338 / AMCULT 338. American Indians in the 20th Century (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTORY 339 / ASIAN 365. Science in Premodern China (3). (HU). May not be repeated for credit.

HISTORY 340 / AAPTIS 340 / ASIAN 340 / MENAS 340 / REES 340. From Genghis Khan to the Taliban: Modern Central Asia

(4; 3 - 4 in the half-term). (SS). (R&E). May not be repeated for credit. HISTORY 341 / POLSCI 397. Nations and Nationalism

(4). May not be repeated for credit.

HISTORY 342 / POLSCI 345 / SOC 342. History of European Integration (3). (SS). May not be repeated for credit.

HISTORY 343. Rise of the Corporation (3). (SS). May not be repeated for credit.

HISTORY 345 / RCSSCI 357. History and Theory of Punishment (4). May not be repeated for credit.

HISTORY 346 / AMCULT 348. History of American Radicalism (*4*; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 347 / ANTHRCUL 346. Latin America: The Colonial Period (4). (SS). May not be repeated for credit.

HISTORY 348. Latin America: The National Period (4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 352. Imperial China: Ideas, Men, and Society (3). May not be repeated for credit.

HISTORY 353 / AMCULT 353. Asians in American Film and Television (4; 3 in the half-term). (ID). (R&E). May not be repeated for credit.

HISTORY 354 / ASIAN 354. Rebellion and Revolution in China Through Two Centuries

At least one course in HISTORY or Asian Studies. (4; 3 in the half-term). May not be repeated for credit.

HISTORY 355 / ANTHRCUL 355 / CAAS 355. Health and Illness in African Worlds (4; 3 in the half-term). (R&E). May not be repeated for credit.

HISTORY 356 / AMCULT 356. World War Two in the Pacific (4; 3 in the half-term). May not be repeated for credit.

HISTORY 357. Topics in African History (3). May be elected three times for credit.

HISTORY 358. Topics in Latin American History (3). May be elected three times for credit.

HISTORY 359. Visions of the Past (3). May not be repeated for credit.

HISTORY 360. September 11

(3). May not be repeated for credit.

HISTORY 361. U.S. Intellectual History, 1750-1940 (3). (HU). May not be repeated for credit.

HISTORY 362 / CAAS 346 / ENGLISH 389. Literature in African History CAAS 111 and 200. (3). (HU). May not be repeated for credit.

HISTORY 363. U.S. Foreign Policy and International Politics Since World War II (4). May not be repeated for credit.

HISTORY 364. History of American Suburbia (4). May not be repeated for credit.

HISTORY 365 / AMCULT 336 / CAAS 334. Popular Culture in Contemporary Black America

CAAS 201. (3). (HU). May not be repeated for credit.

HISTORY 367 / AMCULT 367. American Indian History (4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

HISTORY 368 / AMCULT 342 / WOMENSTD 360. History of the Family in the U.S.

(4; 3 in the half-term). (ID). May not be repeated for credit. HISTORY 369 / AMCULT 369. The History of U.S. Mass Culture From Minstrelsy to Hip Hop

(4; 3 in the half-term). May not be repeated for credit.

HISTORY 370 / WOMENSTD 370. Women in American History to 1870

(3). May not be repeated for credit.

HISTORY 371 / AMCULT 371 / WOMENSTD 371. Women in American History Since 1870

(4). (R&E). May not be repeated for credit. W.

HISTORY 372 / WOMENSTD 372. Women and Gender in European History (3). May not be repeated for credit.

HISTORY 373 / AMCULT 373. History of the U.S. West (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTORY 374 / AMCULT 374. The Politics and Culture of the "Sixties" (4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 375 / WOMENSTD 375. A History of Witchcraft: The 1692 Salem Trials in Historical and Cross-Cultural Perspective (4). (HU). May not be repeated for credit.

HISTORY 376. History of Ireland to 1603

(3). (HU). May not be repeated for credit. HISTORY 377 / AMCULT 315. History of Latinos in the U.S.

(4). (R&E). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AMCULT/HISTORY 312.

HISTORY 378 / AMCULT 314. History of Asian Americans in the U.S. (4; 3 in the half-term). (SS). May not be repeated for credit.

HISTORY 379 / RCSSCI 379 / SI 379. History of Computers and the Internet Junior standing. Familiarity with computer concepts helpful but not required. (4). (SS). May not be repeated for credit.

HISTORY 381 / JUDAIC 380 / MEMS 381. Medieval Jewish History: 500-1492 (3). May not be repeated for credit.

HISTORY 382 / JUDAIC 382 / MEMS 382. Early Modern Jewish History 1492-1700 (3). May not be repeated for credit.

HISTORY 383 / JUDAIC 383. Modern Jewish History to 1880 (3). May not be repeated for credit.

HISTORY 384 / JUDAIC 384. Modern Jewish History 1880-1948 (3). May not be repeated for credit.

HISTORY 386 / JUDAIC 386. The Holocaust (4). (R&E). May not be repeated for credit.

HISTORY 387 / AMCULT 387 / JUDAIC 387. History of American Jews (4; 3 in the half-term). May not be repeated for credit.

HISTORY 388 / CAAS 323 / WOMENSTD 323. Black Feminist Thought and Practice (3). May not be repeated for credit.

HISTORY 389. War Since the Eighteenth Century (3). May not be repeated for credit.

HISTORY 390. Topics Mini-Course (1 - 2). May be elected three times for credit.

HISTORY 391. Topics in European History (3). May be repeated for a maximum of 6 credits.

HISTORY 392. Topics in Asian History (3). May be elected twice for credit.

HISTORY 393. Topics in U.S. History

(3). May be repeated for a maximum of 6 credits.

HISTORY 395. Reading Course

Consent of department required. Open only to History concentrators. (1 - 4; 1 - 3 in the half-term). (INDEPENDENT). May be repeated for a maximum of 8 credits. A maximum of eight credits can be elected through HISTORY 394 and 395. For the purposes of history concentration credit, no more than eight credits may be elected from HISTORY 395 (Independent Study).

HISTORY 396. History Colloquium

Junior and Senior HISTORY concentrators by permission only. HISTORY concentrators are required to elect HISTORY 396 or 397. (4; 3 in the half-term). May be repeated for a maximum of 8 credits.

HISTORY 397. History Colloquium

Enrollment limited to junior and senior History concentrators by permission only. History concentrators are required to elect HISTORY 396 or 397. (4; 3 in the half-term). May be repeated for a maximum of 8 credits.

HISTORY 398. Honors Colloquium, Junior

Consent of instructor required. Honors students; junior standing, and permission of instructor. (4; 3 in the half-term). May not be repeated for credit. HISTORY 398-399 Honors sequence satisfies the "colloquium" requirement for history concentration. W.

HISTORY 399. Honors Colloquium, Senior

Consent of instructor required. Honors students, HISTORY 398, senior standing, and permission of instructor. (1 - 6). May be repeated for a maximum of 6 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of HISTORY 399, the final grade is posted for both term's elections. HISTORY 398-399 Honors sequence satisfies the "colloquium" requirement for history concentration.

HISTORY 400. Problems in Greek History I

(3). May not be repeated for credit.

HISTORY 402. Problems in Roman History I (3). May not be repeated for credit.

HISTORY 403. Problems in Roman History II

(3). May not be repeated for credit.

HISTORY 405 / CLCIV 476 / RELIGION 476. Pagans and Christians in the Roman World

(4; 3 in the half-term). May not be repeated for credit.

HISTORY 406 / JUDAIC 406. The Church and the Jews (3). May not be repeated for credit.

HISTORY 408. Byzantine Empire, 284-867

(3; 2 in the half-term). May not be repeated for credit.

HISTORY 409. Byzantine Empire, 867-1453

(3; 2 in the half-term). May not be repeated for credit.

HISTORY 410 / MEMS 410. Classics of Medieval History

Sophomore or above and one course in HISTORY or HISTART. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTORY 415 / ASIAN 415. Law and Society in Late Imperial and Modern China Junior or senior standing. No prior knowledge of China or Chinese required. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTORY 416 / GERMAN 401. Nineteenth-Century German and European Intellectual History

(3). May not be repeated for credit. Taught in English.

HISTORY 417 / GERMAN 402. Twentieth-Century German and European Thought (3). May not be repeated for credit. Taught in English. German concentrators must be concurrently enrolled in GERMAN 404.

HISTORY 420. Modern Germany

(3). May not be repeated for credit. No credit for those who have completed or are enrolled in HISTORY 418 or 419.

HISTORY 421 / CAAS 421 / LACS 421 / RELIGION 421. Religions of the African Diaspora

(3). May not be repeated for credit. Rackham credit requires additional work.

HISTORY 422 / ASIAN 400 / RELIGION 400. Indian Religions and Western Thought Junior and above. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTORY 427. Magic, Religion, and Science in Early Modern England (3). May not be repeated for credit.

HISTORY 429 / AAPTIS 495 / RELIGION 496 / WOMENSTD 471. Gender and Sexuality in Pre-Modern Islam

Students should preferably have had one course in Islamic Studies. (3). May not be repeated for credit.

HISTORY 431. History of the Balkans Since 1878

(3; 2 in the half-term). (R&E). May not be repeated for credit. W.

HISTORY 433. Russia Under the Tsars: From Peter the Great to the Revolutions of 1917

(3). May not be repeated for credit.

HISTORY 434. Russia in the 20th Century: War, Revolution, and Reform (4). May not be repeated for credit. W.

HISTORY 435 / JUDAIC 435 / RUSSIAN 435. Cultural History of Russian Jews through Literature and the Arts

(3). May not be repeated for credit. Rackham credit requires additional work.

HISTORY 442 / AAPTIS 461. The First Millennium of the Islamic Near East Junior standing. (3). May not be repeated for credit. Taught in English.

HISTORY 443 / AAPTIS 487. Modern Middle East History (4). May not be repeated for credit.

HISTORY 448 / WOMENSTD 448. Gender and the Family in China (3). May not be repeated for credit. Rackham credit requires additional work.

HISTORY 449. Topics in Middle Eastern History (3). May not be repeated for credit.

HISTORY 450. Japan to 1700

(3). May not be repeated for credit. Rackham credit requires additional work.

HISTORY 451. Japan Since 1700 (3; 2 in the half-term). May not be repeated for credit.

HISTORY 452 / SEAS 452. History of Late-Colonial Southeast Asia, 1780-1942 (3). May not be repeated for credit.

HISTORY 453 / SEAS 453. History of Post-Colonial Southeast Asia, 1942-2000 (3). May not be repeated for credit.

HISTORY 454. The Formation of Indian Civilization to 320 A.D. (3). May not be repeated for credit.

HISTORY 455. Classical India and the Coming of Islam 320-1526 A.D. (3). May not be repeated for credit.

HISTORY 457. History of India, 1750-1900 (3). May not be repeated for credit.

HISTORY 458. The History of South Asia in the 20th Century (3). May not be repeated for credit.

HISTORY 461. The American Revolution (4; 3 in the half-term). May not be repeated for credit.

HISTORY 463. The Origins of the American Civil War, 1830-1860 (3). May not be repeated for credit. W.

HISTORY 464 / AMCULT 464. Race, Culture, and Politics in the Era of Civil War and Reconstruction

(3). (R&E). May not be repeated for credit. HISTORY 466. The United States, 1901-1945

(4). May not be repeated for credit.

HISTORY 467. The United States Since 1945 (4). May not be repeated for credit. W.

HISTORY 468. Topics in U.S. History

(3). May be elected three times for credit. HISTORY 469. Precolonial Southeast Asia

(3). May not be repeated for credit.

HISTORY 472. Topics in Asian History (3). May be elected three times for credit.

HISTORY 473 / CAAS 473 / LACS 483. Brazil: History and Culture

(3). May not be repeated for credit. Rackham credit requires additional work. HISTORY 476 / LHC 412. American Business History

Junior, senior, or graduate standing. (3). May not be repeated for credit.

HISTORY 477. Law, History, and the Dynamics of Social Change (3). May not be repeated for credit.

HISTORY 478. Topics in Latin American History (3). May not be repeated for credit.

HISTORY 480. Conflict and Diplomacy in the Caucasus (3). May not be repeated for credit. Rackham credit requires additional work.

HISTORY 481. Topics in European History (3). May be elected three times for credit.

HISTORY 486. Social History of Early Modern England Upperclass standing. (3). May not be repeated for credit.

HISTORY 487 / AAPTIS 467 / RELIGION 467. Shi'ism: The History of Messianism and the Pursuit of Justice in Islamdom

Junior standing or permission of instructor. (3). May not be repeated for credit.

HISTORY 489. The History of the Roman Catholic Church, 1775-2005 (4; 3 in the half-term). May not be repeated for credit.

HISTORY 491 / ECON 491. The History of the American Economy

ECON 401 with a C- or better; or Graduate Standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

HISTORY 494 / ECON 494. Topics in Economic History ECON 401 with a C- or better; or Graduate Standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

HISTORY 495. Medieval Inner Asia (3). May not be repeated for credit.

HISTORY 498. Topics in History (3). May be elected three times for credit.

HISTORY 584. Legal History Workshop (2 - 3). May not be repeated for credit.

HISTORY 595 / CAAS 595. Topics in African History CAAS 200. (3). May not be repeated for credit.

MEDIEVAL AND EARLY MODERN STUDIES (MEMS)

MEMS 110 / HISTORY 110. Medieval, Renaissance, and Reformation Europe (*4*; 3 in the half-term). (SS). May not be repeated for credit.

MEMS 210 / HISTORY 210. Early Middle Ages, 300-1100 (4; 3 in the half-term). (SS). May not be repeated for credit. F.

MEMS 211 / HISTORY 211. Later Middle Ages, 1100-1500

(4). (SS). May not be repeated for credit. W. MEMS 212 / HISTORY 212. Renaissance Europe

(4). (HU). May not be repeated for credit.

MEMS 213 / HISTORY 213. The Reformation (4; 3 in the half-term). (HU). May not be repeated for credit.

MEMS 240 / HISTART 240. The Visual Arts in Medieval Society (3). (HU). May not be repeated for credit.

MEMS 250 / HISTART 250. Italian Renaissance Art (4). (HU). May not be repeated for credit.

MEMS 251 / HISTART 251. Italian Renaissance Art, II (4). (HU). May not be repeated for credit.

MEMS 260. Special Topics in Medieval and Early Modern Studies (3). May be elected twice for credit. May be elected more than once in the same term.

MEMS 310 / RCHUMS 310. Pagans, Christians, and Barbarians in Late Antiquity and the Early Christian Period

(3). (HU). May not be repeated for credit. MEMS 314 / RCHUMS 314. The Figure of Rome in Shakespeare and 16th-Century Painting

(3). (HU). May not be repeated for credit.

MEMS 333 / ITALIAN 333. Dante's Divine Comedy

A knowledge of Italian is not required. (3). (HU). May not be repeated for credit. Taught in English.

MEMS 344 / HISTART 344. Early Medieval Kingdoms and Cultures: European Art 400-1000

Upperclass standing. (3). (HU). May not be repeated for credit.

MEMS 345 / HISTART 345. Introduction to Medieval Architecture Upperclass standing. (3). (HU). May not be repeated for credit.

MEMS 350 / ENGLISH 350. Literature in English to 1660

(4; 3 in the half-term). May not be repeated for credit. F.

MEMS 360. Special Topics in Medieval and Early Modern Studies (3). May be elected twice for credit. May be elected more than once in the same term. **MEMS 366 / ENGLISH 366. Shakespeare's Contemporaries** (4; 3 in the half-term). May not be repeated for credit.

MEMS 367 / ENGLISH 367. Shakespeare's Plays: The Elizabethan Years (4; 3 in the half-term). (HU). May not be repeated for credit.

MEMS 368 / ENGLISH 368. Shakespeare's Plays: The Jacobean Years (4; 3 in the half-term). (HU). May not be repeated for credit.

MEMS 375 / GERMAN 375 / SCAND 375. Celtic and Nordic Mythology (3). (HU). May not be repeated for credit. Taught in English.

MEMS 377 / FRENCH 367. Literature, History, and Culture of Early Modern France

Two courses in FRENCH numbered FRENCH 250-299; or FRENCH 235 and two RCLANG 320; or FRENCH 235, one course in FRENCH numbered FRENCH 250-299 and one RCLANG 320. (Prerequisites enforced at registration.) (3). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

MEMS 381 / HISTORY 381 / JUDAIC 380. Medieval Jewish History: 500-1492 (3). May not be repeated for credit.

MEMS 382 / HISTORY 382 / JUDAIC 382. Early Modern Jewish History 1492-1700 (3). May not be repeated for credit.

MEMS 386 / FRENCH 366. Medieval Literature, History, and Culture

Two courses in FRENCH numbered FRENCH 250-299; or FRENCH 235 and two RCLANG 320; or FRENCH 235, one course in FRENCH numbered FRENCH 250-299 and one RCLANG 320. (Prerequisites enforced at registration.) (3). (HU). May be repeated for a maximum of 6 credits.

MEMS 410 / HISTORY 410. Classics of Medieval History

Sophomore or above and one course in HISTORY or HISTART. (3). May not be repeated for credit. Rackham credit requires additional work.

MEMS 411. Special Topics (1 - 3). May not be repeated for credit.

(1 - 5). Way not be repeated for crean.

MEMS 421 / RCHUMS 386. Medieval Drama (4). May not be repeated for credit.

MEMS 441 / LATIN 436. Postclassical Latin II Two years of college Latin. (3; 2 in the half-term). May not be repeated for credit.

MEMS 445 / FRENCH 462. Literature of the Sixteenth Century Three courses in FRENCH numbered 300 or above. (Prerequisites enforced at registra-

tion.) (3). May not be repeated for credit.

MEMS 465 / ENGLISH 465. Chaucer: The Canterbury Tales (3; 2 in the half-term). May not be repeated for credit.

MEMS 476 / AAPTIS 476. The Church of Armenia: Profile of a National Institution Upper-class undergraduates or graduate students. (3). May not be repeated for credit. Rackham credit requires additional work.

MEMS 490. Directed Reading

Permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for credit.

MEMS 491. Research Methods for Premodern Topics

Consent of instructor required. Honors student and senior standing. (1). May be repeated for a maximum of 2 credits.

History of Art

110 Tappan Hall 855 South University Avenue (734) 764-5400 (phone) (734) 647-4121 (fax) www.lsa.umich.edu/histart Professor Celeste Brusati, Chair

Professors

Matthew Biro, Critical Theory, 20th-Century Art

Celeste Brusati, Northern Baroque Art

- Elaine K. Gazda, *Etruscan and Roman Art, Classical Archaeology*
- Daniel Herwitz (Mary Fair Croushore Professor of Humanities), *European Avant-Garde*

Alex Potts, Modern Art and Sculpture, Critical Theories of Art

- Martin Powers (Sally Michelson Davidson Professor of Chinese Arts and Cultures), *Warring States through Jung Dynasty Chinese Art*
- Margaret C. Root, *Art and Archaeology of the Ancient Near East and Greece*
- Elizabeth Sears (George H. Forsyth Jr. Collegiate Professor of the History of Art), *History of Art Historical Scholarship*

Susan Siegfried, 18th- and 19th-Century European Art

Ray Silverman, Art and Visual Cultures of Africa, Museum Studies

Associate Professors

David Doris, *African Art and Culture* Megan Holmes, *Italian Renaissance Art* Howard Lay, 19th-20th *Century Art and Theory* Lisa Nevett, *Architecture in the Ancient World* Patricia Simons, *Italian Renaissance Art and Women's Studies* Rebecca Zurier, *American Art*

Assistant Professors

Kevin Carr, Japanese Art Joan Kee, Modern and contemporary East and Southeast Asian Art Achim Timmermann, Medieval Art and Architecture Tom Willette, Renaissance and Baroque Art Claire Zimmerman, 19th/20th-Century Architecture

Affiliated Faculty

Beth Genné, 19th- & 20th-Century European and American Art
 Christopher Ratté, Classical Archaeology, especially Greek architecture and urbanism, archaeology of Turkey
 Anatole Senkevitch, Modern Architecture

Lydia Soo, Early Modern Architecture

Professors Emeriti R. Ward Bissell, Richard Edwards, Marvin Eisenberg, Ilene H. Forsyth, Joel Isaacson, Diane M. Kirkpatrick, Victor H. Miesel, Charles H. Sawyer, Walter M. Spink, Nathan Whitman

History of Art examines the wide range of things that humanity has made and looked at and endowed with meaning – from the imposing facade of an imperial palace, to the colorful glory of stained glass or oil painting, to an artist's intimate sketches. The discipline encompasses the study of painting, sculpture, the graphic media, and architecture, as well as an extensive variety of visual forms produced for purposes that run far afield of the traditional territory of "art" itself (advertising, say, or ritual and ceremony, or popular entertainment).

Students become conversant with the world's cultures and develop skills in visual analysis in order to understand how images, objects and built environments communicate. They also learn to employ a broad selection of interpretive methodologies. Through careful work with original sources and a wide-ranging study of comparative cultures, our students learn to consider how art objects were understood in their own time and place, and how they continue to function in the contemporary world. In doing so, history of art students become acute observers and interpreters of the visual environment.

A concentration in History of Art provides an excellent general foundation for work in a range of careers which rely on visual literacy as well as training in the humanities. Graduates of our program have pursued careers not only in university teaching and research, museums, galleries, auction houses, but also in arts administration, art therapy, design, advertising, criticism, journalism, publishing, libraries, computer and digital technology, and historical preservation.

Organized visits to museums in Cleveland, Detroit, Toledo, and other nearby collections are an integral part of the department's academic program.

Resources and Special Opportunities

The Fine Arts Library, housed in Tappan Hall, is a major research collection of books and periodicals of international scope in addition to up-to-date on-line and CD-ROM resources.

The Eleanor Collins Visual Resource Collections is not only one of the best teaching collections of slides and photographs in the United States, but also contains significant research holdings in Asian art.

Helicon, the department's undergraduate association, sponsors a variety of activities such as films, museum trips, speakers, and social events. All History of Art concentrators are eligible to join; notices of meetings and events are posted on the bulletin board in the Tappan Hall lobby.

The History of Art Student Service Office, located in 50 Tappan Hall, maintains files of information on career options, internships, study abroad programs, graduate schools, Museum Studies programs, and fellowships.

History of Art

May be elected as a departmental concentration program

Prerequisites to Concentration. One course below the 300 level (except for HISTART 194), one of which must be chosen – preferably – from among the courses numbered HISTART 100, 101, 102, 103, 112, or 208. One 100-level course can be met through AP, upon approval by a History of Art advisor.

Concentration Program. 30 credits at the 200-level and above. At least four courses (or a minimum of 12 credits) must be at the 300 or higher level, and one of these must be a 300- or 400-level seminar. Three courses (at the 200 or higher level) must meet the Chronological and Geographical distribution requirements described below. Students are otherwise free to choose whatever they wish to make up their concentration.

(N.B.: No course in which the student obtained lower than a C-grade may be accepted in satisfaction of the department's concentration requirements, nor any course elected under the pass/fail option).

1. Chronological and Geographical Distribution Requirements. History of Art at the University of Michigan offers a culturally interlaced and multicentric program, encompassing the histories of the visual and architectural arts in a diversity of temporal and geographical locations. Concentrators must ensure that at least three of their courses adequately cover some of this rich diversity. To do this, students must take courses covering each of at least three chronologically different periods, and courses covering each of at least three geographical regions.

The chronological categories can be broadly defined as:

- (1). Ancient;
- (2). Medieval;
- (3). Early Modern;
- (4). Modern and Contemporary (18th century or later).

The geographical areas can be described as:

- A. Western Asia and North Africa (Middle East) and Central Asia;
- B. Sub-Saharan Africa;
- C. Eastern Asia (China, Japan, India, Southeast Asia) and the Pacific;
- D. Europe, United States, and Canada;
- E. the Americas and the Caribbean.

A student thus might take the following cluster of courses to satisfy the distribution requirement: Ancient China, Byzantine Middle East, Modern Russia; another cluster could be Hellenistic Egypt, Medieval Western Europe, Early Modern Africa. Many other combinations are possible. Concentration advisors guide students through the program.

Students are encouraged to take a semester of work in history of art at various international programs. However, at least 12 credits for the concentration (excluding prerequisites) must be taken in residence at UM–Ann Arbor.

HISTART 393 Junior Proseminar is open to junior concentrators upon recommendation of a concentration advisor. History of Art Honors students are strongly recommended to take the Proseminar and to write the Honors Thesis (HISTART 498 and 499).

2. Cognates. Six credits of courses at the 300- or higher level, preferably in fields related to the themes and materials of a student's area of focus in history of art *(e.g.,* courses in ALC, CAAS, Classical Civilization, History, Romance Languages, or MEMS). One course may be at a lower level if it is a studio/practicum course *(e.g.,* ASIANLAN 207 "Calligraphy"; or a studio course taken in Art & Design or Architecture + Urban Planning or the RC; or certain internships, approved by an undergraduate advisor in History of Art.

Language Preparation. Students who wish to pursue graduate work in the history of art are encouraged to develop second language proficiency beyond the requirements set by LSA. Reading proficiency in German, in particular, is required by most history of art graduate programs. Students who wish to pursue graduate studies in west or east Asian art are strongly encouraged to begin the study of Arabic, Persian, Japanese, Chinese or a related language as early as possible in their undergraduate program.

Credit for Study Abroad. Credit awarded by the University of Michigan Center for Global and Intercultural Study (CGIS) may automatically be offered in satisfaction of appropriate history of art concentration requirements. In consultation with the student, a history of art concentration advisor will correlate study abroad courses with the department's course offerings. The concentration advisor will also sign the student's CGIS application.

History of art courses taken through **other** university study-abroad programs, however, must be evaluated by a concentration advisor on a case-by-case basis. Students hoping to present such work to-ward their concentration must consult with the concentration advisor **prior** to undertaking foreign studies, with the end of identifying potentially appropriate courses. It is understood that no such courses can be preapproved, and that students upon their return must be prepared to document their work fully by providing the syllabi, papers, and/or exams for the courses in question. Depending upon the content, academic demands, and relationship to department course offerings thus demonstrated, full, partial, or no credit toward meeting concentration requirements may then be granted.

Credit for Internship Experience. Internships at museums, galleries, auction houses, and archaeological digs can be of great benefit to students of the history of art, providing intimate contact with works of art and exposure to the many facets of the discipline. The department is therefore prepared to award credit for internship experience through independent study (HISTART 299). Before registering, the student completes the Independent Study (IS) Contract form and meets with a faculty member to determine the objectives that will be met by the internship, as well as the grade criteria and the number of academic credits to be earned. As with any independent study, students will meet the academic requirements for course credit by submitting a written product, describing the skills acquired by the internship and how those skills will contribute to the student's academic and/or career goals. The final evaluation will be determined once the internship is completed, and the written product is submitted for evaluation.

Honors Program. The Honors concentration is open to juniors and seniors who have obtained the permission of the Honors concentration advisor. Candidates for Honors in history of art must meet all requirements for a regular concentration. The core of the Honors program is the work done in conjunction with HISTART 393 and 498. In their last term Honors candidates must complete the Honors thesis (HISTART 499).

Advising. Students concentrating in the history of art are required to discuss their program with a departmental concentration advisor at least once a year, and are strongly urged to do so at least once every Fall/Winter Term. These advising appointments are scheduled through the Student Services office (50 Tappan Hall). However, progress toward the satisfaction of the many and varied LSA distribution requirements should be monitored by an LSA academic advisor (1255 Angell Hall). While every effort is made to apprise students of

the various Departmental and College regulations and to monitor student progress, the ultimate responsibility for assuring that all requirements are met rests with the student.

History of Art Academic Minor

An academic minor in History of Art is not open to students with a concentration in History of Art.

The History of Art academic minor offers students an introduction to the discipline's approach to humanistic study of the things that cultures around the world have made, looked at, and endowed with meaning. It will sharpen students' skills in visual and historical analysis and interpretation. An academic minor in History of Art is developed in consultation with an undergraduate advisor in History of Art. Appointments are scheduled through the Student Services office (50 Tappan Hall).

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 15 credits (and five courses), to be chosen from the following three categories as stated below:

- Required Survey Course: one introductory course chosen from the "10X" sequence of survey courses (HISTART 100, 101, 102, 103, 112, or 208).
- Electives: at least 12 credits at the 200-level or above. At least two courses must be elected at the 300-level or above, and at least one course (3 credits) must be a Junior/Senior Methodology course.

COURSES IN HISTORY OF ART (HISTART)

HISTART 100. Introduction to Art

(4). (HU). May not be repeated for credit.

HISTART 101. Great Monuments from the Stone Age to the Middle Ages (4). (HU). May not be repeated for credit. F.

HISTART 102. Western Art from the End of the Middle Ages to the Present U.G. (4). (HU). May not be repeated for credit. No credit granted to those who have completed HISTART 150. W.

HISTART 112. History of Photography

(4). (HU). May not be repeated for credit.

HISTART 194. First Year Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit. May not be used to meet the prerequisite requirement for the History of Art concentration.

HISTART 208 / CAAS 208. Introduction to African Art (4). (HU). May not be repeated for credit.

HISTART 211 / WOMENSTD 211. Gender and Popular Culture (4). (HU). May not be repeated for credit.

HISTART 212 / ARCH 212. Understanding Architecture (3). May not be repeated for credit. Not open to students enrolled in Architecture. W.

HISTART 213 / ARCH 213. Architecture and Modernity (4). (HU). May not be repeated for credit.

HISTART 220 / CLARCH 220. Great Buildings of Ancient Greece and Rome (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTART 221 / CLARCH 221. Introduction to Greek Archaeology (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTART 222 / CLARCH 222. Introduction to Roman Archaeology (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTART 224 / CAAS 224. African Visual Cultures: Akan/Kongo/Yoruba (3). May not be repeated for credit.

HISTART 240 / MEMS 240. The Visual Arts in Medieval Society (3). (HU). May not be repeated for credit.

HISTART 243 / ASIAN 243. Introduction to South Asian Art (3). (HU). May not be repeated for credit.

HISTART 244. Art of the American Century (1893-1968) (3). (HU). May not be repeated for credit.

HISTART 250 / MEMS 250. Italian Renaissance Art (4). (HU). May not be repeated for credit.

HISTART 251 / MEMS 251. Italian Renaissance Art, II (4). (HU). May not be repeated for credit.

HISTART 254 / WOMENSTD 254. Introduction to Gender and the Arts (3). (HU). May not be repeated for credit.

HISTART 255. Visual Mythology

(4). (HU). May not be repeated for credit.

HISTART 265 / ASIAN 265 / PHIL 265 / RCHUMS 265. The Arts and Letters of China (4). (HU). May not be repeated for credit.

HISTART 271. Origins of Modernism: Art and Culture in Nineteenth Century France (4). (HU). May not be repeated for credit. F.

HISTART 272 / RCHUMS 272. Art in the Modern World: Avant-Garde to Contemporary

(4; 3 in the half-term). (HU). May not be repeated for credit.

HISTART 285 / AAPTIS 285. Visual Culture Islam

(4). (HU). (R&E). May not be repeated for credit.

HISTART 299. Experiential Study

Consent of instructor required. One course in History of Art. (1 - 3). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. This course is not intended for students who are pursuing research. Offered mandatory credit/no credit.

HISTART 306. Exhibiting Mesopotamia

Consent of instructor required. HISTART 101. (3). (HU). May not be repeated for credit.

HISTART 334 / WOMENSTD 334. Women in the Visual Arts: Images and Image-

Makers

One course in Women's Studies or History of Art. (3). (HU). May not be repeated for credit.

HISTART 341. The Gothic Age

Upperclass standing. (3). (HU). May not be repeated for credit.

HISTART 342 / RCHUMS 344. Reason and Passion in the 18th Century Sophomore standing. (3). (HU). May not be repeated for credit.

HISTART 344 / MEMS 344. Early Medieval Kingdoms and Cultures: European Art 400-1000

Upperclass standing. (3). (HU). May not be repeated for credit. HISTART 345 / MEMS 345. Introduction to Medieval Architecture

Upperclass standing. (3). (HU). May not be repeated for credit.

HISTART 351. The Art and Poetry of Michelangelo HISTART 102 or 251. (3). May not be repeated for credit.

HISTART 362 / CAAS 362. Expressive Cultures of the Black Atlantic: Vision and Time HISTART 208/CAAS 208 and upperclass standing. (3). May not be repeated for credit.

HISTART 363. Muslim Kingship: The Palace and the Courtly Arts Consent of instructor required. HISTART 285. (3). May not be repeated for credit.

HISTART 369. Art of the Enlightenment, Revolution, and Empire (3). May not be repeated for credit.

HISTART 376. Dada and Surrealism (3). May not be repeated for credit.

HISTART 377. Perspectives in Recent Art HISTART 102 or 272. (3). May not be repeated for credit.

HISTART 381. Writing about Asian Art (3). May not be repeated for credit.

HISTART 382 / ACABS 382 / ANTHRARC 381. Introduction to Egyptian Archaeology (4; 3 in the half-term). (HU). May not be repeated for credit.

HISTART 384 / CLARCH 384. Principal Greek Archaeological Sites Upperclass standing, and a course in archaeology. (3). May not be repeated for credit.

HISTART 386. Painting and Poetry in China Upperclass standing and a course in archaeology. (3). (HU). May not be repeated for

credit.

HISTART 387 / CLARCH 387. Archaeology of Ancient Housing (3). May not be repeated for credit.

HISTART 388. Norm and Storm: Rebellion in Art

(3). (HU). May not be repeated for credit. HISTART 389 / CLARCH 389. Pompeii: Its Life and Art

CLARCH 222/HISTART 222. (3). (HU). May not be repeated for credit.

HISTART 391. Survey of Japanese Painting

Upperclass standing or permission of instructor. (3). May not be repeated for credit.

HISTART 392. Anime to Zen: Japanese Art through Contemporary Popular Culture (4). (HU). May not be repeated for credit.

HISTART 393. Junior Proseminar

Consent of instructor required. Concentration in History of Art and upperclass standing. (3). May be elected twice for credit. W.

HISTART 394. Special Topics Upperclass standing. (3). May be repeated for a maximum of 12 credits. May be

elected more than once in the same term. F, W, Sp, Su.

HISTART 399. Independent Study

Consent of instructor required. PER. INSTR. (1 - 3). (INDEPENDENT). May be repeated for credit.

HISTART 406 / CAAS 407. Looking at African Things

HISTART 208/CAAS 208. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTART 407 / MUSPRACT 407. Introduction to Museum Practice (3: 2 in the half-term). May not be repeated for credit.

HISTART 415 / WOMENSTD 415. Studies in Gender and the Arts

Upperclass standing, and one course in Women's Studies or History of Art. (3). May be repeated for a maximum of 9 credits.

HISTART 420 / AMCULT 432. National Identity in American Art Upperclass standing, and any prior coursework in History of Art, American Culture, or American History. (3). May not be repeated for credit.

HISTART 424 / CLARCH 424. Archaeology of the Roman Provinces

Upperclass standing, and CLARCH/HISTART 221 or 222. (3). May not be repeated for credit.

HISTART 433 / CLARCH 433. Greek Sculpture

Upperclass standing, and HISTART 101. (3; 2 in the half-term). May not be repeated for credit. Rackham credit requires additional work.

HISTART 435 / CLARCH 435. The Art and Archaeology of Asia Minor Upperclass standing. (3). May not be repeated for credit.

HISTART 436 / CLARCH 436. Hellenistic and Roman Architecture

Upperclass standing, and HISTART 101 or CLARCH 221/HISTART 221 or CLARCH 222/HISTART 222. (3). May not be repeated for credit.

HISTART 439 / CLARCH 439. Greek Vase Painting

Upperclass standing. (3; 2 in the half-term). May not be repeated for credit.

HISTART 440 / CLARCH 440. Cities and Sanctuaries of Classical Greece Upperclass standing, and a course in archaeology. (3; 2 in the half-term). May not be repeated for credit.

HISTART 443 / CLARCH 443. The Art and Archaeology of Greek Colonization Upperclass standing and CLARCH/HISTART 221. (3). May not be repeated for credit.

HISTART 463. Varieties of Dutch and Flemish Painting

Upperclass standing and HISTART 102 or 260. (3). May not be repeated for credit.

HISTART 464 / FRENCH 453. Interdisciplinary Topics in French Art, Literature, and Culture

Upperclass standing. (3). May be repeated for a maximum of 6 credits. Taught in English. Rackham credit requires additional work.

HISTART 466 / ASIAN 465. Sacred Image/Sacred Place in Japanese Art Some background knowledge in HISTART, Japanese, or RELIGION. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTART 473. Twentieth-Century Architecture

Upperclass standing, and HISTART 102. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTART 474. Topics in Modern and Contemporary Architecture

Any 100- or 200-level course in art history or architecture. (3). May be elected three times for credit. Rackham credit requires additional work.

HISTART 478. Issues in Modern Sculpture and Theory

HISTART 272 and at least one other History of Art course on 20th century or contemporary art. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTART 481 / CLARCH 481. Art of Ancient Iran

Upperclass standing and HISTART 101 or 222. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTART 489. Special Topics in Art and Culture

(1 - 3). May be elected three times for credit. May be elected more than once in the same term.

HISTART 497. Upper-Level Seminar

Previous coursework in the History of Art. (3). May be elected three times for credit. May be elected more than once in the same term.

HISTART 498. Honors Colloguium

HISTART 393. (3). May not be repeated for credit.

HISTART 499. Honors Thesis

Consent of instructor required. HISTART 498. (3). May not be repeated for credit.

HISTART 515 / CLARCH 515. The Archaeology of the Roman Economy

CLARCH/HISTART 222 or permission of instructor and upperclass standing. (3). May not be repeated for credit.

HISTART 534 / CLARCH 534. Ancient Painting

Upperclass standing, HISTART 101 and either HISTART/CLARCH 221 or 222. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTART 536 / CLARCH 536. Hellenistic and Roman Sculpture

Upperclass standing, HISTART 101 and either CLARCH/HISTART 221 or 222. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTART 555. Renaissance Architecture in Italy

Upperclass standing, and HISTART 101 or 102. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTART 565. Early Modern Architecture in Italy, Austria, and Germany

Upperclass standing and HISTART 102. (3). May not be repeated for credit. Rackham credit requires additional work.

HISTART 584. Painting in Islamic Countries

Upperclass standing, and HISTART 285. (3). May not be repeated for credit. Rackham credit requires additional work.

Honors Program

1330 Mason Hall 419 South State Street (734) 764-6274 (phone) (734) 763-6553 (fax) www.lsa.umich.edu/honors e-mail: ask.honors@umich.edu Profoscor Tim McKay (Physics) Director

Professor Tim McKay (Physics), Director The College, recognizing its special responsibility to students with superior ability, has established a four-year program to provide opportunities for greater depth of study throughout the undergraduate years. Michigan Honors is a four year program. In each term of the

years. Michigan Honors is a four year program. In each term of the first and second years, students elect two Honors courses among the total of four courses normally comprising their schedules. In the junior year students are admitted to an Honors concentration ("major") from among approximately forty departments and programs in the College. Students may also choose to pursue Honors in the Liberal Arts.

Among the features of the Honors Program are special Honors courses and Honors sections in regular courses, opportunities to participate in the research projects of faculty members, or in individual research, faculty-student seminars, and special academic advising.

Honors Admission. Students are admitted to the Honors Program by invitation of the Director, though inquiries are welcomed from any highly motivated student. Approximately 10% of incoming first-year students are invited into the program, but continuance is based on academic accomplishment. Students may jointly enroll in Honors and other LSA programs, such as the Residential College, the Compre-

hensive Studies Program, or other MLCs, or in LSA/Honors and another school, such as Music or Engineering.

Honors Admissions considers a number of factors when reviewing students: the high school GPA; the difficulty of the curriculum; teacher and counselor recommendations; the student's intellectual interests, enthusiasms, and goals; achievement test scores, SAT and ACT scores, and the student's essay. The Honors student body is diverse, with a range of backgrounds, scores, and grades. Above all, we look for evidence of exceptional intellectual engagement and energy.

Students who are not invited to participate in the fall of their first year may request admission for the winter of the first year or the fall of the second year. This should be done shortly after grades for at least one semester's work have been reported and prior to the beginning of a new term so that, if admitted, they can be enrolled in the appropriate Honors courses. Only students with distinguished academic performance in a full set of challenging classes are admitted at the second year level.

Honors Housing. Honors Housing is open to all students who are admitted to the Program, but no student is required to live there. Honors Housing allows students to live near others who are taking some of the same classes, and promotes intellectual interchange and a feeling of community. At the same time, students have access to all of the facilities in the residence hall and can participate in its many programs and activities. Students gather for the Honors Round Table every week in the South Quad Dining Hall where they have lunch together, meet faculty members, and discuss a wide variety of

interesting issues. Information about Honors Housing is sent to all admitted students.

Honors Advising. Perhaps the most valuable aspect of the Honors Program that students consistently mention is the high quality of academic advising they receive from the directors, the entire Honors staff, faculty, and peer advisors. Advising helps students make informed decisions. These decisions range from election of courses to choosing a concentration, from setting up an independent study to choosing a graduate or professional school, from going abroad to focusing on potential careers. This kind of ongoing dialogue assures that the individual student comes first. Students also profit from discussions with Honors concentration advisors.

Honors Courses. The Honors Program believes that challenging work, including research opportunities, should be available to superior students from the onset of their college education. Several types of Honors courses are offered for first and second year students:

- courses offered by various departments intended only for Honors students
- sections of regular courses for Honors students
- · courses sponsored by the Honors Program.

Small seminars (HONORS 250, 251, and 252) enable students to discuss matters of intellectual substance with a senior faculty member on a variety of topics. These seminars enroll a maximum of 15 students.

Some upper level courses also count as Honors courses for first and second year students and many courses may be converted to Honors courses with the agreement of the professor and the Honors Program.

No course elected Pass/Fail will receive the Honors notation on the transcript or be counted as an "Honors" course for the Sophomore Honors Award.

Independent Study and Research. Underlying all the coursework in Honors is the firm belief that students should take learning outside the classroom and engage in an independent study research project (for credit) under the direction of a faculty member. The Honors Program strongly encourages qualified and able students to do independent study or research. These options allow students to concentrate a considerable amount of time and effort in an area of particular interest, to develop intellectual relationships with members of the faculty and research staff, and to make more informed decisions about the Honors thesis and perhaps even long-range goals. Students are encouraged to look for a research placement when they have had adequate preparation to make their participation useful to the project and interesting for them. Honors academic advisors will be happy to talk with students about strategies for finding a project and a mentor.

Honors research tutorials are available in any term by permission of the Honors Office. First-year students and sophomores elect HONORS 291 and 292 and may serve as research assistants for faculty researchers, receive instruction in research methods, or participate in some phase of University or individual research. Comparable courses are available for juniors (HONORS 390) and seniors (HONORS 490).

The Undergraduate Research Opportunity Program (UROP) is another avenue through which to find a research placement. Some departments (for example, chemistry and psychology) maintain lists of available research projects. Many of our students find research work by directly contacting faculty whose areas of specialization interest them.

First and Second Year (Underclass) Honors. General guidelines for underclass Honors students, if they are to remain in good standing in the Honors Program, are based on standards developed during the Program's history. They are designed to provide a sound base for the undergraduate experience and to allow students to acquire knowledge, develop analytic skills, exercise creative abilities and critical faculties of mind. The basic four requirements for an underclass Honors student are:

- an average of two Honors courses per term for the four full terms of underclass Honors
- a course load of 14-18 credit hours
- an overall grade point average (GPA) of 3.4 or better
- the Literature and Ideas requirement.

Literature and Ideas. The Honors Program has established special courses that satisfy the introductory composition requirement at Michigan. It is our firm belief that strong writing skills are best achieved by exposure to great works of literature, history, and philosophy, and by exposure to the range of critical approaches to those works.

Except in very rare circumstances, every first-year Honors student must elect one of the following courses in each academic term of the first year: English Advanced Placement will not satisfy the Literature and Ideas requirement.

Fall Term, First Year

CLCIV 101 (Honors section) or GTBOOKS 191 (any section).

The readings for GTBOOKS 191 and CLCIV 101 (Honors section) overlap considerably but they have somewhat different emphases. Both courses stress the writing of essays, and the instructors pay attention to writing techniques and problems.

Winter Term, First Year

CLCIV 102 (Honors section) or GTBOOKS 192 (any section) or an approved alternative.

Prior to the registration period for each term, a list of courses which satisfy the second half of the Literature and Ideas requirement is published on the Honors website and is also available in the Honors office. This list will vary from year to year as course offerings vary.

The Sophomore Honors Award. The Sophomore Honors Award was created to encourage students to take full advantage of the opportunities in the Program and to recognize outstanding achievement during the freshman and sophomore years. To be eligible for this award, students must:

- 1. Obtain a minimum grade point average of 3.7, with no grade below a "C" in any course.
- Complete an average of two Honors courses per term during the first four full terms (fall/winter) they are at the University of Michigan, including two terms of Literature and Ideas courses.
- 3. Average 14 credits per term during the first four full terms they are at the University of Michigan.
- 4. Apply for the Award after the conclusion of the sophomore year. Applications are available online and in the Honors Office.

Students are also encouraged to seek out supervised research or small seminar classes where they engage with a reasonably advanced topic.

Junior/Senior (Upperclass) Honors. All departments and interdisciplinary programs offer the opportunity to graduate with Honors. At the beginning of the third year, students may apply to a departmental Honors Concentration Program. Students who meet departmental criteria are eligible to apply whether or not they have previously been in the Honors Program. Admission of upperclass students is decided by Honors concentration advisors appointed by various LSA departments and programs. Students who are accepted into an Honors concentration program automatically become LSA Honors students.

Honors concentration programs are described under the relevant departmental listings in this *Bulletin*.

Students may also petition the Honors Program for approval of an *Honors Individual Concentration Program (HICP)*. Information about the Honors Individual Concentration Program is available in 1330

Mason Hall. Candidates for graduation with Honors must perform very well in courses and also demonstrate ability in original thesis work, and, in some concentrations, pass a comprehensive examination.

Senior Thesis. During the senior year, Honors concentrators carry out research and write a thesis under the direction of a faculty mentor. With only a few exceptions, such as Math and Computer Science, graduation with Honors requires the completion of a Senior Honors thesis. This consists of detailed, original research in a student's chosen field. The thesis is normally completed during the senior year. Length and format requirements vary by department. Thesis research and writing is normally done under the direction of a professor who shares the student's areas of interest.

Many departments require their Honors concentrators to register for special seminars and independent study research courses. Other departments do not have these courses, so their students can choose to enroll in HONORS 490. Since thesis research and writing most often extends beyond one term, the course may be assigned a "Y" grade for the term or terms prior to completion. This simply means "extended course" or "work in progress." At the completion of the thesis, one letter grade will be assigned for all the terms involved. Unlike an "I" (for an incomplete), the "Y" does not remain on the record.

Honors students have the option of using their senior theses to satisfy the Upper-Level Writing Requirement. A *Sweetland Writing Center Thesis Intent Form* is available in the Honors Office, and must be filled out by the student and the thesis advisor. An Honors Director will then approve the request, and it will be forwarded to the Sweetland Writing Center for processing. This form should be completed within the first couple of weeks of the term the student plans to finish the thesis. Completion of the requirement hinges on satisfactory completion of the thesis.

After an evaluation of the thesis and the overall academic record, Honors concentration advisors recommend that students graduate with Honors. Deadlines and procedures for evaluating senior theses vary by department. Some departments have a committee that evaluates all theses, whereas others are based primarily on the judgment of the student's advisor and the Departmental Honors advisor.

The Department will then send one of four possible recommendations to the Honors Office: "No Honors," "Honors," "High Honors," or "Highest Honors." "No Honors" is given for work that does not meet departmental standards, and for students with GPAs under 3.4. The Honors Academic Board will accept petitions from departments requesting exceptions to the above minimum GPA requirements if there is compelling evidence that an Honors student's final GPA does not adequately represent the student's record of outstanding academic achievement. The other three recommendations ("Honors," "High Honors," "Highest Honors") will be posted on the final transcript and diploma. These are separate from the Distinction awards, which are also posted on graduates' diplomas and transcripts. Levels of Distinction are awarded on the basis of the student's final cumulative GPA.

Honors in the Liberal Arts. Honors in the Liberal Arts (HLA) provides an alternative to the traditional Honors concentration as a means to earn an Honors degree. The degree is intended for Honors students who have been academically successful during the first and sophomore years and who wish to explore and develop deep interests across concentration boundaries through especially advanced work primarily outside the concentration. This work may be elected either in addition to an Honors concentration or to supplement a non-Honors concentration. The courses proposed for the HLA must represent areas or aspects of a central theme which span the curricula of several departments or programs. Only one HLA course may come from any of the student's concentration(s) or academic minor(s). HLA proposals will reflect the unique academic interests of each individual student. Students who make this choice will graduate with Honors in the Liberal Arts. It is possible for students to complete both Honors in the Liberal Arts and Honors concentration degrees if they complete a sufficiently rich and challenging curriculum outside the area of concentration in the third and fourth years.

Requirements for Honors in the Liberal Arts

- Completion of the Honors Program requirements in the first two years: eight (8) Honors courses, including two (2) "Literature and Ideas" courses.
- Submission of a proposal and list of potential courses to the Honors Academic Board before the end of the junior year. Students should consult with an advisor while preparing their proposal.
- 3. Five (5) HLA courses, each carrying departmental graduate credits (a minimum of 15 credits), to be selected in consultation with an Honors advisor. Four (4) must come from outside the student's concentration and academic minor.
- 4. Students will submit a portfolio of work completed in their HLA courses to the Honors Program in the term they plan to graduate. This work will be evaluated by a committee, which will include faculty, to ensure that the academic program is sufficiently rigorous and includes written expression of a caliber that will warrant awarding the HLA.
- 5. An overall GPA of 3.5.

Deroy Visiting Honors Professorship. In 1981, the trustees of the Helen L. DeRoy Testamentary Foundation of Detroit established the Helen L. DeRoy Visiting Professorship in Honors to invite distinguished persons in business, government, labor, law, writing and various scholarly disciplines to teach seminars for Honors students. Since enrollment in seminar courses is limited, there is usually an application process for these courses.

Thesis Grants. All seniors are eligible to apply for senior thesis and travel grants. These include the *Graf Research Grant,* the *Hellman Family Grant,* the *Davidson Grant,* the *Kennedy Travel Grant,* and the *Cutcheon Research and Travel Grants.* Information is available in the Honors Office, and on the Honors website.

Prizes and Awards. Special prizes and awards are given at the time of graduation to recognize excellence in various fields. These include the *Virginia Voss Prize for Writing*, the *Alumni Prize for Outstanding Achievement*, and the *Goldstein Awards* for excellence in academic achievement, demonstrated potential, and humanitarian efforts.

Otto Graf Scholarship. The Otto Graf Scholarship, named after a long-time early director of the Honors Program, is awarded to an outstanding Honors junior.

Jack Meiland Award for Academic Excellence. The Jack Meiland Award for Academic Excellence is a scholarship to honor the memory of Prof. Jack Meiland, Professor of Philosophy and former Director of the Honors Program.

Other scholarships, grants, and fellowships are available. Please see the Honors website and consult an Honors advisor.

Graduation Procedures

Honors students* who have completed 85 Credits Toward Program (CTP) should apply for graduation on Wolverine Access and submit *Concentration/Minor Release Forms* for each concentration/minor they have declared. <u>ALL graduation materials (even non-Honors concentration releases) should be submitted to the Honors Office. Concentration/Minor Release Forms</u> must be submitted by a departmental advisor.

Once the online application and all release forms have been received, students will receive an email within three weeks that states their progress toward degree requirements. Ideally, students will initiate this process in the term prior to their expected graduation date.

Additionally, all Honors seniors, including RC/Honors students, should submit a *Graduation Information Card* to the Honors Office. This card is not required in order to graduate, but it informs the Program of students' specific areas of research and is used for inviting graduates and their families to the Honors Graduation Ceremony.

In order for the student's name to appear in the *Commencement Guide*, the online application needs to be completed no later than six weeks after classes begin in the term the student plans to graduate. Attendance at a commencement (Honors or otherwise) does not confirm official graduation from the university. Degrees are not conferred until all final grades and credits are posted to the transcript and the Honors Academic Auditor verifies that all degree requirements are met. Degree conferral usually occurs one month after commencement. Students who do not complete degree requirements in the term they applied for will be notified about their outstanding degree requirements. Diplomas are sent approximately 8 weeks after commencement.

Students who drop or add concentrations and/or minors after they initially applied to graduate online should contact the Honors Auditor to be sure their graduation eligibility has not changed. Students who need to change their graduation date in Wolverine Access must notify the Honors Auditor.

Note for Residential College (RC)/Honors Students: The RC will process your senior audit and graduation. However, as part of the Honors Program, you should also submit a Graduation Information Card to the Honors Office at 1330 Mason Hall.

Other Forms:

 Honors Thesis Intent Form for the Upper-Level Writing Requirement. Honors students have the option of using their senior theses to satisfy the Upper-Level Writing Requirement (ULWR). If this is your intention, an *Intent Form* must be completed. It must be filled out by the student a*nd the thes* advisor and then submitted to the Honors Office. This should be completed within the first few weeks of the term the student plans to finish the thesis. Fulfilling the ULWR hinges on satisfactory completion of the thesis. The form is available in the Honors Office or is downloadable from the Honors website www.lsa.umich.edu/honors

Request to Submit a Single Honors Thesis in Two Concentrations: Some students who decide to pursue Honors in two departments consider submitting a single thesis for both concentrations. Students who intend to do this must obtain prior permission from their thesis advisor as well as an Honors concentration advisor in both departments and from a representative of the Honors Academic Board (HAB) in *the* Honors Program office. The form is available in the Honors Office or is downloadable from the Honors website, www.lsa.umich.edu/honors.

*With only a few exceptions, such as Math and Computer Science, graduation with Honors requires the successful completion of a Senior Honors thesis. If you are completing a thesis, even if you were *not* in the First & Second-year Honors Program, you are considered part of the Honors Program. Conversely, if you *were* in the First & Second-year Honors Program, but have decided against writing a Senior Honors thesis, please inform the Honors Department as soon as you have made this decision.

COURSES IN COLLEGE HONORS (HONORS)

HONORS 135. Ideas in Honors

First-year standing in the Honors Program. (1). May not be repeated for credit. Offered mandatory credit/no credit.

HONORS 250. Honors Social Sciences Seminar

Open to all Honors students. (3). (SS). May be elected twice for credit.

HONORS 251. Honors Humanities Seminar

Open to Honors students. May be repeated for credit with permission of department. (3). (HU). May be elected twice for credit. May be elected more than once in the same term.

HONORS 252. Honors Natural Sciences Seminar

Open to Honors students. (3). (NS). (BS). May be elected twice for credit.

HONORS 290. Honors Introduction to Research

Consent of instructor required. Junior or Senior honors program. (1 - 4). (INDEPEN-DENT). May be repeated for a maximum of 8 credits. I, II, III, III, III, III.

HONORS 291. Honors Introduction to Scientific Research

Consent of instructor required. Open to Honors students. Permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. I, II, III, IIIa, IIIb.

HONORS 292. Honors Introduction to Scientific Research

Consent of instructor required. PER. HONORS. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits.

HONORS 350. Honors Introduction to Research in the Social Sciences Consent of department required. (3). (SS). May not be repeated for credit. HONORS 351. Honors Introduction to Research in the Humanities Consent of department required. (3). (HU). May not be repeated for credit.

HONORS 352. Honors Introduction to Research in the Natural Sciences (3). (NS). (BS). May not be repeated for credit.

HONORS 354 / CAAS 354 / RCHUMS 354 / WOMENSTD 354. Race and Identity in Music

(3). (HU). (R&E). May not be repeated for credit.

HONORS 390. Junior Honors Research

Consent of instructor required. PER. DIR. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of HONORS 490, the final grade is posted for both term's elections. F, W, Sp/Su, Sp, Su.

HONORS 490. Senior Honors Research

Consent of instructor required. Open to upperclass Honors concentrators. Permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. F, W, Sp/Su, Sp, Su.

HONORS 493. College Honors Seminar

Consent of instructor required. Permission of instructor or of the Honors Director. (1 - 4). May be repeated for a maximum of 8 credits. W.

Individual Concentration Program (ICP)

1255 Angell Hall 435 South State Street (734) 764-0332 (phone) (734) 764-2772 (fax) http://www.lsa.umich.edu/icp

David R. Smith, Ph.D. ICP Advisor

May be approved as a special concentration program

The Individual Concentration Program (ICP) is an option for innovative and thoughtful students who wish to undertake a rigorous program of study within the College of LSA that is not available either in an existing departmental concentration or interdepartmental program. ICPs are interdisciplinary and reflect the liberal arts perspective of LSA. The ICP encourages diversity and flexibility, but all ICPs must have an identifiable academic focus and unifying theme. As with other concentrations, ICPs must stress development of skills to think critically, to understand and evaluate knowledge, and to develop ideas.

Students are encouraged to apply for an ICP during their sophomore year. No more than half the proposed concentration courses can be completed and/or currently elected at the time the ICP application is submitted. Applications from students in their senior year will not be accepted.

Recent ICPs have included Community Studies, Computers and Cultural Animation, International Development, Studies in Religion,

Science and Society, Ethics, Human Rights, Perspectives on Death and Dying, Urban Studies, Global Health, and Social Justice.

Since an ICP leads to an A.B. or B.S. degree, students must meet A.B./B.S. requirements (first-year writing, second language, race and ethnicity, and quantitative reasoning requirements, and an area distribution plan). Students may complete the upper-level writing requirement by electing any course approved for that purpose but are urged to seek courses relevant to their concentration.

Students with an ICP may elect a double concentration provided the ICP courses are not used as part of the second concentration or for area distribution. Only one course from an ICP may be used toward completing the requirements of an academic minor. A maximum of six non-LSA credits may be included in an ICP. Courses in departments from which students have 12 or more concentration credits may not be used to meet the distribution requirement.

Students interested in developing an ICP must meet with the ICP advisor to discuss goals, academic options, and procedures. After this initial discussion, a formal application may be submitted. This application must include:

- an intellectual statement containing a coherent rationale for the proposed program;
- (2). a comprehensive curriculum of at least 34 upper-level credits;
- (3). an unofficial transcript; and
- (4). a letter of recommendation from two faculty members from two LSA departments offering courses in the student's defined concentration. These faculty should have discussed the proposed program with the student and support the proposal.

The completed application is reviewed by the *Committee on Interdisciplinary Studies*, a committee composed of LSA faculty members

Honors Individual Concentration Program (HICP). The Honors ICP is intended for exceptional students who wish to undertake a liberal arts program of study not currently available in an existing departmental concentration or program. HICPs are interdepartmental or interdisciplinary in character and include courses from a variety of sources. While the HICP encourages diversity and flexibility, each HICP must have an identifiable academic focus within LSA, an appropriate disciplinary base, and unifying theme, and culminate in the writing of an Honors thesis. An HICP should not be a specialization within an already existing concentration. It should include an adequate number of prerequisite courses.

and a representative of the Newnan Academic Advising Center. The committee bases its decision on whether the proposed program ensures a coherent course of study comparable to that in other College concentration programs.

When an ICP has been approved, the student may proceed with the program. If it becomes necessary or desirable to modify an ICP, the student must consult the ICP advisor.

ICP Requirements.

In addition to completing 34 upper-level credits, ICP students also are required to:

- 1. include a senior seminar (UC 455) in their curriculum (these credits can count towards the 34 required credits); and
- 2. complete a Senior Project

Under the supervision of the ICP advisor and at least one sponsoring faculty member, the student will take the initiative to propose, design, and execute a Senior Project that showcases the outcome of their Individual Concentration. During the fall of their senior year, ICP students are required to submit a formal proposal that outlines the intent and direction of their Senior Project. This proposal would need to have support from at least one faculty member. The Senior Project would be due prior to the end of the winter academic term of their senior year. More detailed guidelines for the Senior Project may be obtained from the ICP Advisor.

Advising. Appointments with the ICP advisor, David R. Smith, are scheduled at the Newnan LSA Academic Advising Center, 1255 Angell Hall. ICP applications are available at the ICP website and when completed should be returned to 1255 Angell Hall.

Since HICPs require an unusual level of intellectual competence and maturity, an overall GPA of 3.5 and, in most cases, a 3.7 in courses related to the HICP subject are required for admission to the program. The Honors Academic Board reviews all proposals. Graduation with "Honors," "High Honors," or "Highest Honors" is granted upon recommendation of the thesis advisor and readers.

Honors Advising. Students interested in submitting an HICP should schedule an appointment with Dr. D.L. Wessel Walker, Associate Director of the Honors Program, to discuss goals and procedures. A formal prospectus, developed in consultation with appropriate faculty advisor, is then submitted for review.

Residential College Individual Concentration Program (**RCICP**). The Residential College offers the opportunity to formulate an individualized concentration to RC students unable to find an existing degree program within the Residential College, or in the College of Literature, Science and the Arts, which meets their specific academic needs and interests. Students wishing to pursue this option must have a good idea of what they want to achieve, consult with RC faculty and (where appropriate) other U-M faculty, and develop a carefully thought out academic plan of study.

Note: Students who wish to declare an individualized concentration are strongly advised to do so before the end of their sophomore year. Under exceptional circumstances an individualized concentration may be approved as late as during the junior year, but in no cases during the senior year.

RC Advising. Students interested in this option should start by discussing the matter with the head of the RC Individual Concentration Program (ICP), whose name may be obtained at the RC Academic Services Office in 134 Tyler. With the assistance of the ICP coordinator, the student will need to identify one or two faculty members – at least one of whom is on the RC faculty – willing to serve as her/his concentration advisor(s). The concentration advisor(s) will help the student formulate an appropriate academic plan of study, and that plan must be approved by the advisor(s) and by the ICP coordinator before the student can formally declare the individualized concentration. After the concentration is declared, the student must continue to consult with her/his advisor(s) at least once a term before registering for courses in the following term; and completion of the concentration must be certified by an advisor who is a member of the RC faculty.

Informatics

439 West Hall 1085 South University (734) 615-3789 (phone) (734) 763-4676 (fax) informatics.umich.edu email: informatics@umich.edu

May be elected as an interdepartmental concentration program administered by the Department of Statistics

Informatics Faculty Steering Committee

Paul Conway, Associate Professor, School of Information Anna Gilbert, Associate Professor, Department of Mathematics H.V. Jagadish, Professor, Computer Science & Engineering Atul Prakash, Professor, Computer Science & Engineering Charles Severance, Clinical Assistant Professor, School of Information Kerby Shedden, Associate Professor, Department of Statistics

What is Informatics?

Informatics is the study of human and computer information processing systems from a socio-technical perspective. Michigan's unique interdisciplinary approach to this growing field of research and teaching emphasizes a solid grounding in contemporary computer programming, mathematics, and statistics, combined with study of the ethical and social science aspects of complex information systems. Experts in the field help design new information technology tools informed by scientific, business, and cultural contexts.

Informatics is where the technical accomplishments of computer science, mathematics, and statistics become embedded in the ways we interact, imagine, and produce in richer and more thoughtful ways. Students will obtain software development skills and learn a formal framework for making inferences from experimental and observational data, focusing on the manner and purpose in which people interact with information and information systems.

The concentration in Informatics is appropriate for students with varied interests and a range of background knowledge in information systems engineering, information analysis, and/or the use of information processing in biological, societal and emerging application areas. Students who complete the concentration are equipped to participate fully in important emerging areas such as bioinformatics. information analysis, large-scale information management, and human-centered information systems design. In addition, depending on which track a student selects, he or she develops the intellectual skills to analyze enormous quantities of information (Data Mining & Information Analysis Track); to reason systematically about the social impacts of and on information systems (Social Computing Track); to design computing solutions focused on human factors (Computational Informatics Track); or to apply information technology to large-scale, cutting-edge problems in the life sciences (Life Science Informatics Track).

Students concentrating in Informatics have many opportunities available to them after graduation. The concentration provides excellent preparation for jobs in the IT industry as product managers, human factors engineers, usability specialists, information analysts in sciences and science related industries, and designers working with large software development teams. Recruiters visiting the university frequently are seeking students with the ideals and skill sets that are provided by this program. Combined with work in specific knowledge domains, from nursing to economics, graduates of Michigan's Informatics concentration are vital in leading organizations to harness emerging technologies. The deep understanding of the connections between information technology, data analysis, and organizations and society is also excellent background for students seeking to enter law school, business school, medical school, or schools of public policy. And, depending on the track they complete, students are well prepared for graduate study in many fields, including statistics, computer science, information, law, medicine, public health, and natural and social sciences.

Summary of Course Requirements and Prerequisites

The concentration in Informatics requires 44 credit hours for completion, including core courses, concentration track requirements, and electives. The concentration consists of four core courses, 3-4 courses in one of four flexible program tracks, plus electives selected from a list of recommended courses.

Four prerequisite courses serve as an introduction to some of the core academic aspects of the curriculum and are required for all concentrators. The core serves as a tour of critical perspectives and investigative methodologies, an introduction to tools and techniques, and an entry point for further study. The four core courses provide grounding in discrete mathematics, computer programs and models, research methods in applied statistics, and the ethical issues posed by new and emerging technologies. Each of the four core courses helps establish a foundation for the advanced study of informatics issues pursued through the specific informatics tracks. Core courses may be taken in any order and are required for completion of the concentration. Students may enroll in track courses before they have completed the entire core curriculum.

In pursuing the concentration in Informatics, students have the flexibility to specialize in one of four tracks: Computational Informatics, Data Mining & Information Analysis, Life Science Informatics, or Social Computing. Each of the four tracks requires three to four courses, some of which will have associated prerequisite courses enforced at registration. The tracks consist of a set of carefully chosen courses that together convey the necessary intellectual perspectives and foundational skills of the track.

In addition to the concentration's core and track requirements, students select concentration electives from a list of recommended courses. The breadth of elective options allows students to add intellectual depth to their selected track studies or to broaden their perspective on other aspects of the informatics field. The Faculty Steering Committee for the concentration will entertain appeals from students to substitute courses other than those in the list of recommended electives

A. Computational Informatics Track

Today, computer technology is ubiquitous, and a robust understanding of information systems is important in almost every industry and organization. Computational Informatics emphasizes issues involved in the design of computing solutions, rather than focusing on the underlying computing infrastructure. In the Computational Informatics track, students learn to assess and build usable software applications for web servers, browsers, smartphones, information analysis tools, and automation of common activities. They develop analytical skills and gain a professional understanding of how people and organizations utilize technology to manage data. Graduates of this track put their skills to use in business and in the financial, software development, and information technology industries. They are also well prepared for graduate programs in computing and information sciences, among others.

B. Data Mining & Information Analysis Track

The collection, analysis, and visualization of complex data play critical roles in research, business, and government. Powerful tools from applied statistics, mathematics, and computational science can be used to uncover the meaning behind complex data sets. The Data Mining and Information Analysis track integrates these disciplines to provide students with practical skills and a theoretical basis for approaching challenging data analysis problems. Students in this track learn how to develop and test models for making predictions, to search through large collections of data for rare and unexpected patterns, and to characterize the degree of certainty associated with discoveries made in the course of data analysis. Skills and knowledge acquired in this track are increasingly important in the job market

and are highly relevant for a number of graduate school programs.

C. Life Science Informatics Track

Using artificial information systems, scientists have made great progress in identifying core components of organisms and ecosystems and are beginning to better understand how these components behave and interact with each other. In fact, biology has become an information science, as computational techniques have become an important means to develop and evaluate biological hypotheses. Informatics is used from basic biological research-studying how patterns of gene expression differ across various cell types-to the practice of medicine, where informatics is used to compare treatments, to identify social correlates of health, and to evaluate possible changes in health policy. The Life Science Informatics track prepares students for careers and advanced study in a number of informationrelated fields in the life sciences, as well as medical school and other areas of graduate study.

D. Social Computing Track

Facebook, Twitter, and shared calendars are now embedded in the fabric of everyday life, but countless other applications have yet to be discovered and perfected, each potentially enhancing the way we interact. Applying knowledge from psychology, economics, and sociology, Social Computing students craft, evaluate, and refine social software computer applications for engaging technology in unique social contexts. Advances in computing have created opportunities for studying patterns of social interaction and developing systems that act as introducers, recommenders, coordinators, and record-keepers. Students in this track develop analytical and problem-solving skills useful in business, software development, and the information industry and are prepared for graduate study in areas including information science, business, and law.

Field of Concentration. For purposes of calculating grade point average, the term "field of concentration" means the following:

- 1. All STATS courses.
- 2. All courses used to meet concentration requirements.
- 3. All mandatory concentration prerequisites.

Informatics concentrators may not use any STATS courses toward the Area Distribution requirement.

Prerequisites to Core Courses:

- 1. SI 110 / SOC 110;
- 2. MATH 115;
- 3. EECS 182 / SI 182;
- 4. STATS 250 (or 350) or STATS 400.

Concentration Program. A minimum of 12 courses and 44 credits.

- 1. Core: EECS 203, EECS 282, STATS 403, and SI 410.
- 2. Subplans: Completion of one of the following tracks:
 - a. Computational Informatics track
 - i. EECS 382
 - ii. EECS 280
 - iii. Two of the following Computational courses:
 - EECS 281, 376, 476, 477, 481, 484, 485, 492, 493, 494
 - iv. *Electives*:* 8 credits must be elected at the 300-level or higher, and all electives must be selected in consultation with a faculty advisor.
 - b. Data Mining & Information Analysis track
 - i. STATS 406
 - ii. STATS 415
 - iii. One of the following Quantitative courses:

- MATH 425, 471, 561, 562, 571
- STATS 425, 500
- IOE 310, 510, 511, 512
- iv. *Electives*:* 8 credits must be elected at the 300-level or higher, and all electives must be selected in consultation with a faculty advisor.
- c. Life Science Informatics track
 - i. BIOINF 527
 - ii. One of the following Life Sciences courses:
 - BIOLOGY 305
 - MCDB 310
 - EEB 485
 - iii. Two of the following Quantitative/Computational courses:
 - EECS 376, 382, 485
 - STATS 401, 449, 470
 - BIOSTAT 449
 - iv. *Electives*:* 4 credits must be elected at the 300-level or higher, and all electives must be selected in consultation with a faculty advisor.
- d. Social Computing track:
 - i. PSYCH 280
 - ii. SI 301
 - iii. SI 422
 - iv. SI 429 (or 529)
 - v. Electives*: 8 credits must be elected at the 300-level or higher, and all electives must be selected in consultation with a faculty advisor.
- Electives: Additional Informatics electives to bring total concentration credits to 44 credits.
 - BIOLCHEM 551
 - BIOMEDE 551
 - BIOINF 527, 545, 547, 551
 - BIOSTAT 449, 503, 553, 646
 - CHEM 551
 - EECS 281, 376, 382, 410, 476, 477, 481, 484, 485, 487, 492, 493, 494, 496, 498, 545, 547, 594
 - ENGR 410
 - MATH 416, 425, 433, 451, 462, 463, 471, 513, 525, 526, 547, 548, 571
 - MCDB 408, 411
 - PATH 551
 - PSYCH 280
 - SI 301, 422, 429 (or 529), 508, 539, 563, 572, 583, 631, 652, 679, 683, 689
 - STATS 401, 406, 408, 415, 425, 426, 430, 449, 470, 480, 500, 525, 526, 545, 547, 548

*Electives must be selected in consultation with a concentration advisor. Alternative courses may be considered for elective credit.

Advising. The Academic Program Manager and members of the Faculty Steering Committee that designed the concentration share responsibility for concentration advising. Students who are interested in the Informatics concentration should consult with an Academic Advisor in the Newnan LSA Academic Advising Center during their freshman year and are strongly encouraged to meet with a concentration advisor early in their academic career. To make an appointment with a concentration advisor, please contact

informatics@umich.edu.

Note. It is not necessary to complete all prerequisite courses prior to declaring an Informatics concentration.

School of Information (SI)

School of Information 304 West Hall 1085 South University Avenue (734) 763-2285 (phone) (734) 764-2475 (fax) www.si.umich.edu e-mail: si.info@umich.edu Professor Martha Pollack, Dean

Not a concentration program

The School of Information offers an accelerated program for exceptional undergraduates at the University of Michigan. The program enables students in the Department of Linguistics to complete both a bachelor's degree and the two-year Master of Science in Information (MSI) degree in five years of study. The School of Information will select candidates for this program during their junior year. The A.B./B.S. degree is normally awarded at the end of the senior year (the first year of study in the School of Information) and the MSI degree after completion of its requirements (normally after a second year of graduate study).

The program is described in *Chapter V* in the section *Information*. Undergraduates wishing further information about course offerings and degree requirements should contact the School of Information.

The School of Information is also a participating unit in the interde-

partmental Informatics concentration program listed in this *Bulletin* in *Chapter VI* under "Informatics."

COURSES IN INFORMATION (SI)

Courses in the School of Information are listed in the *Schedule of Classes* under the School of Information. The following courses count as LSA courses for LSA degree credit.

SI 110 / SOC 110. Introduction to Information Studies (4). (SS). May not be repeated for credit.

SI 182 / EECS 182. Building Applications for Information Environments (4). (MSA). (BS). May not be repeated for credit. F, W.

SI 301. Models of Social Information Processing

(3). May not be repeated for credit.

SI 379 / HISTORY 379 / RCSSCI 379. History of Computers and the Internet Junior standing. Familiarity with computer concepts helpful but not required. (4). (SS). May not be repeated for credit.

SI 410. Ethics and Information Technology

(4). May not be repeated for credit.

SI 422. Evaluation of Systems and Services (3). May not be repeated for credit.

SI 429. eCommunities: Analysis and Design of Online Interaction (3). May not be repeated for credit.

SI 446. Personal Privacy: Policy, Practice and Technology Issues (3). May not be repeated for credit.

SI 561 / EECS 595 / LING 541. Natural Language Processing

Senior standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

Institute for the Humanities

1111 Thayer Academic Building 202 South Thayer Street (734) 936-3518 (phone) (734) 763-5507 (fax) www.lsa.umich.edu/humin e-mail: humin@umich.edu Professor Daniel Herwitz (Philosophy, History of Art), Director

Not a concentration program

The Institute for the Humanities is a center for innovative, collaborative study in the humanities and arts. Each year the Institute provides fellowships for Michigan faculty, students, and visiting scholars who work on interdisciplinary projects. The Institute also offers a wide array of public and scholarly events including weekly brown bag talks, public lectures, conferences, art exhibits, and performances. Courses are offered at the discretion of faculty and visiting scholars, in their fields of expertise, and will vary from term to term.

COURSES IN THE INSTITUTE FOR THE HUMANITIES (INSTHUM)

INSTHUM 411. Topics in Interdisciplinary Studies Advanced undergraduate standing. (1 - 4). May be repeated for credit.

Program on Intergroup Relations (IGR)

3000 Michigan Union 530 S. State Street 734-936-1875 (phone) 734-647-4133 (fax) www.igr.umich.edu Monita C. Thompson & Kelly E. Maxwell, Co-Directors

The Program on Intergroup Relations (IGR) is a social justice education program on the University of Michigan's Ann Arbor campus. As a joint venture of the College of Literature, Science, and Arts and the Division of Student Affairs, IGR works proactively to promote understanding of intergroup relations inside and outside of the classroom. Multidisciplinary courses offered by IGR are distinguished by their experiential focus, teaching philosophy, and incorporation of dialogical models of communication.

The Mark Chesler Library Collection on Intergroup Relations is home to over 1200 books, videos, journals, and other materials covering a wide range of subjects related to social diversity and social justice. These materials are useful for conducting independent research, designing dialogue activities, enhancing curricular content or simply broadening horizons in many areas of interest. Topics found within the resource center include intercultural communication, social identity, multicultural education, facilitation techniques, social justice issues, intergroup relations, and many more. All students, faculty, and staff on campus are invited to use these resources, located in the IGR office, 3000 Michigan Union.

The Library of The Program on Intergroup Relations is named in honor of Mark Chesler, Professor of Sociology Emeritus, who helped create IGR and whose professional and personal life exemplifies its mission "to pursue social justice through education".

The Intergroup Relations Course Sequence

The course sequence in Intergroup Relations is designed for students with special interests in social diversity and social justice. Intergroup Relations courses offer experience in both analyzing and understanding issues of diversity and justice, and building practical skills to deal with these issues in the "real world."

Students may find this sequence useful in preparing for careers in social work, law, medicine, clinical psychology, education, business, and other diverse workplaces. Students may also use this sequence to enter graduate programs in social justice, become community organizers, or engage in other professions directly relevant to social action. Additionally, students study this sequence not merely for professional reasons, but also to refine and actualize their own values as individuals and community members.

For more information on the IGR Course Sequence, please contact The Program on Intergroup Relations. The following courses listed in the sequence below are examples of applicable Intergroup Relations courses and are recommended, but not required.

Introductory Course in Intergroup Relations (3 credits)

- At least one introductory seminar from the "FIGS" Group.
- If possible, this course should be taken during the first year. (Some, but not all, of these courses satisfy the University's Race and Ethnicity requirement.)
- Examples of FIGS courses include:
 - PSYCH 120/CAAS 103 I, Too, Sing America;
 - PORTUG 150 Breaking Gender & Racial Barriers in Brazil;
 - PSYCH 120/CAAS 103 Challenges to Democracy;
 - SOC 105 Democracy, Diversity, & Community;
 - PSYCH 120 Racism Underground: Prejudice in America;
 - PSYCH 120/CAAS 103 Justice for All? Difference and Oppression in U.S. Society.

Intergroup Dialogues (2 credits): PSYCH 122/SOC 122/UC 122.

If possible, PSYCH 122/SOC 122/UC 122 should be completed by the first academic term of the sophomore year. A second dialogue, on a different topic, may be taken for two additional credits.

Examples of topics offered in recent academic terms include: Race & Ethnicity; Gender; Sexual Orientation; Religion; Socio-Economic Class and International Students/U.S. Students.

Global Understandings (3 credits): UC 178

This course offers a unique opportunity for students to engage in intercultural communication with college students in other parts of the world without having to leave the classroom. Intercultural exchange is conducted using written communications (online chatting and collaborative paper assignments) and "face-to-face" real time group discussions via video conference. Students will learn about intercultural communication concepts and how social identities can influence communication. Students will discuss various topics with their non-UM partners such as: college life, culture/traditions, religion/spirituality, and stereotypes/prejudices.

Foundations of Intergroup Relations (3 credits):

UC 218/SOC 218

This introductory course will examine identity development, intergroup and intercultural relations from a social justice framework, and challenge ourselves to think critically and creatively about social justice and worldviews. This course will also examine the history of various social identity groups, the theory behind how social identity groups form, intergroup conflict and coalition building. We will also explore how people develop an understanding of their own social identity group membership, how bias develops (prejudice, stereotyping, discrimination, and oppression), how groups are impacted by privilege and power dynamics, and how to develop advocacy for groups to which one does not belong.

Training and Practicum in Intergroup Dialogue Facilitation (6 credits)

- PSYCH 310/SOC 320/UC 320: Training Processes for Intergroup Dialogue Facilitation. (This course should be completed by the end of the junior year, and must be completed by the first term of the senior year.)
- PSYCH 311/SOC 321/UC 321: Practicum in Intergroup Dialogue Facilitation. (This course is usually taken the academic term after PSYCH 310/SOC 320/UC 320 is completed.)

Conflict and Coexistence: UC 370. Intergroup Conflict and Coexistence: Religion, Ethnicity, and Culture

Conflict is an inherent part of human nature, individual relationships and thus society. There are, however, important, successful and often underreported examples of **coexistence** between groups that historically have been in conflict. this course will examine **examples** of social conflict based on religion, ethnicity and culture, and examine **interdisciplinary theories** that help to understand the nature of such conflict *(i.e., social identity, limited resources, psycho-* logical, neurological, communication, anthropology). We will review current coalition building, and **coexistence work** among various religious, ethic and cultural groups, as well as in higher education, community programs and NGOs *(i.e.,* Oasis of Peace, Slifka Program, UN Difficult Dialogues, Peace Studies Program, *etc.).* conflict as a constructive tools for **social change** will be examined, with an eye towards increasing capacity for coexistence.

Capstone Course: Advanced Intergroup Relations (3 credits): $UC\;470$

This course, offered periodically, will focus on social justice and social change in the United States and on individual participants – own values, skills and future plans. By their senior year, many UM students committed to social change have managed to find places where they can learn about such work or even engage in it with allies on campus or the local community. But what about after graduation? This course seeks to address this question and consider social change and social justice in the real world.

The course will explore alternative meanings of social justice, theories and strategies of social change, roles of change agents in traditional career environs, the costs and benefits of careers of social activism, including opportunities for career choices in these arenas and the assessment of personal skills and resources, discussions with local social justice advocates and organizational representatives, and practice in multicultural teamwork and coalition building.

Elective Courses in Intergroup Relations. A partial list of courses suggested as electives for further study in Intergroup Relations includes:

- ECON 325/POLSCI 439. Inequality in the United States.
- OBHRM (Business) 326. Workforce Diversity.
- PSYCH 120. First-Year Seminar in Psychology as a Social Science. Racism Underground: Hidden and Not-so-Hidden Prejudice in America.
- PSYCH 305/AMCULT 309. Practicum in Multicultural Communities.
- PSYCH 315/CAAS 327. Psychological Aspects of the Black Experience.
- PSYCH 316/CAAS 331. The World of the Black Child.
- PSYCH 317/AMCULT 306. Community Based Research.
- PSYCH 319/AMCULT 319. Empowering Families and Communities.
- PSYCH 405. Social Psychology in Community Settings (offered in winter terms).
- PSYCH 411/WOMENSTD 411. Gender and Group Process in a Multicultural Context.
- RCSSCI 381. Unteaching Racism.
- SOC 105. First Year Seminar in Sociology. *Class, Race, Gender, and Modernity.*
- SOC 202. Contemporary Social Issues: Social Inequality.
- SOC 204/LHSP 189. Intergroup Relations and Conflict.
- SOC 205. Poverty, Race, and Health.
- SOC 303/CAAS 303. Race and Ethnic Relations.
- SOC 323/CAAS 321. African American Social Thought.
- SOC 404/AMCULT 404. Hispanic-Americans: Social Problems and Social Issues.
- SOC 410. The American Jewish Community.
- SOC 412. Ethnic Identity and Intergroup Relations.
- SOC 424. Social Stratification.
- SOC 434/CAAS 434. Social Organization of Black Communities.
- SOC 435. Urban Inequity and Conflict.
- SOC 447/WOMENSTD 447. Sociology of Gender.
- SOC 490/REES 490/WOMENSTD 492. Women and Islam: A Sociological Perspective.
- SOC 521/CAAS 521. African American Intellectual Thought.
 UC 170. UC Special Topics.
- Faith Identities and Your Campus Experience World, Community, and Self
- WOMENSTD 250. Introduction to Lesbian, Gay, Bisexual, and Transgender Studies.

Center for International and Comparative Studies (CICS)

1080 South University Avenue, Suite 3661 (734) 764-2268 (phone) (734) 647-8120 (fax) www.ii.umich.edu/cics e-mail: cics.info@umich.edu

Professor Kenneth Kollman (Political Science), Director

The Center for International and Comparative Studies (CICS) provides a forum for international partnerships and interdisciplinary learning, bringing together scholars with practitioners and representatives of multilateral institutions to address emerging global problems and engage in dialogue related to the three themes of CICS: human rights, international development, and international security and cooperation.

Knowledge and insight pertaining to global affairs and different societies and cultures are more important than ever in today's interconnected world. A well-developed international perspective contributes to personal intellectual growth, is an increasingly important component of America's civic culture, and is required for success in an expanding number of professions.

International Studies

May be elected as an area concentration program administered solely by CICS

The concentration in International Studies offers students the opportunity to take a set of courses across departments to bring multiple methods and concepts together to address global problems. The concentration is rigorous and offers a balanced approach between disciplinary depth and cross-disciplinary breadth.

It is an opportunity for students to create a curriculum that combines exposure to disciplinary depth and integrative coursework emphasizing successful interdisciplinary research. Our goal is to give students skills in moving among different units of analysis and different disciplinary approaches in order to understand, analyze, and ultimately help solve contemporary problems. International Studies students will be exposed to a rigorous curriculum emphasizing the use of multiple methods of analysis of such topics as terrorism, global health trends, human rights and refugees, cultural homogenization and hybridization, environmental and energy crises, transnational religious movements, and the spread of technology. The concentration will draw on methods developed in specific disciplines such as economics, sociology, psychology, comparative literature, political science, anthropology, and history, and some methods emerging from crossdisciplinary and inter-disciplinary fields.

Prerequisites to Concentration. None, *per se.* Courses used in the concentration may have prerequisites. Because sixth-term proficiency in a language other than English is required, students should begin the language sequence early, though it does not need to be completed before students declare the concentration.

Concentration Program.

- 1. Core Courses. CICS 101, 301 and 401.
- 2. Foreign Language Requirement. Sixth-term proficiency in a language other than English must be fulfilled through study of a language, though language courses do not count as credits toward the concentration. The language requirement does not need to be completed before students declare the concentration. We believe that language study is a vital part of any liberal arts education, and that students who concentrate in international studies should be well prepared to work in environments overseas, or in companies or organizations that interact regularly with people from other countries. The language requirement will not only be

of benefit to the students in broadening their skills and their vision of the world, but will also be an important signal to employers or graduation admissions committees about how our students are well-rounded and focused on the world and not just the United States.

- 3. Research Methods Course. One quantitative research methods course (minimum of 3 credits) chosen from the following list:
 - COMM 211: Evaluating Information
 - ECON 309: Experimental Economics
 - ECON 401: Intermediate Microeconomic Theory
 - ECON 405: Introduction to Statistics
 - POLSCI 391: Introduction to Modeling Political Processes
 - POLSCI 490: Game Theory & Formal Models
 - POLSCI 499: Quantitative Methods of Political Analysis
 - SOC 210: Elementary Statistics
 - SOC 310: Introduction to Research Methods
 - STATS 250 (or 350): Introduction to Statistics & Data Analysis

This requirement must be completed before electing CICS 301.

- 4. **One Regional Course (minimum 3 credits):** Geographic emphasis composed of one course devoted to a single world region or country that is related to foreign language of study. This course cannot be double counted with a subplan course.
- 5. Subplans: The four subplans represent four different themes or areas of interest. Students must choose one subplan and take at least four courses (minimum 12 credits) from that subplan to gain knowledge in one area. One of the courses must be 400 level. The four courses must be taken in two or more academic subjects. Please visit our website at www.ii.umich.edu/cics for an updated list of courses for each subplan.

International Security, Norms & Cooperation

- ANTHRCUL 333: Non-Western Legal Systems I
- HISTORY 363: U.S. Foreign Policy and International Politics Since World War II
- POLSCI 353: The Arab-Israeli Conflict
- POLSCI 360: Problems in World Politics
- POLSCI 364: Public International Law
- POLSCI 369: Politics of International Economic Relations
- POLSCI 372: Comparative Foreign Policy
- POLSCI 370: International Security Affairs
- POLSCI 489: Advanced Topics in Contemporary Political Science. Section titled "The International Law & Politics of Human Rights"
- SLAVIC 470: Topics in Cultural Studies of Central, Eastern, and Southeastern Europe. Section titled "Human Rights Reporting & Problems of Representation"

Political Economy & Development

- ANTHRCUL 439: Economic Anthropology & Development
- ECON 340: International Economics
- ECON 350: Comparative Economic Systems
- ECON 441: International Trade Theory
- ECON 461: The Economics of Development I
- ENVIRON 367: Global Enterprise & Sustainable Development
- ENVIRON 270: Our Common Future: Ecology, Economics & Ethics of Sustainable Development
- POLSCI 343: Political Economy of Developed Democracies
- POLSCI 348: Political Economy of Development
- POLSCI 369: Politics of International Economic Relations
- RCSSCI 315: International Grassroots Development

Comparative Culture & Identity

The selected courses should contribute to the coherence of the student's overall IS concentration. Therefore, all courses **must** be approved by the International Studies Advisor and signed off by the director of CICS prior to registration. Here is a list of courses that have been approved.

- AAPTIS 200/ACABS 200/HJCS 200/RELIGION 201: Introduction to World Religions: Near Eastern
- AAPTIS 383: The Arab-Israeli Conflict in Middle Eastern Literature
- ACABS 200/AAPTIS 200/HJCS 200/RELIGION 201: Introduction to World Religions: Near Eastern
- ASIAN 220/RELIGION 202: Introduction to the Study of Asian Religions
- ASIAN 235: Introduction to the Study of Asian Cultures
- ASIAN 261: Introduction to Modern Chinese Culture. Section titled "Modern China & Its Others"
- ANTHRCUL 222: Comparative Study of Cultures
- ANTHRCUL 305: Peoples & Cultures of the Himalaya
- ANTHRCUL 309: Anthropology of Europe
- ANTHRCUL 319: Latin American Society & Culture
- ANTHRCUL 328: Globalizing Consumer Cultures
- ANTHRCUL 333: Non-Western Legal Systems I
- ANTHRCUL 408/CAAS 409: Maternal/Child Health & Environmental Pollution in Africa
- ANTHRCUL 409: People & Cultures of the Near East & North Africa
- ANTHRCUL 416/HBEHED 516: Global Health
- ANTHRCUL 428/WOMENSTD 428/RCSSCI 428: Sex Panics in the US & UK Since 1890
- ANTHRCUL 464: Language, Culture & Society in South Asia
- CAAS 409/ANTHRCUL 408: Maternal/Child Health & Environmental Pollution in Africa
- COMM 458: Special Topics in Media Systems. Section titled "Media and Identity in Global Context"
- COMM 488: Special Topics in Media Effects. Section titled "L.A., Bombay, Hong Kong: Creative Industries in Transition"
- COMPLIT 240: Introduction to Comparative Literature
- COMPLIT 260: Europe & Its Others
- COMPLIT 280: America & Its Others
- COMPLIT 382: Literature & the Other Arts
- COMPLIT 490: Comparative Cultural Studies
- DANCE 220/RCHUMS 260: The Art of Dance: An Introduction to American & European Dance History, Aesthetics, and Criticism
- ENGLISH 375: World Literature in English
- HBEHED 516/ANTHRCUL 416: Global Health
- HISTORY 241: America and Middle Eastern Wars
- HISTORY 314: Empire, War, and Modernity: France & the World in the 20th Century
- HISTORY 333/REES 396/POLSCI 396/SLAVIC 396/SOC 393: Survey of Central & Eastern Europe & the Enlarged European Union
- HJCS 200/ACABS 200/AAPTIS 200/RELIGION 201: Introduction to World Religions: Near Eastern
- POLSCI 346: Comparative Studies in Religion & Politics
- POLSCI 353: The Arab-Israeli Conflict
- POLSCI 357: Governments & Politics of India and South Asia
- POLSCI 396/REES 396/HISTORY 333/SLAVIC 396/SOC 393: Survey of Central & Eastern Europe & the Enlarged European Union
- RCHUMS 260/DANCE 220: The Art of Dance: An Introduction to American & European Dance History, Aesthetics, and Criticism
- RCSSCI 428/ANTHRCUL 428/WOMENSTD 428: Sex Panics in the US & UK Since 1890
- REES 396/HISTORY 333/POLSCI 396/SLAVIC 396/SOC 393: Survey of Central & Eastern Europe & the Enlarged European Union
- RELIGION 201/ACABS 200/AAPTIS 200/HJCS 200: Introduction to World Religions: Near Eastern
- RELIGION 202/ASIAN 220: Introduction to the Study of Asian Religions

- SLAVIC 396/REES 396/HISTORY 333/POLSCI 396/SOC 393: Survey of Central & Eastern Europe & the Enlarged European Union
- SOC 393/REES 396/HISTORY 333/POLSCI 396/SLAVIC 396: Survey of Central & Eastern Europe & the Enlarged European Union
- WOMENSTD 428/RCSSCI 428/ANTHRCUL 428: Sex Panics in the US & UK Since 1890

Global Environment & Health

- ANTHRCUL 344: Medical Anthropology
- ANTHRCUL 408/CAAS 409: Maternal/Child Health & Environmental Pollution in Africa
- CAAS 365/WOMENSTD 365: Global Perspectives on Gender, Health, & Reproduction
- CAAS 409/ANTHRCUL 408: Maternal/Child Health & Environmental Pollution in Africa
- ECON 370/ENVIRON 375: Environmental & Resource Economics
- EEB 318/RCIDIV 318/ENVIRON 318: Food, Land & Society
- ENVIRON 270: Our Common Future: Ecology, Economics & Ethics of Sustainable Development
- ENVIRON 365: International Environmental Policy
- ENVIRON 318/RCIDIV 318/EEB 318: Food, Land & Society
- ENVIRON 367: Global Enterprise & Sustainable Development
- ENVIRON 375/ECON 370: Environmental & Resource Economics
- ENVIRON 490/ POLSCI 463: War & the Environment: A Lethal Reciprocity
- HISTORY 284: Sickness & Health in Society: 1492 to the Present
- HISTORY 285/RCSSCI 275: Science, Technology, Medicine & Society
- POLSCI 463/ENVIRON 490: War & the Environment: A Lethal Reciprocity
- RCIDIV 318/ENVIRON 318/EEB 318: Food, Land & Society
- RCSSCI 275/HISTORY 285: Science, Technology, Medicine & Society
- WOMENSTD 365/CAAS 365: Global Perspectives on Gender, Health, & Reproduction

Three electives (minimum of 9 credits). The electives are designed to allow students to personalize their IS concentration by choosing, with the approval of the International Studies advisor, three courses that build upon their subplan, contributing to the coherence of the student's overall IS concentration. The purpose is both to broaden and deepen their studies using courses outside their chosen subplan. There is no pre-approved list for electives. Students may take additional courses within their subplan, additional regional courses or relevant study abroad courses as electives.

Advising: The International Studies Advisor will assist students in developing a program of study. All proposals must receive written approval by the Director of CICS, ideally before a student begins taking courses for the concentration. Students who have taken an appropriate course before signing up may request it be counted toward the concentration when applying for approval. The CICS director is available to talk to students in the concentration about their career plans and their overall goals for their education.

Academic Minor in International Studies

The International Studies Academic Minor is intended to be a rigorous program of study. It will be of interest to students prepared to make a serious investment in adding an international dimension to the instructional program associated with a disciplinary concentration. The academic minor in International Studies offers students an opportunity to add to their disciplinary concentration a program of study that includes the following:

- (1) attention to another country or world region;
- (2) interdisciplinary coursework devoted to a particular theme or topic of international relevance;
- (3) progress toward proficiency in a foreign language;
- (4) support for an education abroad experience; and
- (5) an innovative interdisciplinary seminar.

Advising: The International Studies Advisor will assist students in developing a program of study. All proposals must receive written approval by the Director of CICS, ideally before a student begins taking courses for the academic minor. Students who have taken an appropriate course before signing up may request it be counted toward the academic minor when applying for approval.

Prerequisites to the Academic Minor: Sixth-term proficiency in a language other than English must be satisfied through the study of a language used in the country or world area that is the focus of geographic coursework. The Director of the Center for International and Comparative Studies (CICS) will consider requests involving a different language, but it is expected that students will in all cases complete at least one year of coursework in a language used in the region of geographic emphasis. *Any exceptions to the language requirement must be approved by written consent of the CICS Director.*

Academic Minor Program: Students are required to complete a minimum of 18 credit hours of course work, exclusive of language study. These courses must include the following:

- 1. **A "geographic" emphasis** composed of three courses devoted to a single world region *(e.g.,* Africa, South Asia) or country *(e.g.,* China, India). At least two of the three geographic courses must be 300-level or above.
- 2. A "thematic" emphasis composed of three courses devoted to a given theme or topic *(e.g.,* international conflict and security, human rights, music and ethnomusicology). At least two of the three thematic courses must be 300-level or above. At least two of the three thematic courses must give primary attention to countries or world regions beyond the United States. A third course devoted to the same theme can give significant attention to the United States if there is a clear intellectual reason for doing so.

Geographic and thematic course selections must be approved by the International Studies Advisor. Each threecourse set must possess intellectual coherence, and there must also be a clear and logical connection between the focus of the selected geographic and thematic courses. The International Studies Advisor will consult the director of CICS and members of the CICS Advisory Committee for guidance in assessing a proposed program of study.

One course can be "double-counted" and thus count for *both* the geographic and the thematic concentration requirement. It is expected that most students will choose to double-count one

course; those not choosing to do so will be required to complete 21 credits of coursework for the International Studies Academic Minor.

The five or six geographic and thematic courses taken by a student must be from at least two academic disciplines. No more than one of these courses may be offered by the department of the student's disciplinary concentration (major). If the courses are taught by faculty members in a single department *(e.g.,* Women's Studies, German, ALC, NES), the faculty members must be from at least two different disciplines.

3. An interdisciplinary International Studies Advanced Topics Seminar will be offered for students in the academic minor. This course cannot be taken prior to the second term of the junior year. Students enrolled in the academic minor may take the course more than once, but it can only be counted once toward 18 credits required for the academic minor.

The International Studies Advanced Topics Interdisciplinary Seminar is a variable content course designed to bring an interdisciplinary perspective to the study of a topic of international significance. Some seminars will be team-taught and some will be taught by faculty with International Institute Sponsored Appointments. Seminars may occasionally be taught by visiting international scholars. At least one International Studies Seminar will be offered every year.

Education Abroad: An education abroad experience is strongly encouraged. The International Studies Advisor, in cooperation with the Center for Global and Intercultural Study (CGIS), will assist students in identifying education abroad opportunities consistent with their needs and interests. At least 10 credits toward the academic minor must be taken in residence (which can include courses in U-M study abroad programs).

Limited funding will be made available to students in the International Studies Academic Minor to encourage and facilitate participation in education abroad programs. Applications for these funds should demonstrate a connection between the overseas program and the student's area(s) of emphasis.

Although strongly encouraged, an education abroad experience is not required for the International Studies Academic Minor since some students may be unable to meet this requirement because of financial, family, or other considerations.

COURSES IN INTERNATIONAL AND COMPARATIVE STUDIES (CICS)

CICS 101 / GEOG 145 / UC 145. Introduction to International Studies (3). (SS). May not be repeated for credit. Meets the geography requirement for public teacher certification in the School of Education.

CICS 301. Topics in International Studies

CICS 101. (3 - 4). May not be repeated for credit.

CICS 401. International Studies Advanced Seminar

Junior standing or above. (Prerequisites enforced at registration.) (3 - 4). May be elected twice for credit. CICS 401 can be counted only once for credit toward the Academic Minor in International Studies.

International Institute

1080 South University Avenue, Suite 2660 (734) 763-9200 (phone) (734) 763-9154 (fax) www.ii.umich.edu e-mail: iimichigan@umich.edu

Professor Mark Tessler, Director, International Institute; Samuel J. Eldersveld Collegiate Professor, Political Science; and Vice Provost for International Affairs

Not a concentration program

The University of Michigan International Institute (II) advances the exchange of knowledge, ideas, and resources across U-M's campus and with partnering institutions worldwide. Working actively with its centers and other academic units, the institute expands and enriches instructional programs, advances language study, and provides funding to students and faculty for research and study overseas. The II also brings leading scholars together to address national and international problems and collaborates with other academic units to recruit faculty members with international expertise.

Centers and Programs. The International Institute is home to centers and programs which support faculty and students interested in area and thematic studies. These include:

- African Studies Center*
- Armenian Studies Program*
- China Data Center
- Center for Chinese Studies*
- Center for European Studies*/European Union Center
- Center for International and Comparative Studies*
- Center for International Business Education
- Islamic Studies Program
- Center for Japanese Studies*
- Center for Korean Studies*
- Center for Latin American and Caribbean Studies*
- Center for Middle Eastern and North African Studies*
- Center for Russian, East European, and Eurasian Studies*
- Center for South Asian Studies*
- Center for Southeast Asian Studies*
- Weiser Center for Emerging Democracies
- Weiser Center for Europe and Eurasia
- Center for World Performance Studies

(*described elsewhere in this Bulletin.)

Center for Japanese Studies (CJS)

1080 South University Avenue, Suite 4640 (734) 764-6307 (phone) (734) 936-2948 (fax) www.ii.umich.edu/cjs e-mail: umcjs@umich.edu

Professor Ken K. Ito (Asian Languages and Cultures), Director

Not a concentration program. Undergraduates may pursue Japanese Studies through the Asian Studies concentration or academic minor of the Department of Asian Languages and Cultures.

The Center for Japanese Studies (CJS) promotes and disseminates research on Japan, fosters communication among diverse disciplines, and encourages new approaches in the understanding of Japan and its place in the world. Founded in 1947, CJS is the oldest interdisciplinary center in the United States devoted exclusively to Japanese Studies. CJS is also part of The University of Michigan's U.S. Department of Education Title VI East Asia National Resource Center, along with the Center for Chinese Studies and the Center for Korean Studies. The Center supports a community of over forty Japan area specialists who teach and pursue research in the University's various departments and professional schools.

The Center for Japanese Studies (CJS) offers a broad, interdisciplinary approach to the study of Japan at the Master's Level. Undergraduates may pursue Japanese Studies through the Asian Studies concentration of the Department of Asian Languages and Cultures.

Overseas Study

The *Kyoto Consortium for Japanese Studies* (KCJS) is an undergraduate academic year program in Kyoto co-sponsored by fourteen universities in the United States, including the University of Michigan. This center, developed in cooperation with Kyoto University, opened in September of 1989. The program provides a select group of undergraduates and graduating seniors with an academically challenging course of study in Japanese language and culture. Prerequisites: at least two years of prior enrollment in Japanese language courses at the college level (five hours per week minimum). A limited number of students may be admitted for single semester study in the fall or spring. Applications are available from the Center for Global and Intercultural Study (CGIS). KCJS also offers a six-week intensive summer program in advanced and classical Japanese for highly motivated undergraduate and graduate students who have completed three years of Japanese or equivalent. Application deadline: March 1. For more information and application, see kcjssummer.columbia.edu.

The Japan Center for Michigan Universities (JCMU) is an opportunity for undergraduates currently enrolled at the University of Michigan to study Japanese language, society, and culture in Japan. Located in Shiga Prefecture, on Lake Biwa (near Kyoto and Osaka), the JCMU offers academic courses and programs for university credit. The program is open to undergraduates from any of the fifteen statesupported universities in Michigan, as well as students from Shiga Prefecture. Prerequisites: applicants must have been enrolled fulltime for at least one year at one of the state-supported universities in Michigan. Applicants must apply through their home institution. Applications are available from the Center for Global and Intercultural Study (CGIS).

The Inter-University Center for Japanese Language Studies (IUC) in Yokohama, Japan offers advanced intensive Japanese language training in a 10-month academic year program and a six-week summer program for select undergraduate and graduate students. The Center's program is intended for students who are embarking on careers in Japanese studies or a profession in which fluent Japanese is necessary. The program is designed to bring each student to a level of proficiency sufficient for academic or professional use. Applicants to the 10-month program must be currently enrolled in a graduate degree program or graduating seniors who plan to enroll in a graduate program upon completion. They should have completed at least two years of college-level Japanese prior to application, and must pass a proficiency test. Applicants to the summer program must demonstrate a clear intent to pursue a professional or academic career requiring the use of Japanese, and have successfully completed two to three years of college-level Japanese. Application deadline: March 15. For more information and application, see www.stanford.edu/dept/IUC/index.html.

COURSES IN JAPANESE STUDIES (CJS)

CJS 450. Minicourse in Japanese Studies

Upperclass standing. (1 - 2). May be repeated for a maximum of 4 credits. May be elected more than once in the same term. Rackham credit requires additional work.

CJS 451. Topics in Japanese Studies

Junior/Senior or Graduate students. (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term. Rackham credit requires additional work.

Judaic Studies

2111 Thayer Academic Building 202 South Thayer Street (734) 763-9047 (phone) (734) 936-2186 (fax) www.lsa.umich.edu/judaic e-mail: JudaicStudies@umich.edu Professor Deborah Dash Moore (History), Director

Professors

- Ruth Behar (Anthropology), Cultural Anthropology, Cuban Jews, Sephardic Jews
- Sara Blair (English Language and Literature), Modernism and Modernity, American Urban Social Contexts and Visual Culture
- Gabriele Boccaccini (Near Eastern Studies), Second Temple Judaism, and Christian Origins
- David Caron (Romance Languages) French, 20th- and 21st-Century Literature and Culture, Queer Studies, AIDS, Holocaust and Jewish Studies
- Deborah Dash Moore (History) (Frederick G.L. Huetwell Professor of History), *American Jewish History*
- Todd M. Endelman (History) (William Haber Professor of Modern Jewish History), *Modern Jewish History*
- Jonathan Freedman (English Language and Literature), *Ethnicity in* American Literature and Culture, 1870-2005
- Zvi Y. Gitelman (Political Science) (Preston R. Tisch Professor of Judaic Studies), *Ethnicity and Politics, Russian and East European Jewry, Jewish Identities*
- Karla Goldman (Social Work) (Sol Drachler Professor of Social Work), American Judaism and American Jewish Community and Leadership
- Regina Morantz-Sanchez (History), Jewish Intermarriage, Acculturation, and Politics in the American Progressive Period
- Anita Norich (English Language and Literature), Yiddish Literature, Jewish Literature, Literature of the Holocaust
- Paul Schoenfield (School of Music, Theatre & Dance) *Music Composition, Jewish American 20th-21st Century Composers*
- Mark Tessler (Political Science) (Samuel Eldersveld Professor of Political Science), *Middle Eastern Politics and International Relations*
- Jindrich Toman (Slavic Languages and Literatures), *Czech and East European Modernism, Slavic Linguistics, History of Linguistics, Modern Czech Literature*

Associate Professors

- Carol Bardenstein (Near Eastern Studies), Arabic and Comparative Literature, Culture
- Elliot Ginsburg (Near Eastern Studies), Jewish Mysticism and Jewish Thought
- Julian Levinson (English Language and Literature) (Samuel Shetzer Associate Professor of Jewish-American Studies), *Jewish American Literature, Intersections of Jewish American Culture, Secularism and Religion in Jewish American Culture*
- Joshua Miller (English Language and Literature), *Modernism, 20th-Century U.S. Literature, and Language Politics*
- Eileen Pollack (English), Jewish American Literature, Sociology and Literature of Jewish Catskills
- Brian Schmidt (Near Eastern Studies), *Early Israelite and Canaanite Religions and Cultures, Hebrew Bible*
- Scott Spector (Germanic Languages and Literatures and History), Modern German-Jewish Culture and History
- Ruth Tsoffar (Women's Studies & Comparative Literature), *Ethnicities, Sexualities and Gender, and Minorities in Judaism, and Israeli Culture*

Assistant Professors

- Maya Barzilai (Near Eastern Studies), *Modern Hebrew Literature, German-Jewish Literature and Culture, Photography and Film Studies*
- Madeline Kochen (Law), Jewish Law and Rabbinic Literature
- Mikhail Krutikov (Slavic Languages and Literatures), Yiddish, Jews in Eastern Europe
- Rachel Neis (History), Late Antique Judaism, Rabbinics, Hekhalot, Visuality
- Benjamin Paloff (Slavic Languages and Literatures), *Comparative* Approaches to Polish, Russian, and Czech Literatures, Philosophy in Literature, Poetics, and Translation in Theory and Practice
- Shachar Pinsker (Near Eastern Studies), Modern Hebrew Literature
- Ryan Szpiech (Romance Languages), Literatures of Medieval Iberia, Conversion and Religious Polemic

Lecturers

- Milka Eliav (Near Eastern Studies), Hebrew Language
- Doron Lamm (Near Eastern Studies), Information Technology in Foreign Language Instruction, Hebrew Language
- MacDonald Moore (American Culture), Media, American Jewish Culture
- Ilan Rosenberg (Near Eastern Studies), Hebrew Language

Vera Szabo (Judaic Studies), *Yiddish Languages, Literature, Folklore* Pauli Weizman (Near Eastern Studies), *Hebrew Language*

Adjunct Associate Professor

David Schoem (Sociology), U.S. Jewish Community, Identity, Intergroup Relations

Professors Emeriti Edna Amir Coffin (Near Eastern Studies), Charles Krahmalkov (Near Eastern Studies), Gene Schramm (Near Eastern Studies)

Since 1976, Jewish Studies at the University of Michigan has thrived as an interdisciplinary endeavor drawing on the rich resources of a diverse faculty, educating undergraduate and graduate students, and engaging the community. The inauguration of the Frankel Institute for Advanced Judaic Studies in 2007 establishes the University of Michigan as a premiere site for Jewish Studies in the United States.

The Jean and Samuel Frankel Center for Judaic Studies at the University of Michigan offers students an interdisciplinary approach to the study of Jewish civilizations and thought. The program explores the rich culture and historical experience of the Jewish people, their unique traditions, interactions with other cultures, and impact on world civilizations. It draws on the academic excellence and expertise of faculty in many disciplines, including History; Political Science; Near Eastern studies; Germanic, English, Slavic, and Hebrew and Yiddish Languages; Sociology; and Comparative Literature.

Undergraduate Study. Both a Bachelor of Arts and Academic Minor in Judaic Studies are offered by the Frankel Center, where undergraduate students receive a well-balanced understanding of Jewish Literature and Culture, Jewish History and Social Science, and Classical and Modern Judaism in Law and Religion, along with a strong knowledge of Yiddish or Hebrew. The undergraduate curriculum aims to situate Jewish Studies within a broad-based liberal arts education and provides a framework for developing critical thinking and informed engagement.

The Frankel Institute for Advanced Judaic Studies at the University of Michigan. The Institute is committed to interdisciplinary, multilingual work spanning ancient times through the contemporary era. By combining intellectual autonomy with the ideal of a scholarly community, it aims to offer global leadership in Jewish Studies. The major goal of the Frankel Institute is to provide an intellectually stimulating environment, promote an atmosphere of openness

and encourage constructive criticism. It seeks to advance Jewish Studies globally. In addition, the Frankel Institute considers diversity and pluralism as fundamental characteristics of a public university and emphasizes such principles in all endeavors.

The Harlan Hatcher Graduate Library houses an extensive collection of Judaica materials in Hebrew, Yiddish, English, and other European languages. Book funds contributed by the Lucius N. Littauer Foundation; Bruce and Lois Zenkel; Jerold Solovy; and Hubert and Francis Brandt, as well as acquisitions funded by the University of Michigan, have expanded the library's Judaica holdings. A *curatorship of Judaica* in the Library has been established in memory of Irving Hermelin.

The Martin Salinger Resource Center, located in the Thayer Building, was established in 1985. It includes a reference library and a reading room. The Center was created through the generosity of the Martin Salinger family, in his memory, with the assistance of the College of Literature, Science, and the Arts.

The Jewish Heritage Video Collection, donated to the Frankel Center for Judaic Studies by Fran and Hubert Brandt and Eugene Grant, was created to explore the heritage of American Jews through the unique resources of film and television. The JHVC includes features and documentaries, and American and foreign productions. Many of the tapes are not generally available in video stores. The JHVC is housed in the Language Resource Center inside the Modern Language Building.

Study Abroad. Many Judaic Studies concentrators at the University of Michigan spend all or part of an academic year studying in Israel where they have an opportunity to hone their language skills and participate in the daily life of the Jewish state. The Center for Judaic Studies encourages this experience abroad and offers advising about educational institutions and programs as well as assistance in tailoring an overseas academic curriculum that will help meet the degree requirements at the University of Michigan.

Judaic Studies

May be elected as an interdepartmental concentration program

An undergraduate concentration in Judaic Studies offers students the opportunity to broaden their knowledge of international affairs, historical change and religious phenomena. The concentration introduces students to the history and cultures of the Jewish people, and explores the world from distinctive Jewish perspectives.

Prerequisites to Concentration. JUDAIC 205 and second-term proficiency in modern Hebrew (HJCS 102) or Yiddish (JUDAIC 102).

Concentration Program. Students are required to complete at least 24 credits of work in approved courses, exclusive of the above language requirement and JUDAIC 205. Fifteen of the 24 credits must be elected in residence unless special permission is given by the concentration advisor.

The 24 credits must include two courses in each of the following three categories:

- A. Classical and Modern Judaism
- B. Jewish Literature and Culture
- C. Jewish History and Social Science

In addition, two of the courses (not including JUDAIC 205) must cover or include material from pre-modern periods (before ca. 1750).

Classical and Modern Judaism: Law and Religion

- History: 244, 277, 281, 306, 307, and 406
- Judaic Studies: 244, 270, 277, 281, 317, 318, 376, 379, 467, 468, 470, 478, and 481
- Law: 642, 867
- Near Eastern Studies (Ancient Civilizations and Biblical Studies): ACABS 200, 221, 270, 277, 321, 322, 470, 542, 543, 723, and appropriate sections of 591 and 592

- Near Eastern Studies (Arabic, Armenian, Persian, Turkish & Islamic Studies): AAPTIS 200, 277
- Near Eastern Studies (Hebrew & Jewish Cultural Studies): HJCS 200, 270, 277, 379, 470, 477, 478, 491, 542, 543, 577, and 591
- Religion: 201, 270, 277, 359, 469, 471 and 478
- Slavic Languages and Literatures: SLAVIC 281, 481
- Women's Studies: WOMENSTD 376

Jewish Literature and Culture

- Anthropology: ANTHRCUL 335
- English Language and Literature: 383, and appropriate sections of ENGLISH 313, 317, 318, 417 and 430.
- Judaic Studies: 271, 281, 296, 317, 318, 333, 343, 344, 373, 381, 401, 417, 451, 467, 480, 591, and 592
- Near Eastern Studies (Ancient Civilizations and Biblical Studies): ACABS 544
- Near Eastern Studies (Arabic, Armenian, Persian, Turkish & Islamic Studies): AAPTIS 383.
- Near Eastern Studies (Hebrew & Jewish Cultural Studies): HJCS 281, 296, 305, 335, 373, 381, 401, 402, 471, 472, 491, 544, 545, 571, 572, 577, 591 and 592
- Political Science: 350 and 451
- Religion: 296, 361, 444, and 471
- Slavic Languages and Literatures: 270, 281, and 481

Jewish History and Social Science

- American Culture: 387
- Germanic Languages and Literatures: 322
- History: HISTORY 322, 368, 381, 382, 383, 384, 385, 386, 387, 435, 628, and appropriate sections of HISTORY 396, 397, 590, 591; and MEMS 381 and 382
- Judaic Studies: 317, 318, 380, 382, 383, 384, 385, 386, 387, 407, 417, 435, 451, 480, 517, 628, and 652
- Political Science: 350, 351, 353, 451 and 652
- Religion: 358
- Social Work: 645
- Sociology: 410

Languages

- Judaic Studies: 201, 202, 301, 302, 333 and 401
- Near Eastern Studies (Ancient Civilizations and Biblical Studies): ACABS 201, 202, 483, 484, 581 and 582
- Near Eastern Studies (Hebrew & Jewish Cultural Studies): HJCS 201, 202, 301 and 302
- Yiddish: 201, 202, 301, and 302

Independent Studies

• Judaic Studies: 495, 496, 497, 498, and 500.

Other courses, at the 200-level and above, may be approved by the concentration advisor. *100-level courses may not be included in a concentration plan.*

Students may include intermediate Hebrew or Yiddish courses in a concentration plan if they use the other language as a prerequisite.

Honors Concentration. The Center offers an Honors concentration to qualified Judaic Studies students. Application for an Honors concentration is usually made at the beginning of the third year. Participation requires a 3.5 grade point average. Graduation with Honors is recommended for students who complete all College and Judaic Studies graduation requirements, maintain a 3.5 GPA, and write a substantial Honors thesis which is judged worthy of Honors designation by the thesis advisor and at least one other faculty reader. An Honors concentration is not limited to students who have been in the College Honors Program in the first and second years. The name, phone number, and office hours of the Honors concentration advisor are available in the Honors Office, 1330 Mason Hall, or in the Center for Judaic Studies, 2111 Thayer Academic Building.

Concurrent Undergraduate/Graduate Studies (CUGS) Program. Concentrators who are advanced in their studies and have

exhausted the undergraduate resources in Judaic Studies are encouraged to speak with the Judaic Studies Student/Fellow Coordinator about the Concurrent Undergraduate-Graduate Studies (CUGS) Program in LSA. More information may also be found in the "Special Degrees and Pre-Professional Studies" portion of the *LSA Bulletin*.

Advising. Prospective concentrators should consult the concentration advisor. Normally, a concentration plan should reflect the multidisciplinary nature of the program and the themes that a student wishes to develop. Appointments are scheduled via our Student/Fellow Coordinator by calling (734) 615-6097.

Judaic Studies Academic Minor

An academic minor in Judaic Studies is not open to students with a concentration in Judaic Studies or in Hebrew and Jewish Cultural Studies from the Department of Near Eastern Studies.

The academic minor in Judaic Studies introduces students to Jewish civilization through thematic and textual approaches. Broadly, topic areas include Jewish religious practices, language cultures, especially Hebrew and Yiddish, and the socio-political realities associated with living among non-Jews as a minority both dispersed and concen-

JUDAIC 101 / YIDDISH 101. Elementary Yiddish I

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 431/YIDDISH 431. F.

JUDAIC 102 / YIDDISH 102. Elementary Yiddish II

JUDAIC/YIDDISH 101. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 432/YIDDISH 432. W.

JUDAIC 150. First Year Seminar in Judaic Studies

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

JUDAIC 201 / YIDDISH 201. Intermediate Yiddish I

JUDAIC/YIDDISH 102. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 531/YIDDISH 531. F.

JUDAIC 202 / YIDDISH 202. Intermediate Yiddish II

JUDAIC/YIDDISH 201. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 532/YIDDISH 532. W.

JUDAIC 205 / HJCS 276. Introduction to Jewish Civilizations and Culture

(4). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 505/HJCS 576.

JUDAIC 218. Humanities Topics in Judaism

(1 - 4). (HU). May be elected eight times for credit. May be elected more than once in the same term.

JUDAIC 244 / AAPTIS 244 / HISTORY 244 / HJCS 244 / MENAS 244. The Arab-Jewish Conflict in the Middle East, c. 1880 to the Present

(4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

JUDAIC 270 / ACABS 270 / HJCS 270 / RELIGION 270. Introduction to Rabbinic Literature

(3). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in HJCS 470/JUDAIC 470 or HJCS 570/ACABS 570/JUDAIC 570. Taught in English.

JUDAIC 271 / SLAVIC 270. Contact and Conflict: Jewish Experience in Eastern Europe through Art, Film and Literature

(3). (R&E). May not be repeated for credit.

JUDAIC 277 / AAPTIS 277 / ACABS 277 / HISTORY 277 / HJCS 277 / RELIGION 277. The Land of Israel/Palestine through the Ages

(4; 3 in the half-term). (HU). May not be repeated for credit. Taught in English.

JUDAIC 281 / HJCS 281 / SLAVIC 281. Jews in the Modern World: Texts, Images,

Ideas

(4). (HU). (R&E). May not be repeated for credit.

JUDAIC 301 / YIDDISH 301. Advanced Yiddish I

JUDAIC/YIDDISH 202. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 631/YIDDISH 631.

JUDAIC 302 / YIDDISH 302. Advanced Yiddish II

JUDAIC/YIDDISH 301. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in JUDAIC 632/YIDDISH 632.

JUDAIC 317. Topics in Judaic Studies

(1 - 4). May be repeated for a maximum of 8 credits. May be elected more than once in the same term. trated. The fifteen credits required for an academic minor in Judaic Studies are tailored to complement and enrich the programs of students who come from a widespread range of disciplines.

Students wishing to pursue an academic minor in Judaic Studies must develop a specific plan for its completion in consultation with the academic advisor. Appointments are scheduled via our Student/ Fellow Coordinator by calling (734) 615-6097.

Prerequisites to the Academic Minor: None

Academic Minor Program: At least 15 credits of courses, including

- 1. JUDAIC 205 (Introduction to Jewish Civilizations and Cultures)
- 2. two courses from the following three categories (see department for list of specific courses)
 - Jewish Literature and Culture
 - Jewish History and Social Science
 - Law and Religion in Classical and Modern Judaism
- 3. two course electives (which can include Hebrew or Yiddish language at the 200-level).

Constraints: At least three of the courses counting toward the academic minor must be taken at the UM–Ann Arbor campus.

COURSES IN JUDAIC STUDIES (JUDAIC)

JUDAIC 318. Humanities Topics in Judaism

(1 - 4). (HU). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

JUDAIC 343 / AMCULT 343. American Jews and Media Industries (3). May not be repeated for credit.

JUDAIC 344 / AMCULT 344. Passing: Race, Religion and Getting By (3). May not be repeated for credit.

JUDAIC 376 / WOMENSTD 376. Women and the Bible (3). (HU). May not be repeated for credit.

JUDAIC 380 / HISTORY 381 / MEMS 381. Medieval Jewish History: 500-1492 (3). May not be repeated for credit.

JUDAIC 381 / HJCS 381. Introduction to Israeli Literature and Culture (4). (HU). May not be repeated for credit. Taught in English.

JUDAIC 382 / HISTORY 382 / MEMS 382. Early Modern Jewish History 1492-1700 (3). May not be repeated for credit.

JUDAIC 383 / HISTORY 383. Modern Jewish History to 1880 (3). May not be repeated for credit.

JUDAIC 384 / HISTORY 384. Modern Jewish History 1880-1948 (3). May not be repeated for credit.

JUDAIC 386 / HISTORY 386. The Holocaust (4). (*R&E*). May not be repeated for credit.

JUDAIC 387 / AMCULT 387 / HISTORY 387. History of American Jews (4; 3 in the half-term). May not be repeated for credit.

JUDAIC 406 / HISTORY 406. The Church and the Jews (3). May not be repeated for credit.

JUDAIC 417. Topics in Judaic Studies

(3). May be elected three times for credit. May be elected more than once in the same term. Rackham credit requires additional work.

JUDAIC 435 / HISTORY 435 / RUSSIAN 435. Cultural History of Russian Jews through Literature and the Arts

(3). May not be repeated for credit. Rackham credit requires additional work.

JUDAIC 451 / POLSCI 350. The Politics and Culture of Modern East European Jewry A course in East European and/or Jewish history, and Comparative Politics is recommended. (3). May not be repeated for credit. Sp/Su in Poland.

JUDAIC 467 / HJCS 577 / RELIGION 471. Seminar: Topics in the Study of Judaism (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

JUDAIC 468 / HJCS 478 / RELIGION 469. Jewish Mysticism (3). May not be repeated for credit. Taught in English.

JUDAIC 470 / ACABS 470 / HJCS 470. Reading the Rabbis

HJCS 202. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ACABS 270/HJCS 270/JUDAIC 270 or ACABS 570/HJCS 570/JUDAIC 570.

JUDAIC 478 / HJCS 477 / RELIGION 478. Modern Jewish Thought (3). May not be repeated for credit. Taught in English.

JUDAIC 480 / POLSCI 451. Religion, Ethnicity, and Politics: The Jewish Case JUDAIC 205 or HJCS 276, POLSCI 350 or JUDAIC 451, or any course in modern Jewish history. (3). May not be repeated for credit.

JUDAIC 495. Independent Studies

Consent of instructor required. Permission of instructor. (1 - 3). (INDEPENDENT). May not be repeated for credit. F.

JUDAIC 496. Independent Studies

Consent of instructor required. Permission of instructor. (1 - 3). (INDEPENDENT). May not be repeated for credit.

JUDAIC 497. Senior Thesis

Consent of instructor required. Permission of instructor. (3). (INDEPENDENT). May not

be repeated for credit. Continuing Course. Y grade can be reported at end of the firstterm to indicate work in progress. At the end of the second term of JUDAIC 498, the final grade is posted for both term's elections. F.

JUDAIC 498. Senior Thesis

Consent of instructor required. Permission of instructor. (3). (INDEPENDENT). May not be repeated for credit.

Center for Korean Studies (CKS)

1080 South University Avenue, Suite 4663 (734) 764-1825 (phone) (734) 764-2252 (fax) www.ii.umich.edu/cks e-mail: cks.info@umich.edu Professor Nojin Kwak (Communication Studies), Director

Not a concentration program. Undergraduates may pursue Korean Studies through the Asian Studies concentration or academic minor of the Department of Asian Languages and Cultures.

The Center for Korean Studies (CKS) is a unit of the International Institute within the University of Michigan. The program's goal is to foster teaching and research across disciplines and to use the academic resources of the university to promote an economic, political, and cultural understanding of Korea.

The CKS provides funding for public programs (art exhibitions, film festivals, lectures, and conferences), individual faculty research, undergraduate and graduate scholarships, development of new

courses, and the expansion of the Asia Library's Korea collection. It maintains an active colloquium series, bringing eminent Korean Studies scholars from around the world to lecture on a diverse set of issues. The program also sponsors Korean events on campus including undergraduate and graduate initiatives and cultural activities. Major financial support from the Korea Foundation helped establish a senior professorship in Korean Studies. These activities and programs have raised awareness and appreciation of Korean culture across U-M and in the surrounding community. As the center expands, the depth and diversity of the curriculum in Korean area stucies continues to grow, with a variety of courses in a number of disciplines offered each year.

CKS is also part of the University of Michigan's East Asia U.S. Department of Education Title VI National Resource Center, along with the Center for Chinese Studies and the Center for Japanese Studies. The center provides competitive fellowships for undergraduate and graduate students conducting research related to Korean studies.

Language Resource Center (LRC)

North Quad 105 South State Street (734) 647-0759 (Front Desk Main Center phone) (734) 764-0424 (Business Office phone) (734) 764-3521 (fax) www.umich.edu/~langres

The mission of the Language Resource Center is to serve, support and promote the study and instruction of foreign languages, cultures, and literatures at all levels within the University of Michigan community. To fulfill this mission, the Language Resource Center provides leadership and excellence in the application, creation, and dissemination of innovations with respect to information, technology, media, and materials for all University individuals who utilize foreign languages in their studies, teaching, or research. In addition to supplying diverse resources and services to the University community, the LRC is dedicated to strengthening foreign language instruction at the University of Michigan by informing faculty and GSI's of theoretical and practical developments in the following fields: language pedagogy, teaching methods, educational research, language acquisition, instructional technology, evaluation, and productivity.

Services and Facilities. The Language Resource Center will move into North Quad Summer 2010. For current hours, please refer to website.

The Language Resource Center has a diverse collection of unique resources and facilities. The Center and its resources are available to anyone within the University of Michigan community either free of charge or at a low fee depending on the user's affiliation, and on the type of services requested.

Students and faculty have access to the LRC's open computer labs, as well as audio listening/recording stations, video stations, textbooks and dictionaries, a free-reading text library, videos, software, realia, and copy machines. Access to foreign satellite television broadcast channels is available on a walk-in basis at video stations in the Main Center or by specially requested recording (videotape or dvd). Space is available for students to work individually, in small groups or with their classes.

Additional resources for faculty include equipment reservation and loan services, two 25 station computer classrooms for group use, video and audio collections with over 10,000 items, a pedagogical resource text library, multimedia development stations, and space for office hours and tutorials. The Center also provides satellite services, video duplication and standards conversion, audio and video production, workshops, foreign language instructional technology development, and curricular consultation.

Computing Stations. The LRC workstations contain a wide variety of software including both class specific and general use applications. Both Macintosh and Windows machines are available. Computing assistants are available to answer questions in the Center.

The LRC supports multilingual computing for most Middle Eastern, Asian, Slavic, and European languages. This is the only computing site on the U-M campus that provides support and assistance with non-Roman fonts.

The LRC also maintains two computer classrooms (one Mac, one Windows) that can accommodate classes up to 25 students. Reservations are required to use these facilities.

Audio and Video Collections. The Language Resource Center video collection contains over 3,000 titles. When combined with the language, literature and cultural programs of the Askwith Media Library, language faculty have a rich resource available for use in instruction and research. The Language Resource Center audio collection contains a diverse body of material in more than 50 languages. The collection consists of music, literature, exercises, cultural materials, and dialogues. There are also audio exercises corresponding to textbook courses, supplementary materials and self-study materials.

The LRC has several video stations located in the Main Center that can be used individually or in groups. Instructors can place video materials on reserve through the reservations office. These materials are then made available to students on a first come first served basis. Video materials are not allowed to be taken off site by students. **Course Reserves.** Faculty can put their course materials on reserve at the LRC for students to access. This helpful service gives students access to limited materials such as texts, answer keys, video and audio material.

Center for Latin American and Caribbean Studies (LACS)

1080 South University Avenue, Suite 3624 (734) 763-0553 (phone) (734) 615-8880 (fax) www.ii.umich.edu/lacs e-mail: lacs.office@umich.edu Associate Professor Richard Turits (History), Director

Faculty Advisors Alberto (History and Romance Languages), Behar (Anthropology), Brittenham (History of Art), Carroll (English), Caulfield (History), Colás (Romance Languages), Ekotto (Romance Languages), Espinoza-Pino (Residential College), Fromont (History of Art), Frye (Anthropology), Herrero-Olaizola (Romance Languages), Hoffnung-Garskof (History), Jenckes (Romance Languages), Johnson (History and CAAS), LaFountain-Stokes (Romance Languages), Levine (Political Science), MacLatchy (Anthropology), Mannheim (Anthropology), Marcus (Anthropology), Owusu (Anthropology), Paige (Sociology), Paley (Anthropology), Pedraza (Sociology), Pires (Linguistics), Ramirez (History), Roberts (Anthropology), Robinson (Sociology), Rodríguez (Residential College), Rodríguez-Matos (Romance Languages), Sanjinés (Romance Languages), Satterfield (Romance Languages and Literatures), J. Scott (History), R. Scott (History), Thompson (Economics), Turits (History), Verdesio (Romance Languages), Wherry (Sociology), Williams (Romance Languages)

The Latin American and Caribbean Studies Program (LACS) was founded at the University of Michigan as an undergraduate concentration program in 1984. Over the years LACS has grown into a major interdisciplinary program, linking many faculty members from more than a dozen departments, and professionals with research interests in Latin America. LACS has achieved national recognition for its growth as an academic program and a center of excellence in area research. In 2006, LACS became one of twenty-four U.S. Department of Education-supported National Resource Centers for Latin American and Caribbean Studies.

LACS maintains strong ties with several other research and teaching programs on campus, including

- the Center for Afroamerican and African Studies (CAAS),
- the Program in American Culture, and
- Latino/Latina Studies.

Several of the LACS program faculty are affiliated with these units and we frequently co-sponsor activities. Overlapping all four groups are research clusters of faculty and graduate students interested in such areas as:

- Latino/a history, "minority" identity, and the experience of migration
- The African Diaspora in the Americas
- Indigenous America
- · Questions of colonialism and post-coloniality

LACS organizes and co-sponsors over 50 public lectures, workshops, and conferences each year, and has become a midwestern and Michigan resource for scholars and the public at large. LACS actively sponsors and co-sponsors events involving visiting scholars and speakers, and conferences and workshops in which participants from Latin America interact with University faculty, students, and members of the community.

The major goals of the Program are:

- To offer broad-ranging undergraduate (concentration and academic minor) and graduate (certificate) academic programs in Latin American and Caribbean Studies at the University of Michigan.
- To promote and support initial field research of graduate students specializing in Latin American studies, with the help of resources such as Foreign Language and Area Studies awards.
- To promote interchange among faculty and graduate students through field research, special courses, events, and conferences.
- To maintain our active partnerships with scholars from Latin America.
- To develop collaborative relationships and closer links between the disciplinary departments of the College of Literature, Science and Arts and the professional schools of the University of Michigan by supporting promising students with research interests in Latin America.
- To serve as a resource on Latin America for area educators and the wider community.

Study Abroad. LACS majors and minors are encouraged to participate in one of the study-abroad programs in Latin America that are arranged through the Center for Global and Intercultural Study (CGIS). Since 1992, LACS has collaborated directly with CGIS on matters relating to the joint Michigan/Wisconsin program in Santiago, Chile, and since 1999 LACS has been active in advancing two new programs in Bahia and Belo Horizonte, Brazil.

LACS currently holds a reciprocal study-abroad program with the Centro Tinku, a major regional studies center in Peru at the graduate and faculty level. In addition to benefiting undergraduates, these programs may in the future provide an additional point of organization for links between Michigan faculty and graduate students, and universities and research institutes in Latin America.

Quechua Language Study at Michigan. Quechua, the language of the Inkas, is spoken today by millions of people in Bolivia, Peru, Ecuador, and Colombia. It has a written literature that goes back to the sixteenth century.

Quechua is offered as a regular course during the academic year at the University of Michigan in Ann Arbor, and as an intensive summer course in Cusco, Peru.

Three levels are taught in year-long courses:

- Beginning Quechua (LACS 471/472)
- Intermediate Quechua (LACS 473/474)
- Advanced Quechua (LACS 475/476).

Summer Quechua Language Study in Cusco. The program is open to all college and university undergraduate and graduate students who wish to learn Southern Quechua. This unique program offers high quality intensive language instruction through the experienced faculty Centro Tinku and the unusual experience of living and learning in the ancient Inka capital of Cuzco. Classes will meet intensively for seven weeks. A series of lectures on Quechua culture and history and an extensive program of excursions and cultural events will supplement the courses. The Quechua courses are taught using the immersion method, so previous knowledge of Spanish is

not required (though of course some familiarity with Spanish is useful for getting around Peru). Consult the program website for further information: www.ii.umich.edu/lacs/academics/quechua

Foreign Language and Area Studies (FLAS) Fellowships for undergraduate students. A FLAS Fellowship provides tuition support and a stipend to students studying designated foreign languages in combination with area studies or international aspects of professional studies. Awards are available for both summer 2010 and the 2010-11 academic year. The program's priority is to encourage the study of less commonly taught languages, specifically Quechua and Portuguese. FLAS Fellowships are administered by the University of Michigan Center for Latin American and Caribbean Studies (LACS) and are awarded competitively through annual fellowship competitions. The U.S. Department of Education funds these awards under the provisions of Title VI of the Higher Education Act.

More information and applications are available at

www.ii.umich.edu/lacs/academics/undergrads and then click on Fellowships and Grants and then either the Academic Year FLAS or Summer FLAS.

Questions can be sent to lacs.office@umich.edu.

Latin American and Caribbean Studies

May be elected as an interdepartmental concentration program

The Interdepartmental Concentration Program in Latin American and Caribbean Studies is designed to provide students with a rigorous, multi-disciplinary approach to the study of Latin America and the Caribbean. A broad base of knowledge is established by the requirement of a core of upper-level work in languages, the social sciences, and the humanities. Analytical depth is demonstrated through the completion of a senior thesis under appropriate faculty supervision.

Prerequisites to Concentration. None.

Concentration Program. 30 credits above the 200-level, beyond the language requirement, are required to complete the concentration program. Among the 30 credits, students must choose at least one course from each of the disciplines of Anthropology, History, Literature, and Political Science.

Language Requirement. Competency in Spanish or Portuguese (equivalent to SPANISH 275 or the intensive Spanish program at the Residential College, or PORTUG 232) should be achieved as early as possible in the program. Students are encouraged to go beyond this, either with further work in the language chosen, or by achieving competency in the other major language.

Required Courses. In choosing the 30 credits of upper-level courses, students must include at least one course from *each* of the following areas:

- Anthropology: ANTHRCUL 319 (Introduction to Latin American Society and Culture), 414 (Introduction to Caribbean Societies and Cultures), or another upper-level Anthropology course on Latin America.
- History: HISTORY 347 (Latin America: The Colonial Period), or 348 (Latin America: The National Period), or another upper-level HISTORY course on Latin America.
- Literature: SPANISH 381, 382 (Introduction to Latin American Literature, I and II), or another upper-level course in Latin American literature.

 Political Science: POLSCI 347 (Government and Politics of Latin America), or another upper-level course in Latin American politics.

Elective Courses. The remainder of the 30 credits may be drawn from upper-level courses, from any department, that deal with Latin America and the Caribbean. These change from year to year. The Program will normally make available during pre-registration a list of courses relating to Latin America and the Caribbean offered the following term. Accredited courses taken during Study Abroad programs in Latin America [administered by the Center for Global and Intercultural Study (CGIS), 764-4311] can in many cases count toward the major. Students should consult with their individual faculty advisor and with the Undergraduate Advisor for advice on selecting appropriate courses and developing an intellectually coherent and comprehensive program of study.

Advising. Prospective concentrators should consult the Director or the undergraduate advisor for guidance on courses. Appointments are scheduled in the LACS office, (734) 763-0553 or lacs.office@umich.edu. Normally, a concentration plan should reflect the multidisciplinary nature of the program and the themes that a student wishes to develop. Students should file a tentative concentration plan with the Center in their junior year, and update it prior to graduation.

Honors Concentration. LACS offers an Honors concentration to qualified LACS students. Application for an Honors concentration is usually made at the beginning of the third year. Participation requires a 3.5 grade point average. Graduation with Honors is recommended for students who complete all College and LACS graduation requirements, maintain a 3.5 GPA, and write a substantial LACS Senior Thesis that is judged worthy of Honors designation by the thesis advisor and at least one other faculty reader. An Honors concentration is not limited to students who have been in the College Honors Program in the first and second years. More details about the Senior Thesis and about applying for LACS Honors may be obtained from the Undergraduate Advisor.

Latin American and Caribbean Studies Academic Minor

An academic minor in Latin American and Caribbean Studies is not open to students with a concentration in Latin American and Caribbean Studies.

The LACS academic minor is designed to provide students with a multidisciplinary approach to the study of Latin America and the Caribbean. It aims to enhance the student's disciplinary training, received through concentration in a traditional discipline, by exposing the student to the topics and issues that are raised in the multidisciplinary area studies approach to countries of the Americas. Students wishing to pursue an academic minor in Latin American and Caribbean Studies must develop a specific plan for its completion in consultation with the LACS Student Advisor.

Appointments are scheduled in the LACS office [(734) 763-0553 or lacs.office@umich.edu].

Prerequisites to the Academic Minor: SPANISH 232 or PORTUG 232.

Academic Minor Program: At least 15 credits in courses at the 300-level and above on Latin America and the Caribbean, to be chosen from among courses listed in the Latin American and Caribbean Studies concentration.

Constraints: Courses must be drawn from at least three different departments, with not more than six credits in any one department.

COURSES IN LATIN AMERICAN AND CARIBBEAN STUDIES (LACS)

LACS 355. Topics in Latin American and Caribbean Studies

(3). May be elected twice for credit. May be elected more than once in the same term.

LACS 399. Thesis-Writers' Seminar

Consent of instructor required. Permission of instructor. (3). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

LACS 421 / CAAS 421 / HISTORY 421 / RELIGION 421. Religions of the African Diaspora

(3). May not be repeated for credit. Rackham credit requires additional work.

LACS 446 / LING 446. Comparative Linguistics

At least one course in Linguistics/language analysis. (3). May not be repeated for credit. Rackham credit requires additional work.

LACS 455. Topics in Latin American Studies

Consent of instructor required. (3). May be repeated for a maximum of 6 credits.

LACS 456 / LING 456. Topics in Comparative Linguistics

Concurrent enrollment in LING 446. (1). May be elected three times for credit. May be elected more than once in the same term. Rackham credit requires additional work.

LACS 471. Elementary Quechua, I

Permission of instructor. (4). May not be repeated for credit.

LACS 472. Elementary Quechua, II

Consent of instructor required. Permission of instructor. (4). May not be repeated for credit.

LACS 473. Intermediate Quechua, I Permission of instructor. (4). May not be repeated for credit.

LACS 474. Intermediate Quechua, II Consent of instructor required. Permission of instructor. (4). May not be repeated for credit.

LACS 475. Advanced Quechua, I

Permission of instructor. (4). May not be repeated for credit.

LACS 476. Advanced Quechua, II

Consent of instructor required. Permission of instructor. (4). May not be repeated for credit.

LACS 483 / CAAS 473 / HISTORY 473. Brazil: History and Culture (3). May not be repeated for credit. Rackham credit requires additional work.

LACS 490. Topics in Latin American and Caribbean Studies Mini-course Permission of Instructor. (1 - 2). May be repeated for a maximum of 4 credits. May be elected more than once in the same term.

LACS 499. Reading and Research in Latin American and Caribbean Studies

Consent of instructor required. Permission of Instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

Latina/o Studies (see American Culture)

Linguistics

440 Lorch Hall, 1220 611 Tappan Street (734) 764.0353 (phone) (734) 936.3406 (fax) ling.lsa.umich.edu e-mail: linguistics@umich.edu Professor Patrice Speeter Beddor, Chair

Professors

- Patrice Speeter Beddor, *phonetics, phonology, psycholinguistics* (speech perception)
- Julie E. Boland (Linguistics/Psychology), psycholinguistics, sentence comprehension and parsing, lexical representation
- Madhav Deshpande, Sanskrit, Prakrit and Pali, linguistic traditions of Indian grammarians
- San Duanmu, phonology, phonology-syntax interface, Chinese dialects, phonetics, morphology
- Steven Dworkin, historical linguistics, diachronic Romance, etymology, lexicology, morphology
- Nick Ellis, second language acquisition, psycholinguistics, corpus linquistics, applied cognitive psychology
- Samuel Epstein, syntax, first and second language acquisition
- Diane Larsen-Freeman, applied linguistics, English as a second language
- Jeffrey Heath, historical linguistics, morphology, Arabic, linguistic anthropology
- Deborah Keller-Cohen (Linguistics/Women's Studies), discourse, literacy, language and gender, conversational analysis
- Richard L. Lewis, *computational modeling, psycholinguistics, sentence processing, cognitive architectures, unified theories of cognition*
- Dragomir R. Radev, Natural language processing, Information retrieval, Computational linguistics
- Richmond Thomason, *semantics, philosophy of language, computational linguistics*
- Sarah G. Thomason (William J. Gedney Collegiate Professor of Linguistics), historical linguistics, languages in contact, pidgins & creoles, typological universals, Native American linguistics (especially Salishan)

Associate Professors

Steven Abney, computational linguistics, syntactic theory, language learning

- Marlyse Baptista (CAAS/Linguistics), morpho-syntax interface in pidgin and Creole languages, combining corpus data with the use of theoretical, descriptive and technological tools; how Creole languages inform linguistic theory and to what extent linguistic theory, in turn, informs Creole grammatical systems
- William Baxter (Asian Languages and Cultures/Linguistics), Chinese linguistics, historical phonology, semantics, Montague Grammar
- Anne Curzan (Arthur F Thurnau Professor), *History of English language, pedagogy and composition*
- Benjamin Fortson, historical linguistics, Indo-European linguistics
- Acrisio Pires, *syntax, computational linguistics/natural language processing, language change*
- Robin Queen (Arthur F Thurnau Professor), sociolinguistics, intonation, language contact, language and gender, Germanic linguistics
- Thomas Toon, historical linguistics, old Germanic languages and dialects, paleography

Assistant Professors

- Andries Coetzee, Phonological theory, phonology-phonetics interface, psycholinguistics (phonological processing)
- Ezra Keshet, *semantics, syntax/semantics interface, computational linguistics*
- Barbra Meek, Child language socialization and acquisition, endangered and/or dormant language issues, linguistic theory and Athabaskan linguistics
- Carmel O'Shannessy, sociolinguistics, language acquisition, Australian Languages

Lecturers

Paula Berwanger, *American Sign Language* Elaine McNulty, *syntactic theory*

Professors Emeriti A.L. Becker, Robbins Burling, Alexander Guiora, Peter E. Hook, John Lawler, Lesley Milroy, Joan Morley, Larry Selinker, Marilyn Shatz, Vitaly Shevoroshkin, John Swales

Linguistics investigates all aspects of spoken and written human language. It is especially concerned with the general principles of lan-

guage structure, with the structure and history of particular languages and groups of languages, with the role of language in human experience, and with the techniques employed in analyzing and describing language. The concentration in Linguistics is intended to provide an understanding of human language and its systematic study, as well as provide the opportunity to explore the importance of language in all areas of human life.

The general field of linguistics includes several subfields. Phonetics and phonology are especially concerned with the sounds of speech. Phonetics emphasizes the physical characteristics of speech sounds, and phonology deals with the way in which speech sounds are organized in languages. Syntax examines the way in which smaller units of language, such as words, are organized into larger units, such as phrases and sentences. Semantics seeks to understand how the forms of language are used to express meaning. Historical and comparative linguistics is concerned with the ways in which languages change through time, with the variations in language from place to place, and with the possible relationship among languages. Historical linguistics also includes the study of the history of specific languages and language groups, and the reconstruction of pre-historic languages.

In addition to these central areas of linguistics, several other subdisciplines relate linguistics to other fields of study. Psycholinguistics treats language in its psychological aspects and is especially concerned with the ways in which cultural patterns and values relate to language structure, use, and change. Sociolinguistics deals with the interrelationship of language and society and with the covariation of language and social form. Computational linguistics is concerned with the utilization of computational techniques in the analysis of language.

Some areas in which the findings of linguistics have found application include: translation, the design and documentation of computer software, language and national policy, speech pathology and speech therapy, the development of writing systems for previously unwritten languages, the teaching of first language skills such as reading and writing, and the teaching of second languages.

Pre-concentration courses in Linguistics. The Department of Linguistics offers a series of pre-concentration courses designed to meet the needs of students with broad interests in language-related issues as well as those of students with more focused interests in the study of language. The department has three general introductory courses: Introduction to Language (LING 111), Introduction to Linguistics (LING 210), and Introduction to Symbolic Logic (LING 212). LING 111 surveys the field of Linguistics, including the core areas and other major subfields as well; LING 210 and 212 introduce students to the methods of linguistic analysis and serve as prerequisites for upper-level linguistics courses.

Program in American Sign Language. The Department of Linguistics offers a 5-course sequence in American Sign Language. Introduction to Deaf Culture (Linguistics 140) serves as a pre- or corequisite to the beginning language courses. The four-term sequence of language courses (LING 150, 151, 250, 251) may be used to fulfill the undergraduate language requirement of the College of Literature, Science, and Arts.

ling.lsa.umich.edu/ug/asl.html

Linguistics Club. The Linguistics Club welcomes all undergraduates who are interested in linguistics. It gives students a chance to get together outside the classroom, find out something new about language or linguistics, and unwind. At a typical meeting, a faculty member chats informally about what they work on, and there are games and a movie.

Linguistics Concentration and Academic Minor Advising. Advising appointments can be made by contacting: the student services assistant, or linguistics@umich.edu.

Linguistics

May be elected as an interdepartmental concentration program

Prerequisites to Concentration. LING 209 or 210 or 212 is a prerequisite for a linguistics concentration, but does not count toward the concentration.

Concentration Requirements. The linguistics concentration requires a total of 30 credits at the 300 level or higher; at least 18 of these credits must be in Linguistics or courses cross-listed with Linguistics. Students should consult with their advisor to ensure that their concentration program consists of a coherent set of courses. The interdisciplinary nature of the field of linguistics – and hence the interdisciplinary nature of the concentration program – makes it particularly important that students are aware of the options available to them.

Required Courses. All concentrators are required to take the following three courses. This coursework should be completed as soon as possible, as it is intended to ensure that all students gain a solid understanding of the nature of language and the methods currently employed in the study of language.

- LING 313 Sound Patterns. This course explores two fundamental aspects of the sounds of the world's languages: speech sounds as physical entities (phonetics) and speech sounds as linguistic units (phonology).
- LING 315 Introduction to Syntax. This course examines the rule systems whereby words are organized into phrases and phrases into sentences in natural languages.
- LING 316 Aspects of Meaning. This course introduces students to aspects of semantic and pragmatic systems in natural language, including logic and formal systems, reference/coreference, and text analysis.

In extraordinary circumstances, with permission of the undergraduate chair, an advanced course in the area of phonetics/phonology, semantics, or syntax could satisfy the LING 313, 315, or 316 requirement, respectively.

Additional Courses. Beyond the three basic courses, concentrators are encouraged to fill out their program, in consultation with a linguistics concentration advisor, with courses that satisfy their own particular interests and goals. These courses may be offered by the Department of Linguistics or another program or department. Each term, the Linguistics Undergraduate Program distributes a list of courses offered by other units that are approved for concentration credit in Linguistics. Concentrators may request that courses not on this list also count towards the required credits; these requests must be approved by the Undergraduate Program chair. See under Concentration Profiles for three organized sub-plans that are available to concentrators whose interests fall into one of those areas.

Double Concentration. Because the study of language is inherently interdisciplinary, a concentration in Linguistics can be designed to integrate very well with other academic fields. A large proportion of current linguistics concentrators (more than half) complete double concentrations.

An LSA double concentration requires satisfying all of the concentration requirements of both programs. However, since LSA places no limit on the number of credits that may be offered jointly for both concentrations, this allows students to double-concentrate with substantially fewer than 60 total concentration credits.

Students considering a double concentration in Linguistics and another field in LSA should consult concentration advisors in both fields.

Honors Concentration. The Honors concentration in Linguistics requires completion of the requirements for the concentration and, in addition, a senior Honors project leading to an Honors thesis. The thesis must be written under the supervision of a faculty member of

the Department of Linguistics and with permission of a concentration advisor. Students may elect LING 495 and 496 when writing the Honors thesis (but are not required to do so).

Concentration Profiles. The Department of Linguistics offers three sub-plans within the concentration program. These are optional: no concentrator is required to follow any sub-plan. They are offered for the benefit of those students who wish to have more structure in their concentration program than is provided by the default option, which comprises the three core courses plus 7 electives.

Applied Linguistics and Second Language Learning and Teaching

The study of second/foreign language acquisition is a major focus of applied linguistics. Coursework in this area addresses both practical and theoretical issues. Although much of the emphasis in these courses is on teaching English as a Second Language (ESL), the principles and practices studied apply to instruction in any non-native language. A sequence of coursework in this area is especially useful for students interested in teaching ESL, particularly in international settings.

Students will have opportunities to meet faculty members and observe language courses in the language departments and at the English Language Institute, a principal center of second language instructional research and curriculum development.

Students following this concentration profile who seek a certificate* (issued upon graduation) stating that the student has completed a sequence of courses in this concentration area are required to take LING 350 and three approved courses (in addition to the three core courses required of all concentrators).

*Note that this certificate is <u>not</u> legal certification in ESL for the public schools.

Language and Mind

The language and mind profile introduces students to the multidisciplinary investigation of human language and the mind/brain. Research within this enterprise attempts to characterize the acquisition/development, origin, representation and processing of linguistic knowledge through both theoretical and empirical/experimental investigation. Specific topics include, but are not limited to, linguistic theory, psycholinguistics, cognition, perception, reasoning, and formal and computational models of linguistic knowledge and processes. The sub-plan focuses on the investigation both of universal aspects of human linguistic knowledge and of cognitive mechanisms that determine the observed diversity of human language.

This profile is also relevant for students who wish to pursue graduate study in linguistics; psychology; cognitive science; speech, language and hearing science; philosophy; education; computer science and artificial intelligence; and related fields. In addition, it is of direct interest to students with applied career goals in domains that utilize the knowledge base from this track: natural language processing by computers, human computer interaction, teaching and learning languages, literacy and the diagnosis and treatment of language disorders.

To follow this profile, students are required to take 12 credits, chosen from an approved list of courses (see the Department's website for the list). It is recommended that students interested in this track take LING 200, Language and Human Mind, as one of their first courses.

Linguistics for a Multicultural World

Courses in this profile focus on issues related to historical, sociocultural, and typological aspects of linguistics, particularly as these are relevant to multilingualism and multiculturalism. The sub-plan is designed to teach students to use the tools of linguistic inquiry to address questions of relationships among languages, cultures, and societies. Special attention is devoted to the emergence of global languages, particularly (nowadays) English. The courses in this track approach the study of language from a variety of perspectives and seek to equip students to become productive and informed citizens in an increasingly multicultural world.

Students who follow this profile will take 12 credits, chosen from an approved list of courses (see the Department's website for the list); we strongly recommend that LING 340, Introduction to Sociolinguistics, be one of these courses.

Other Areas

Students interested in combining linguistics with work in a particular language should take courses dealing with the history and structure of that language. Such a concentration assumes the ability to use the spoken and written language; courses that focus on learning the languages (generally 100- and 200-level) will not count as part of the concentration requirements in linguistics.

Students interested in learning about issues in natural language and computation may combine courses in linguistics, philosophy, and computer science. These students may also choose to pursue a double concentration in Linguistics and either of these two fields.

Students interested in applying the methods of linguistic analysis to spoken English discourse and to written English texts can combine the study of linguistics with courses in historical or discourse analysis.

Accelerated Program for Undergraduates (AB/BS and MSI)

The School of Information offers an accelerated joint program for exceptional Linguistics undergraduate concentrators at the University of Michigan. The program enables students in Linguistics to complete both a bachelor's degree and the two-year Master of Science in Information (MSI) degree in five years of study. The School of Information will select candidates for this program during their junior year. The bachelor's degree is normally awarded at the end of the senior year (the first year of study in the School of Information) and the MSI degree after completion of its requirements (normally after a second year of graduate study).

Students in the accelerated joint program must satisfy the normal requirements for both the Bachelors and the MSI programs; but any course they take that satisfies a requirement for the Bachelors and also satisfies a requirement for the MSI can be used to satisfy both requirements simultaneously. By taking 24 credit hours of courses that are "double-counted" in this fashion, it is possible to eliminate a year from the normal course of study. In particular, several designated courses taught in the School of Information and the Department of Linguistics satisfy requirements for both degrees. See the official list of courses for details.

To qualify for admission to the School of Information under the Accelerated Joint Program, students need to show that, given the double counting provision, they will be able to complete the LSA and Linguistics requirements for the Bachelors by the end of the fourth year, while also completing the usual first-year coursework for the MSI.

In addition, applicants for the accelerated joint program must show an academic record that is consistent with the demands of completing six years of course work in five years. This means that program applicants must be at or above the norm for the regular entering class at the School of Information, in terms of fit to the School, maturity, GPA, and GRE scores.

Further information can be found by visiting the School of Information, 300 West Hall, or SI's website [www.si.umich.edu]. Declared Linguistics concentrators who are interested in this program should consult with their Linguistics advisor as early as possible. An application to the School of Information is made in the fall academic term of the junior year and is reviewed as part of the regular admission process by the School of Information. Applicants will be notified of the School of Information's decision before the registration deadline in the winter academic term.

Academic Minor in Linguistics

An academic minor in Linguistics is not open to students with a concentration in the Department of Linguistics.

Many students in departments across campus develop an interest in language as they pursue their studies, and wish to learn more about the ways in which human language informs and defines human experience. Other career aspirations, however, make it difficult for them to have a full concentration in Linguistics. The academic minor in Linguistics is offered to these undergraduates who wish to enrich their education with extended study in the nature of human language. Such inquiry is regularly sought as a support to the study of a specific language and its literature, as an adjunct to other aspects of developmental and cognitive psychology, or as a tools for concentrators in other cognate disciplines. Students wishing to pursue an academic minor in Linguistics must develop a specific plan for its completion in consultation with a faculty member of the Undergraduate Committee of the Linguistics Department.

Prerequisites to the Academic Minor. LING 210 or 212 is a prerequisite for a linguistics academic minor, but does not count toward the academic minor.

Academic Minor Program. 15 credits in Linguistics or in courses cross-listed with Linguistics, distributed as follows:

- 1. Linguistics core: Two courses chosen from LING 313, 315, and 316.
- Linguistics electives: Nine credits in Linguistics, at the 300level or above, chosen in consultation with, and approved by, the academic minor advisor.

COURSES IN LINGUISTICS (LING)

credit.

LING 102. First Year Seminar (Humanities)

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit.

LING 103. First Year Seminar (Social Science)

Enrollment restricted to first-year students, including those with sophomore standing. (3). (SS). May not be repeated for credit.

LING 111. Introduction to Language (3). (SS). May not be repeated for credit.

LING 112. Languages of the World

(3). (SS). May not be repeated for credit. LING 115. Language in a Multicultural World

(3). (SS). May not be repeated for credit. LING 140. Introduction to Deaf Culture

(3). May not be repeated for credit.

LING 150. Elementary American Sign Language Concurrent enrollment in or completion of LING 140. (4). May not be repeated for credit.

LING 151. Elementary American Sign Language II LING 150. (4). May not be repeated for credit.

LING 209 / PSYCH 242. Language and Human Mind (4; 3 in the half-term). (ID). May not be repeated for credit.

LING 210. Introduction to Linguistic Analysis (4). (SS). May not be repeated for credit.

LING 212. Introduction to the Symbolic Analysis of Language (4; 2 in the half-term). (MSA). (BS). May not be repeated for credit. F.

LING 250. Intermediate American Sign Language LING 151. (4). May not be repeated for credit.

LING 251. Intermediate American Sign Language II LING 250. (4). (Lang Req). May not be repeated for credit.

LING 272 / ANTHRCUL 272. Language in Society Primarily for first- and second-year students. (4). (SS). (R&E). May not be repeated for

credit.

LING 305. Advertising Rhetoric Junior standing. (3). May not be repeated for credit.

LING 313. Sound Patterns LING 111 or 210. (3; 2 in the half-term). (SS). May not be repeated for credit.

LING 315. Introduction to Syntax LING 111 or 210. (3; 2 in the half-term). May not be repeated for credit.

LING 316. Aspects of Meaning LING 111 or 210. (3). May not be repeated for credit.

LING 317. Language and History

LING 111 or 210. (3; 2 in the half-term). (HU). May not be repeated for credit.

LING 340. Introduction to Sociolinguistics LING 111 or 210. (3). May not be repeated for credit.

LING 342. Perspectives on Bilingualism LING 111, 210, or 272. (3). May not be repeated for credit.

LING 347 / PSYCH 349. Talking Minds

At least one of: LING 111 or 210, or PSYCH 111, 112, 114, or 115. (3). (BS). May not be repeated for credit.

LING 349. Words and Word Systems

(3). (HU). May not be repeated for credit.

LING 350. Perspectives on Second Language Learning and Second Language Instruction

LING 111 or 210. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in LING 450.

LING 367 / ASIAN 367. Languages of Asia (3). (HU). May not be repeated for credit. LING 370 / ANTHRCUL 370. Language and Discrimination: Language as Social Statement LING 210. (3). (SS). (R&E). May not be repeated for credit. LING 374 / ANTHRCUL 374. Language and Culture Sophomore standing. (4). (HU). May not be repeated for credit. LING 375. Language in the Mass Media: Linguistics and Language Variation in the Public Sphere LING 111 or 210. (3). (ID). May not be repeated for credit. LING 385. Experiential Practice Permission of instructor. (1 - 6). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. Offered mandatory credit/no credit. LING 386 / EDUC 390 / ELI 390 / RCSSCI 390. Community Service and Language, Education, and Culture

One course in linguistics, anthropology, or a related field. (3). May not be repeated for

(1 - 3). (EXPERIENTIAL). May be elected three times for credit.

LING 351 / ELI 351 / PSYCH 344. Second Language Acquisition

LING 352 / PSYCH 352. Development of Language and Thought

LING 111 or 210. (3). (BS). May not be repeated for credit.

PSYCH 250. (3). (SS). May not be repeated for credit.

LING 362 / ANTHRCUL 375. Talking and Telling

LING 394. Topics in Linguistics LING 111 or 210. (3 - 4). May be elected twice for credit. May be elected more than once in the same term.

LING 395. Individual Research

Consent of instructor required. Permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 6 credits. F, W, Sp, Su.

LING 406 / ENGLISH 406. Modern English Grammar (3; 2 in the half-term). May not be repeated for credit.

LING 408 / ENGLISH 408. Varieties of English (3; 2 in the half-term). May not be repeated for credit.

LING 412. Speech Perception

LING 313. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

LING 420. Word and Metaphor LING 315, 316, or equivalent. (3). May not be repeated for credit.

LING 421. Morphology At least one introductory linguistics course. (3; 2 in the half-term). May not be repeated for credit.

LING 433 / AAPTIS 433. Arabic Syntax and Semantics AAPTIS 202 or 205 and AAPTIS 432. (3). May not be repeated for credit.

LING 440. Language Learnability LING 316 and 315 or permission of instructor. (3). May not be repeated for credit.

LING 441. Computational Linguistics I Linguistics concentrators should take LING 315 and 316 first. (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

LING 442. Computational Linguistics II LING 441. (Prerequisites enforced at registration.) Computer programming ability. (3). May not be repeated for credit. Rackham credit requires additional work.

LING 446 / LACS 446. Comparative Linguistics

At least one course in Linguistics/language analysis. (3). May not be repeated for credit. Rackham credit requires additional work.

LING 447 / PSYCH 445. Psychology of Language

PSYCH 240. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

LING 456 / LACS 456. Topics in Comparative Linguistics

Concurrent enrollment in LING 446. (1). May be elected three times for credit. May be elected more than once in the same term. Rackham credit requires additional work.

LING 461 / AMCULT 461 / ANTHRCUL 461. Language, Culture, and Society in Native North America

(3). May not be repeated for credit.

LING 492. Topics in Linguistics

(3; 2 in the half-term). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

LING 493. Undergraduate Reading

Consent of instructor required. Permission of the concentration advisor. (1 - 3). (INDE-PENDENT). May not be repeated for credit.

LING 494. Undergraduate Reading

Consent of instructor required. Permission of the concentration advisor. (1 - 3). (INDE-PENDENT). May not be repeated for credit.

LING 495. Senior Honors Reading Course

Consent of instructor required. Permission of concentration advisor. (1 - 3). (INDEPEN-DENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of LING 496, the final grade is posted for both term's elections. F, W, Sp/Su, Sp, Su.

LING 496. Senior Honors Reading Course

Consent of instructor required. LING 495. (1 - 3). (INDEPENDENT). May not be repeated for credit. F, W, Sp/Su, Su.

LING 512. Phonetics

LING 313. (4). May not be repeated for credit. F.

LING 513. Phonology

LING. 313 or Permission of Instructor. (3; 2 in the half-term). May not be repeated for credit. W.

LING 514. Semantics and Pragmatics

Permission of instructor. (3; 2 in the half-term). May not be repeated for credit. W. LING 515. Generative Syntax

LING 315 or Permission of Instructor. (3; 2 in the half-term). May not be repeated for

credit. F.

LING 517 / ANTHRCUL 519 / GERMAN 517. Principles and Methods of Historical Linguistics

Graduate standing, or permission of instructor. (3; 2 in the half-term). May not be repeated for credit.

LING 519. Discourse Analysis

Permission of instructor. (3; 2 in the half-term). May not be repeated for credit.

LING 541 / EECS 595 / SI 561. Natural Language Processing

Senior standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

LING 542 / ANTHRCUL 572. Introduction to Sociolinguistics

LING 411 or graduate standing. (3; 2 in the half-term). May not be repeated for credit.

Lloyd Hall Scholars Program (LHSP)

Alice Crocker Lloyd Residence Hall 100 South Observatory (734) 764-7521 (phone) (734) 764-5312 (fax) www.lsa.umich.edu/lhsp e-mail: lhsp@umich.edu Dr. Carol Tell (Sweetland Writing Center), Director

Not a concentration program

The Lloyd Hall Scholars Program is a first-year living-learning community that focuses on creative expression in writing and the visual arts. Located in the Alice Lloyd Residence Hall, the Program offers entering students a collegial, interdisciplinary academic environment in which they can enjoy the personal and intellectual advantages of a small group setting while they explore the resources of the larger University. Students from all academic disciplines benefit from the Program's focus; the ability to think and express oneself creatively goes hand-in-hand with the ability to think and express oneself critically. In addition to contributing to their academic success, LHSP develops in students a lifelong passion for the creative arts and encourages students to seek out arts opportunities in their communities. The Program offers writing and arts courses for all first-year students. The Program's writing course for entering students, LHSP 125, meets the LSA Introductory Composition Requirement for first-year students. Several sections of LHSP 125, taught by Sweetland Writing Center faculty, are offered in fall term. This course, while emphasizing college writing, focuses on a variety of diverse topics and themes related to the creative arts. A variety of elective courses, including creative non-fiction and studio art courses, are also offered through LHSP. All LHSP courses are small, and active participation by students is encouraged. LHSP also has a Writing Center available for all students.

In addition, various co-curricular activities enhance the experiences of Program members. These include guest authors and artists, theater trips, and a variety of clubs, such as Book Club, Creative Writing Workshop, and Photography. As part of the Residence Education program in Alice Lloyd Hall, the Program has access to numerous non-academic activities, including films, field trips, community service, multicultural programs, and social programs. Within LHSP, a leadership track for sophomores is also available.

LLOYD HALL SCHOLARS COURSES (LHSP)

A total of 20 credits of LHSP courses may be counted toward the minimum 120 credits required for an LSA degree.

LHSP 125. College Writing

(4). (FYWR). May not be repeated for credit. A maximum of 20 Lloyd Hall Scholars Program credits may be counted toward a degree.

LHSP 130. Writing and the Arts I

(3). (CE). May not be repeated for credit. A maximum of 20 LHSP credits may be counted toward a degree.

LHSP 140. Arts and Humanities

(3). (CE). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. A maximum of 20 Lloyd Hall Scholars Program credits may be counted toward a degree.

LHSP 228. What is Writing?

Completion of the First-Year Writing Requirement. (3). (HU). May not be repeated for credit. A maximum of 20 LHSP credits may be counted toward a degree.

LHSP 230. Writing and Arts II

Completion of the First-Year Writing Requirement. (Prerequisites enforced at registration.) Experience in writing or the arts. Non-LSA students welcome and may request permission to enroll. (3). (CE). May be elected twice for credit. A maximum of 20 LHSP credits may be counted toward a degree.

LHSP 299. Independent Study

Consent of instructor required. Permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. A maximum of 20 Lloyd Hall Scholars Program credits may be counted toward a degree.

Macromolecular Science and Engineering

3062C H.H. Dow Building 2300 Hayward Avenue (734) 763-2316 (phone) (734) 763-4788 (fax) www.engin.umich.edu/prog/macro e-mail: macromolecular@umich.edu Professor Richard M. Laine (Materials Science and Engineering), Director

Not a concentration program

Professors Ellen M. Arruda (Mechanical Engineering), Mark M. Banaszak-Holl (Chemistry), Zhan Chen (Chemistry), Sharon Glotzer (Chemical Engineering), Theodore Goodson III (Chemistry), Peter F. Green (Materials Science & Engineering), Jerzy Kanicki (Electrical Engineering and Computer Science), Richard M. Laine (Materials Science & Engineering), Ronald G. Larson (Chemical Engineering), Peter X. Ma (Biologic & Materials Sciences), Adam Matzger (Chemistry), Richard E. Robertson (Materials Science & Engineering), Michael J. Solomon (Chemical Engineering), Alan S. Wineman (Mechanical Engineering), Robert Zand (Biological Chemistry)

Associate Professors Jay Guo (EECS), Jinsang Kim (Materials Science & Engineering), Max Shtein (Materials Science &

MACROMOL 410 / BIOMEDE 410 / MATSCIE 410. Design and Applications of Biomaterials

MATSCIE 220 or 250 with a grade of C- or better; or graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

MACROMOL 412 / CHE 412 / MATSCIE 412. Polymeric Materials

MATSCIE 220 or 250, and CHEM 210 with a grade of C- or better; or graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

MACROMOL 414 / CHE 414 / MATSCIE 414 / MFG 414. Applied Polymer Processing CHE 412 or MATSCIE 412 or MACROMOL 412 with a C- or better; or graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

MACROMOL 512 / CHE 512 / MATSCIE 512. Polymer Physics

Senior or graduate standing in engineering or physical science. (3). (BS). May not be repeated for credit.

Engineering), Shuichi Takayama (Biomedical Engineering), Angela Violi (Mechanical Engineering, Chemical Engineering, Biomedical Engineering)

Assistant Professors Kenichi Kuroda (Biologic and Materials Sciences), Joerg Lahann (Chemical Engineering), Anne McNeil (Chemistry), Anish Tuteja (Materials Science & Engineering)

Research Assistant Professor István J. Majoros (Internal Medicine)

Macromolecular Science and Engineering is an interdisciplinary graduate program that provides the academic and research basis for studies in the science and technology of synthetic and natural macromolecules. Such large molecules exhibit unusual and specific properties as compared to small molecules and a large field has developed in unraveling the scientific foundations of this behavior, both in the synthetic and the biological areas.

The Program at U-M is one of the very few where students can achieve competence in both the traditional discipline of their choice and the interdisciplinary field of Macromolecular Science and Engineering. The faculty members are drawn from various departments, thus making the Program a truly cooperative and interdisciplinary endeavor.

COURSES IN MACROMOLECULAR SCIENCE (MACROMOL)

MACROMOL 514 / MATSCIE 514 / MFG 514. Composite Materials MATSCIE 350 or equivalent, or permission of instructor. (3). (BS). May not be repeated for credit. F.

MACROMOL 515 / MATSCIE 515. Mechanical Behavior of Solid Polymeric Materials MACROMOL, MECHENG 211 and CHE 412 or MATSCIE 412 or MACROMOL 412 or permissions of instructor. (3). (BS). May not be repeated for credit.

MACROMOL 538 / CHEM 538. Organic Chemistry of Macromolecules CHEM 215/216, and CHEM 230 or 260 or 340. (3). (BS). May not be repeated for credit. F.

MACROMOL 559 / CHE 559 / MATSCIE 559. Foundations of Nanotechnology II Senior or graduate standing. (3). (BS). May not be repeated for credit.

Mathematics

2074 East Hall 530 Church Street (734) 764-0335 (phone) (734) 763-0937 (fax) www.math.lsa.umich.edu

e-mail: math-undergrad-office@umich.edu

Professor Melvin Hochster, Chair Professor Sergey Fomin, Associate Chair for Graduate Students Professor Curtis E. Huntington, Associate Chair for Education Professor Stephen DeBacker, Director of Undergraduate Programs Irina M. Arakelian, Director of the Mathematics Laboratory

Professors

David E. Barrett, Complex Analysis

Alexander Barvinok, Combinatorics, Applied Mathematics

Hyman Bass (Samuel Eilenberg Distinguished University Professor of Mathematics and Mathematics Education, Roger C. Lyndon Collegiate Professor of Mathematics), *Algebraic Geometry*

Andreas Blass, Combinatorics, Logic and Foundations

Anthony Bloch, Differential Equations

Mario Bonk, Geometric Analysis

Daniel M. Burns, Jr., *Complex Analysis, Algebraic and Differential Geometry*

Richard Canary, *Topology*

- Joseph G. Conlon, Mathematical Physics
- Stephen DeBacker, Representation Theory

Hendrikus Derksen, Algebra

- Charles Doering, Applied Mathematics, Mathematical Physics
- Igor V. Dolgachev, Commutative Algebra/Algebraic Geometry

Peter L. Duren, Analysis/Functional Analysis

- Sergey Fomin, Algebraic Geometry, theoretical computer science
- John Erik Fornaess (Frederick W. Gehring Collegiate Professor of Mathematics), Several Complex Variables, Analysis/Functional Analysis, Complex Dynamics
- William Fulton (M.S. Keeler II Professor of Mathematics), Commutative Algebra/Algebraic Geometry

Robert L. Griess, Group/Lie Theory, Algebra

- Philip J. Hanlon (Donald J. Lewis Collegiate Professor of Mathematics; Arthur F. Thurnau Professor), *Combinatorics*
- Mel Hochster, Commutative Algebra/Algebraic Geometry
- Curtis E. Huntington, Actuarial and Financial Mathematics

Trachette Jackson, *Mathematical Biology*

Lizhen Ji, Analysis/Functional Analysis

Mattias Jonsson, Complex Analysis

Smadar Karni, Numerical Analysis

Robert Krasny (Arthur F. Thurnau Professor), Numerical Analysis Igor Kriz, Topology Jeffrey Lagarias, Topology Geometry Robert Lazarsfeld, Algebraic Geometry Robert Megginson (Arthur F. Thurnau Professor), Analysis/Functional Analysis Peter Miller, Applied Mathematics Hugh L. Montgomery, Number Theory Mirecea Mustata, Algebraic Geometry Gopal Prasad (Raoul Bott Collegiate Professor of Mathematics), Lie/Representation Theory Jeffrey B. Rauch, Differential Equations Yongbin Ruan, Symplectic Geometry G. Peter Scott, Topology Carl P. Simon, Differential Equations Peter Smereka, Differential Equations Karen E. Smith (M.S. Keeler II Professor of Mathematics), Algebra/Algebraic Geometry Joel A. Smoller (Lamberto Cesari Collegiate Professor of Mathematics), Differential Equations Ralf J. Spatzier, Differential Geometry John R. Stembridge, Combinatorics Berit Stensønes, Complex Analysis Alejandro Uribe-Ahumada, Geometric Analysis, Mathematical Physics Roman Vershynin, Geometric functional analysis Arthur G. Wasserman, Differential Equations David J. Winter, Algebra/Group Theory, Lie Theory Sijue Wu, PDE Virginia Young (Cecil J. and Ethel M. Nesbitt Professor of Actuarial Mathematics), Actuarial and Financial Mathematics Associate Professors

Jinho Baik, Probability Theory Selim Esedoglu, Applied Mathematics Daniel Forger, Mathematical Biology Anna Gilbert, Analysis Thomas Lam, Algebraic Combinatorics Kristen Moore, Actuarial and Financial Mathematics Kartik Prasanna, Number Theory Martin Strauss, Fundamental Algorithms, Comp Security Divakar Viswanath, Numerical Analysis Michael Zieve, Algebra/Algebraic Geometry, Number Theory

Assistant Professors

Angela Barnhill, Algebra/Group Theory, Geometry and Topology Erhan Bayraktar, Actuarial and Financial Mathematics Elizabeth Beazley, Algebraic Geometry, Combinatorics Hanna Bennett, Algebra/Group Theory Patrick Boland, Geometry and Topology Victoria Booth, Mathematical Biology Dmitriy Boyarchenko, Algebra/Algebraic Geometry William Breslin, Geometry and Topology Jeffrey Brown, Geometry and Topology Xiaojun Chen, Topology/Geometry Tatyana Chmutova, Algebra Cecilia Diniz Behn, Mathematical Biology Francois Dorais, Logic Moon Duchin, Geometry Ahmet Duran, Financial and Actuarial Volker Elling, Applied Mathematics and Differential Equations Thomas Emmerling, Financial and Actuarial Farkhod Eshmatov, Algebra Oscar Fernandez, Geometric Mechanics Weihua Geng, Applied Mathematics and Mathematical Biology Mohar Guha, Partial Differential Equations Jonathan Handy, Complex Analysis

Kenneth Harris, Logic Benjamin Howard, Algebraic Geometry Tatiana Howard, Representation Theory Robert Jenkins, Applied Mathematics Hyunsuk Kang, Analysis/Functional Analysis Jesse Kass, Algebraic Geometry Paul Kessenich, Analysis and Partial Differential Equations Michael Khoury, Number Theory Aaron King, Mathematical Biology Amanda Knecht, Algebraic Geometry Yvonne Lai, Geometry and Topology Lina Lee, Several Complex Variables Larson Louder, Geometry and Topology Todor Milanov, Geometry and Topology Djordje Milićević, Number Theory Carl Miller, Algebraic Geometry and Number Theory Christopher Mooney, Geometry and Topology Yusuf Mustopa, Algebraic Geometry Lan Nguyen, Number Theory Ivan Petrakiev, Algebraic Geometry Alexandra Pettet, Geometry and Topology Karl Schwede, Algebraic Geometry Qingshuo Song, Financial and Actuarial Juan Souto, Geometry and Topology Svetlana Tlupova, Applied Mathematics Enrique Torres-Giese, Topology Jack Waddell, Complex Dynamics and Mathematical Biology Dong Wang, Analysis Chunjing Xie, Analysis Richard Yamada, Mathematical Biology Song Yao, Mathematics of Finance and Stochastic Analysis Wenliang Zhang, Algebraic Geometry and Commutative Algebra Zhou Zhang, Differential Equations

T.H. Hildebrandt Research Assistant Professors

Bin Cheng, PDE and Numerical Analysis Benson Muite Pavlo Pylyavskyy, Combinatorics Elizabeth Wulcan, Analysis

Lecturers

Irina M. Arakelian, Mathematics Education Mark Conger Sara Gentry, Mathematical Biology Gavin LaRose, Mathematics Education Joseph Marker, Actuarial Mathematics Karen R. Rhea, Mathematics Education

Professors Emeriti Morton Brown, Paul Federbush, Frederick W. Gehring, Jack L. Goldberg, Wilfred M. Kincaid, James M. Kister, Eugene F. Krause, Chung Nim Lee, Donald J. Lewis, James S. Milne, Carl M. Pearcy, George Piranian, M.S. Ramanujan, Frank A. Raymond, Maxwell O. Reade, Ronald H. Rosen, Art J. Schwartz, Chung-Tuo Shih, Charles J. Titus, Howard Young

Mathematics is the language and tool of the sciences, a cultural phenomenon with a rich historical tradition, and a model of abstract reasoning. Historically, mathematical methods and thinking have been extraordinarily successful in physics and engineering. Today, they are used successfully in many new areas, from computer science to biology and finance. A Mathematics concentration provides a broad education in various areas of mathematics in a program flexible enough to accommodate a wide range of interests.

The study of mathematics is an excellent preparation for many careers; the patterns of careful logical reasoning and analytical problem solving essential to mathematics are also applicable in contexts where quantity and measurement play only minor roles. Thus stu-

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dents of mathematics may go on to excel in medicine, law, politics, or business as well as any of a vast range of scientific careers. Special programs are offered for those interested in teaching mathematics at the elementary or high school level, in actuarial mathematics, the mathematics of insurance, or financial mathematics. The other programs split between those which emphasize mathematics as an independent discipline and those which favor the application of mathematical tools to problems in other fields. There is considerable overlap here, and any of these programs may serve as preparation for either further study in a variety of academic disciplines, including mathematics itself, or intellectually challenging careers in a wide variety of corporate and governmental settings.

Elementary Mathematics Courses. In order to accommodate diverse backgrounds and interests, several course options are available to beginning mathematics students. All courses require three years of high school mathematics; four years are strongly recommended and more information is given for some individual courses below. Students with College Board Advanced Placement credit and anyone planning to enroll in an upper-level class should consider one of the Honors sequences and discuss the options with a mathematics advisor.

Students who need additional preparation for calculus are tentatively identified by a combination of the math placement test (given during orientation), college admission test scores (SAT or ACT), and high school grade point average. Academic advisors will discuss this placement information with each student and refer students to a special mathematics advisor when necessary.

Two courses preparatory to the calculus, MATH 105 and 110, are offered. MATH 105 is a course on data analysis, functions, and graphs with an emphasis on problem solving. MATH 110 is a condensed half-term version of the same material offered as a self-study course taught through the Math Lab and is only open to students in MATH 115 who find that they need additional preparation to successfully complete the course. A maximum total of 4 credits may be earned in courses numbered 103, 105, and 110. MATH 103 is offered exclusively in the Summer half-term for students in the Summer Bridge Program. MATH 107, Mathematics for the Information Age, is a course for students who may not want or need to take calculus. It encourages mathematical exploration of a variety of topics both inside and outside of mathematics.

MATH 127, 128, and 174 are courses containing selected topics from geometry, and number theory. They are intended for students who want exposure to mathematical culture and thinking through a single course. They are neither prerequisite nor preparation for any further course. No credit will be received for the election of MATH 127, 128, or 174 if a student already has credit for a 200 (or higher) level MATH course.

Each of MATH 115, 185, and 295 is a first course in calculus. Generally credit can be received for only one of MATH 115 or 185. The sequence MATH 115-116-215 is appropriate for most students who want a complete introduction to calculus. One of MATH 215, 255, 285, or 395 is prerequisite to most more advanced courses in Mathematics.

The sequences MATH 156-255-256, 175-186-285-286, 185-186-285-286, and 295-296-395-396 are Honors sequences. Students need not be enrolled in the LSA Honors Program to enroll in any of these courses but must have the permission of an Honors advisor. Students with strong preparation and interest in mathematics are encouraged to consider these courses.

MATH 185 through 285 covers much of the material of MATH 115 through 215 with more attention to the theory in addition to applications. Most students who take MATH 185 have taken a high school calculus course, but it is not required. MATH 175 through 186 assumes knowledge of calculus roughly equivalent to MATH 115 and covers a substantial amount of so-called combinatorial mathematics as well as calculus-related topics not usually part of the calculus sequence. MATH 175 is taught by Inquiry-Based Learning (IBL): students are presented with a great variety of problems and encour-

aged to experiment in groups using computers. The sequence MATH 295 through 396 provides a rigorous introduction to theoretical mathematics. Proofs are stressed over applications and these courses require a high level of interest and commitment. Most students electing MATH 295 have completed a thorough high school calculus course. MATH 295 through 396 is excellent preparation for mathematics at the advanced undergraduate and beginning graduate level.

Students with strong scores on either the AB or BC version of the College Board Advanced Placement exam may be granted credit and advanced placement in one of the sequences described above; a table explaining the possibilities is available from advisors and the department. In addition, there is one course especially designed and recommended for students with one or two terms of AP credit – MATH 156. MATH 156 is an Honors course intended primarily for science and engineering concentrators and emphasizes both applications and theory. Interested students should consult a mathematics advisor for more details.

In rare circumstances and with permission of a Mathematics advisor, reduced credit may be granted for MATH 185 after MATH 115. A list of these and other cases of reduced credit for courses with overlapping material is available from the department. To avoid unexpected reduction in credit, a student should always consult an advisor before switching from one sequence to another. In all cases a maximum total of 16 credits may be earned for calculus courses MATH 115 through 296, and no credit can be earned for a prerequisite to a course taken after the course itself.

Students completing MATH 116 who are principally interested in the application of mathematics to other fields may continue either to MATH 215 (Analytic Geometry and Calculus III) or to MATH 216 (Introduction to Differential Equations); these two courses may be taken in either order. Students who have greater interest in theory or who intend to take more advanced courses in mathematics should continue with MATH 215 followed by the sequence MATH 217-316 (Linear Algebra-Differential Equations). MATH 217 (or the Honors version, MATH 513) is required for a concentration in Mathematics; it both serves as a transition to the more theoretical material of advanced courses and provides the background required for optimal treatment of differential equations in MATH 316. MATH 216 is not intended for concentrators in pure mathematics.

Math Lab. The University of Michigan Mathematics Laboratory (Math Lab) is a walk-in tutoring service available free to all U-M students in B860 East Hall. Tutoring is available for mathematics courses numbered through 217. Though help is not regularly available for other courses, we will attempt to answer the questions of any UM student who comes to us for mathematics help.

Consult the Math Lab website for specific hours of operation. www.math.lsa.umich.edu/undergrad/mathlab/

The Undergraduate Math Club is mentored by a faculty advisor for all students with an interest in Mathematics. It is an informal organization, which sponsors talks by faculty and students. A typical meeting begins with free pizza and drinks, shortly followed by a 45minute talk on an interesting mathematical problem, application, or idea (or all three!). The selected topic is something which isn't usually seen in the standard curriculum. Some of these topics lead into important concepts in theoretical or applied research, while others explain a clever solution to an interesting problem. Everything is formulated so as to avoid needing technical background beyond calculus, some exposure to methods of proof, and a moderate capacity for abstract thought. For more information, see the web page: www.math.lsa.umich.edu/undergrad/mathclub.shtml

www.math.isa.umich.edu/undergrad/mathciub.shtmi

Student Actuaries at Michigan is an organization for undergraduates and graduates interested in the field of actuarial and financial mathematics. There are monthly meetings on topics of interest, sometimes featuring speakers from industry. The Club organizes study groups for the professional examinations and coordinates visits to campus of industry recruiters. It also sponsors a variety of athletic and social activities, including an end-of-year picnic. www.math.lsa.umich.edu/SAM **William Lowell Putnam Competition.** A departmental team participates in the annual William Lowell Putnam Competition sponsored by the Mathematical Association of America. Interested students with exceptional mathematical aptitude are asked to contact the department office for detailed information. The department also sponsors other competitions and activities.

Scholarships and Awards

M.S. Keeler and Math Merit Scholarships are available, generally to entering first year students, in varying amounts up to the current level of in-state tuition. These scholarships are renewable, up to three times, based upon satisfactory progress by declared mathematics concentrators. Multiple scholarships are awarded each year.

Margaret S. Huntington Scholarships in the amount of \$1,000 each are available to first year students who receive a grade of "A" in their first term mathematics courses. Up to ten scholarships are awarded. The goal is to broaden awareness of the actuarial profession.

Evelyn O. Bychinsky Awards are given to continuing students (that is students with less than 90 credits) who show exceptional promise in mathematics deserving of recognition and encouragement. Up to five awards are given annually in amounts of \$1,000.

Irving S. Wolfson Award is given to an undergraduate actuarial student who has shown substantial promise of professional actuarial achievement through academic accomplishments and participation in employment and/or extracurricular achievement. The award is \$7,500.

Lois Zook Levy Memorial Award is given annually to an outstanding graduating senior majoring in mathematics who will pursue a teaching career in K-12 mathematics. The initial award is \$2,500.

The Wirt and Mary Cornwell Award is given annually to a student who, during the four previous years, has demonstrated the greatest intellectual curiosity and has given the most promise of original study and creative work in mathematics. The award is for \$10,000 and is available to both undergraduates and graduate students.

There are a number of other scholarships and prizes which honor faculty and alumni/ae that students are eligible for after they have declared a mathematics concentration. These are funded by the CIGNA, Cortright, Davis, Fischer, Glover, Leveque, Myers, Newsome, Poorman, Richter, Shields, Van Eanam, and Zukowski funds.

Summer Research. The department has opportunities for a number of undergraduate students to pursue on-site summer research under the auspices of the Research Experience for Undergraduates (REU) program. Students pursue a 7-8 week summer research project under the mentorship of regular departmental faculty, and are paid a stipend for this work. For more information, see the web page: www.math.lsa.umich.edu/undergrad/REU/index.shtml

Special Departmental Policies. All prerequisite courses must be satisfied with a grade of C– or above. Students with lower grades in prerequisite courses must receive special permission of the instructor to enroll in subsequent courses.

Mathematics

May be elected as a departmental concentration program

For detailed requirements on the Mathematics Concentration Program consult the brochure *Undergraduate Programs & Courses-Department of Mathematics* available from the Undergraduate Program Office, 2084 East Hall, (734) 763-4223, or the department's website [www.math.lsa.umich.edu/undergrad/index.shtml].

Prerequisites to Concentration. Most programs require completion of one of the sequences ending with MATH 215-217, 256-217, 285-217, or 395-396. A working knowledge of a high-level computer language such as C++ or a computer algebra system (such as Maple or Mathematica), at a level equivalent to completion of a course of three or more credits, and eight credits of PHYSICS, preferably PHYSICS 140/141 and 240/241, are recommended for all programs and required for some. (A grade of C– or better is strongly suggested for MATH 217.)

Concentration Programs. A student considering a concentration in Mathematics should consult a mathematics concentration advisor in the Undergraduate Mathematics Office as early as possible and certainly by the first term of the sophomore year. The department offers many different subconcentration programs with varying requirements; failure to meet some of these at the intended time may delay completion of the program and graduation. A concentration plan must be designed with and approved by a concentration advisor.

The departmental website,

www.math.lsa.umich.edu/undergrad/index.shtml, should be regarded as the most comprehensive and up-to-date guide to the options and requirements for concentration programs in mathematics. A more complete hard copy edition of this information is available in the Undergraduate Mathematics Office, 2084 East Hall.

Field of Concentration. For purposes of calculating grade point average, the term "field of concentration" means the following:

- 1. All MATH courses.
- 2. All courses used to meet concentration requirements.
- 3. All required cognate courses (if any).
- 4. All mandatory prerequisites.
- 5. EECS 183, ECON 101, and ECON 102.

Advising. Students are strongly urged to consult with a concentration advisor each term before selecting courses for the following term. Appointments may be scheduled on-line at: www.math.lsa.umich.edu/undergrad/index.shtml

Pure Mathematics

The Pure Mathematics Program is designed to provide broad training in basic modern mathematics including an introduction to the methods of rigorous mathematical proof and exposure to the major areas: Algebra, Analysis, and Geometry/Topology.

All Pure Mathematics concentrators are also strongly encouraged to take PHYSICS 140-141 and 240-241 and to acquire a working knowledge of a high-level computer language *(e.g.,* Fortran, C, or C++) at a level equivalent to the completion of EECS 183.

- Four basic courses (one course from each of the following four groups), completed with a grade of at least C-: Modern Algebra: MATH 412 or 512 Differential Equations: MATH 256, 286, or 316 Analysis: MATH 351 or 451 Geometry/Topology: MATH 433, 490, 531, 532, or 590
- b. Four elective courses (mathematics) chosen from a list of approved electives and approved by a concentration advisor.
- c. One cognate course outside the Mathematics Department, but with advanced mathematical content.

Mathematical Sciences Program

The Mathematical Sciences Program is designed to provide broad training in basic mathematics together with some specialization in an area of application of mathematics. Each student must select one of the eight Program Options as a special area.

- Four basic courses (one course from each of the following four groups), completed with a grade of at least C-: Differential Equations: MATH 256, 286, or 316 Discrete Math/Modern Algebra: MATH 312, 412, 465, or 512 Analysis: MATH 351, 354, 450, 451, or 454 Probability: MATH 425 or 525
- b. At least three courses from ONE of the Program Options listed below (the list of possible electives for each option is given on the departmental website:

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www.math.lsa.umich.edu/undergrad/index.shtml):

Discrete and Algorithmic Methods Numerical and Applied Analysis Operations Research and Modeling Probabilistic Methods Mathematical Economics Control Systems Mathematical Physics* Mathematical Biology

*Mathematical Physics. Among all of the disciplines which make significant use of mathematics, physics has the longest history. Indeed, several areas of mathematics were developed for the purpose of solving problems in physics. This option allows a student to pursue interests in physics which use undergraduate mathematics. It is designed to facilitate a concurrent concentration in Physics. Every program must include at least two of the Physics courses from the list below. Note that although PHYSICS 401 is prerequisite to several of these, it does not count as one of the option courses

- c. Two additional advanced mathematics (or related) courses, approved by a concentration advisor
- d. At least two of the courses in b and c must be MATH courses.

Honors Concentration

Outstanding students may elect an Honors concentration in Mathematics. The Honors Program is designed not only for students who expect to become mathematicians but also for students whose ultimate professional goal lies in the humanities, law, medicine, or the sciences.

Students intending an Honors concentration are strongly advised to take one of the Honors introductory sequences MATH 156-256, (174, 175 or 185)-286 or 295-396, or some combination of these three. The sequence of MATH 295-396 is very theoretical. Eight credits of PHYSICS and familiarity with a high-level computer language are *strongly* recommended.

The Honors concentration program must include at least nine courses: (A) four basic courses, (B) four elective courses, and (C) one cognate course as described below.

- A. The basic courses consist of one from each of groups 1, 2, 3, and 4 or groups 1, 2, 5, and 6 below:
 - 1. Linear Algebra: MATH 513
 - 2. Analysis: MATH 451
 - 3. Modern Algebra: MATH 512
 - 4. Geometry/Topology: MATH 433, 490, 531, 532, or 590
 - 5. Probability: MATH 525
 - 6. Differential Equations: MATH 404, 454, 556, 557, 558

Students who complete MATH 295-296, with a grade of at least a C- are exempt from MATH 451. If you complete MATH 295-395, with a grade of at least a C- you are exempt from MATH 513.

B. The four elective courses must be chosen in consultation with an honors advisor to provide a cohesive program which explores an area of mathematics in some depth. There is a good deal of freedom allowed here, but a random selection of courses will not satisfy this requirement. The courses should be chosen from the following list or have a course number 600 or above. MATH 289 is a repeatable 1-credit course and can be used to satisfy the elective requirement only if taken for a total of 3 credits. A Mathematics Honors advisor may approve another mathematics course or a course from another department with advanced mathematical content as one of these elective courses. The Mathematics Honors advisor may ask that the student arrange supplemental work in a given class not listed below to conform to expectations for an honors elective. A student electing to satisfy requirement A by choosing courses from groups 1, 2, 5, and 6

must complete a course in Complex Analysis (MATH 555 or 596) as one of his/her electives.

C. One cognate course from outside the Mathematics department, but containing significant mathematical content, chosen with the approval of the Honors advisor.

Students who, in the judgment of the Departmental Honors Committee, have completed an Honors concentration with distinction are granted a citation upon graduating. Interested students should discuss their program and the specific requirements for obtaining the citation with a Mathematics Honors advisor (appointments scheduled at: www.math.lsa.umich.edu/undergrad/index.shtml) no later than the second term of their sophomore year.

Actuarial Mathematics and Mathematics of Finance and Risk Management (Financial Mathematics)

The Actuarial Mathematics Program is designed to provide broad training in the basic mathematics underlying the operations of private and social insurance and employee benefit plans. The courses are organized to assist the student to prepare for several of the examinations of the Casualty Actuarial Society and the Society of Actuaries. Non-credit review classes for some of the professional actuarial examinations are organized each term; ask your actuarial advisor about the time and place of these classes. It is strongly recommended that some of these exams be passed before graduation. Summer internships are an important component of the educational program and students are strongly encouraged to seek an internship no later than the conclusion of their junior year. Students are encouraged to take either MATH 422 or 427 to satisfy their upper-level writing requirement.

The program in Mathematics of Finance and Risk Management (or Financial Mathematics for short) is designed to provide a broad education in the quantitative aspects of risk management and finance. Financial instruments which are engineered today require sophisticated mathematical techniques for their valuation. These techniques come from the fields of probability, statistics and differential equations.

Prerequisites: MATH 215+217, MATH 255+217, MATH 285+217 or MATH 295+296. Each student must also complete: ECON 101 and 102 and EECS 183 all elected on a graded basis. The grade for ECON 101, ECON 102 and EECS 183 will be included in the concentration GPA.

- a. Four basic courses (one from each of the following four groups), completed with a grade of at least C-:
 - 1. Differential Equations: MATH 216, 256, 286, or 316
 - 2. Probability: MATH 425
 - 4. Statistics: STATS 426
 - 5. Finance: MATH 423
- Four special courses for Actuarial Mathematics: MATH 424, MATH 520 and 521 (or 522), and MATH 523.
 Four special courses for Financial Mathematics: MATH 451, MATH 472 (or 471), MATH 525, MATH 526.
- Two additional courses in areas relating to Actuarial or Financial Mathematics approved by an advisor.

Secondary Mathematics Teaching Certificate

The Teaching Certificate program is designed to provide the broad training in mathematics necessary to be a successful teacher of mathematics at the secondary level, grades 6-12. The requirements for a secondary teaching certificate with a concentration in mathematics may be met while earning a degree from the College of Literature, Science, and the Arts (A.B. or B.S.) or from the School Education (A.B. Ed. or B.S. Ed.). Concentration requirements are identical for all of these degrees, although LSA and Education have somewhat differing language and distribution requirements. LSA degree candidates must earn at least 100 LSA credits and at least 30 Education credits. Please note that the LSA B.S. degree requires 60 credits in

physical and natural science and mathematics; students with less than 60 credits may be eligible for an A.B. degree.

Appointments with the Mathematics Department teaching certificate advisor may be scheduled online at: www.math.lsa.umich.edu/undergrad

For information specific to the School of Education, students should contact the SOE Teacher Education Office, 1228 SEB, (734) 615-1528, te.program@umich.edu, www.soe.umich.edu/academics. It is essential that students planning to obtain a teaching certificate consult a teaching certificate advisor, either in Mathematics or Education, prior to beginning their concentration program.

Additional Prerequisites: MATH 217 and one term of computer programming, EECS 183 or equivalent.

Every candidate for a teaching certificate must take one course from each of the following five groups (chosen with the approval of a teaching certificate advisor) and **completed with a grade of at least a** C-:

- 1. Modern Algebra/Number Theory: MATH 312, 412, 475, or 512
- 2. Geometry: MATH 431, 432, or 531
- 3. Probability: MATH 425 or 525
- 4. Analysis: MATH 351 or 451
- 5. Secondary Mathematics: MATH 486

The program requires ten specific Education courses, listed below, totaling 30 credits. These are elected in the junior and senior years in a specified order. Consult with the School of Education for the order and timing of these courses.

- Methods of Teaching Mathematics (or minor field): EDUC 413 (3 credits)
- Practicum in Teaching Methods: EDUC 307I and 307II (4 credits)
- Educational Psychology: EDUC 391 (3 credits)
- Reading and Writing: EDUC 402 (3 credits)
- Education in a Multi-cultural Society: EDUC 392 (3 credits)
- Directed Teaching: EDUC 302 (10 credits)
- Problems and Principles of Secondary Education: EDUC 304 (2 credits)
- Teaching with Technology: EDUC 490-003 (1 credit)
- Teaching Students with Exceptionalities: EDUC 490-004 (1 credit)

The last four of these are to be elected concurrently. **Students must apply for admission to the certification program by February 1 of their sophomore year.** Application forms are available at the School of Education.

Additionally, every student must successfully complete:

- an introductory course in psychology (not PSYCH 112) that is to be taken before EDUC 391, and
- Michigan's licensure requirements (see www.soe.umich.edu/secondary/courses/requirements/licensure).

Every Teaching Certificate student must present a concentration or minor in another academic field. This normally requires 20-24 credits

in a structured program in an area other than mathematics. Consult the *Bulletin* of the School of Education for acceptable programs.

Mathematics Academic Minor

An academic minor in Mathematics is not open to students with any concentration in Mathematics.

The academic minor in Mathematics is designed to enable a student with a significant interest in Mathematics to deepen his/her knowledge while pursuing a concentration in another field. While the concentration will often be in a field that makes significant use of mathematics, such as a science or a quantitative social science, it may be in any area of study.

Students wishing to pursue an academic minor in Mathematics must develop a specific plan for its completion in consultation with an advisor. Appointments are scheduled on-line at:

www.math.lsa.umich.edu/undergrad/index.shtml

Prerequisites to the Academic Minor: One of the sequences MATH 115-116, 175-176, 185-186, or 295-296; or MATH 156. These all provide a thorough grounding in the calculus of functions of one variable. Advanced Placement credits in MATH 120 and 121 also meet the prerequisite requirement.

Academic Minor Program: 15-18 credits of courses, including either two courses from category A and three courses from category B, or one course from category A and four courses from category B. No more than one course may be elected from each of the three areas of category A. The courses in category B must be selected from exactly two of the six listed areas. A student planning to take linear algebra and differential equations should note that not all of MATH 215, 216, and 217 will count toward the academic minor, whereas all of MATH 215, 217 and 316 will.

Category A: Second-year courses:

- Multivariable Calculus: MATH 215, 255, or 285
- Linear Algebra: MATH 214, 217, 417, or 419
- Differential Equations: MATH 216, 256, or 286

Category B: Upper-level courses:

- Analysis/Differential Equations: MATH 316, 351, 354, 404, 425, 450, 451, 452, 454, 555
- Algebra/Number Theory: MATH 312, 389, 412, 420, 475, 512, 513, 561, 575
- Geometry/Topology: MATH 433, 490, 531
- Applied Mathematics: MATH 354, 371, 404, 423, 425, 450, 454, 462, 463, 471, 472, 550, 563
- Discrete Mathematics: MATH 310, 312, 389, 412, 416, 425, 465, 475, 481, 512, 561, 566, 567, 582
- Financial/Actuarial Mathematics: MATH 423, 424, 520, 523, 524
- Math Education: MATH 385, 431, 486, 489, 497.

COURSES IN MATHEMATICS (MATH)

MATH 103. Intermediate Algebra

Only open to designated summer half-term Bridge students. (2 in the half-term). May not be repeated for credit. A maximum of four credits may be earned in MATH 101, 103, 105, and 110. Su.

MATH 105. Data, Functions, and Graphs

(4). (MSA). (QR/1). May not be repeated for credit. Students with credit for MATH 103 can elect MATH 105 for only 2 credits. No credit granted to those who have completed any Mathematics course numbered 110 or higher. A maximum of four credits may be earned in MATH 101, 103, 105, and 110.

MATH 107. Mathematics for the Information Age

Three to four years high school mathematics. (3). (MSA). (QR/1). May not be repeated for credit.

MATH 110. Pre-Calculus (Self-Study)

MATH 110 is by recommendation or permission of MATH 115 instructor. (2). May not

be repeated for credit. No credit granted to those who already have 4 credits for precalculus mathematics courses. A maximum of four credits may be earned in MATH 101, 103, 105, and 110.

MATH 115. Calculus I

Four years of high school mathematics. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit is granted for only one course from among MATH 115 and 185.

MATH 116. Calculus II MATH 115. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit is granted for only one course among MATH 116, 119, 156, 176, and 186.

MATH 128. Explorations in Number Theory

High school mathematics through at least Analytic Geometry. Enrollment restricted to first-year students, including those with sophomore standing. (4). (MSA). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed a 200-(or higher) level mathematics course (except for MATH 385 and 485). F.

MATH 145. Houghton Scholars Calculus Workshop I

Consent of department required. Concurrent enrollment in MATH 115. (2). May not be repeated for credit. Offered mandatory credit/no credit.

MATH 146. Houghton Scholars Calculus Workshop II

Consent of department required. Concurrent enrollment in MATH 116. (2). May not be repeated for credit. Offered mandatory credit/no credit.

MATH 147. Introduction to Interest Theory

Three to four years high school mathematics. (3). (MSA). (BS). May not be repeated for credit. No credit granted to those who have completed a 200- (or higher) level mathematics course.

MATH 156. Applied Honors Calculus II

Score of 4 or 5 on the AB or BC Advanced Placement calculus exam. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit is granted for only one course from among MATH 116, 119, 156, 176, and 186. F.

MATH 175. An Introduction to Cryptology

Permission of department. (4). (MSA). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed a 200-level or higher Mathematics course. F.

MATH 176. Explorations in Topology and Analysis

MATH 175. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit is granted for only one course from among MATH 116, 119, 156, 176, and 186.

MATH 185. Honors Calculus I

Permission of the Honors advisor. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit is granted for only one course from among MATH 115, and 185. F.

MATH 186. Honors Calculus II

Permission of the Honors advisor. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit is granted for only one course from among MATH 116, 119, 156, 176, and 186. W.

MATH 203. Introduction to Computer Algebra Systems

MATH 215, 255, 285, or equivalent. (2). (BS). May be repeated for a maximum of 4 credits.

MATH 214. Linear Algebra and Differential Equations

MATH 115 and 116. Most students take only one course from among MATH 214, 217, 417, 419, and 513. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit can be earned for only one of MATH 214, 217, 417, or 419. No credit granted to those who have completed or are enrolled in MATH 513.

MATH 215. Calculus III

MATH 116. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit can be earned for only one of MATH 215, 255, or 285.

MATH 216. Introduction to Differential Equations

MATH 116, 119, 156, 176, 186, or 296. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit can be earned for only one of MATH 216, 256, 286, or 316.

MATH 217. Linear Algebra

MATH 215, 255, or 285. Most students take only one course from MATH 214, 217, 417, 419, and 513. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit can be earned for only one of MATH 214, 217, 417, or 419. No credit granted to those who have completed or are enrolled in MATH 513.

MATH 255. Applied Honors Calculus III

MATH 156. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit can be earned for only one of MATH 215, 255, or 285. W.

MATH 256. Applied Honors Calculus IV

MATH 255. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit can be earned for only one of MATH 216, 256, 286, or 316. F.

MATH 285. Honors Calculus III

MATH 176 or 186, or permission of the Honors advisor. (4). (MSA). (BS). (QR/1). May not be repeated for credit. Credit can be earned for only one of MATH 215, 255, or 285. F.

MATH 286. Honors Differential Equations

MATH 285. (3). (MSA). (BS). (QR/1). May not be repeated for credit. Credit can be earned for only one of MATH 216, 256, 286, or 316. W.

MATH 289. Problem Seminar

(1). (BS). May be repeated for credit.

MATH 295. Honors Mathematics I

Prior knowledge of first year calculus and permission of the Honors advisor. (4). (MSA). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 185. F.

MATH 296. Honors Mathematics II

MATH 295. (4). (BS). (QR/1). May not be repeated for credit. Credit is granted for only one course from among MATH 156, 176, 186, and 296. W.

MATH 310. Elementary Topics in Mathematics

Two years of high school mathematics. (3). (BS). May not be repeated for credit.

MATH 312. Applied Modern Algebra

MATH 217. (3). (BS). May not be repeated for credit. Only one credit granted to those who have completed MATH 412. W.

MATH 316. Differential Equations

MATH 215 and 217. (3). (BS). May not be repeated for credit. Credit can be earned for only one of MATH 216, 256, 286, or 316.

MATH 333. Directed Tutoring

Consent of instructor required. Enrollment in the secondary teaching certificate pro-

gram with concentration in Mathematics and permission of instructor. (1 - 3). (EXPE-RIENTIAL). May be repeated for a maximum of 3 credits. F, W, Sp. Offered mandatory credit/no credit.

MATH 351. Principles of Analysis

MATH 215 and 217. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 451.

MATH 354. Fourier Analysis and its Applications

MATH 216, 256, 286, or 316. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 450 or 454.

MATH 371 / ENGR 371. Numerical Methods for Engineers and Scientists

ENGR 101; one of MATH 216, 256, 286, or 316, and one of MATH 215, 217, 417, or 419. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 471 or 472.

MATH 385. Mathematics for Elementary School Teachers

One year each of high school algebra and geometry. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 485.

MATH 389. Explorations in Math Research

Consent of department required. MATH 215 and familiarity with Maple or other math modeling computer program. (3). (BS). May not be repeated for credit.

MATH 395. Honors Analysis I

MATH 296 or permission of the Honors advisor. (4). (BS). May not be repeated for credit. F.

MATH 396. Honors Analysis II

MATH 395. (4). (BS). May not be repeated for credit. W.

MATH 399. Independent Reading

Consent of instructor required. Permission of instructor. (1 - 6). (INDEPENDENT). May be repeated for credit. F, W, Sp/Su, Sp, Su.

MATH 404. Intermediate Differential Equations and Dynamics

MATH 216, 256 or 286, or 316. (3). (BS). May not be repeated for credit.

MATH 412. Introduction to Modern Algebra

Math. 215,255 or 285; and 217; only 1 credit after Math. 312. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 512. Students with credit for MATH 312 should take MATH 512 rather than 412. One credit granted to those who have completed MATH 312.

MATH 417. Matrix Algebra I

Three courses beyond MATH 110. Credit can be earned for only one of MATH 214, 217, 417, or 419. No credit granted to those who have completed or are enrolled in MATH 513. (3). (B5). May not be repeated for credit. Credit can be earned for only one of MATH 214, 217, 417, or 419. No credit granted to those who have completed or are enrolled MATH 513. F, W, Sp. Su.

MATH 419. Linear Spaces and Matrix Theory

Four courses beyond MATH 110. Credit can be earned for only one of MATH 214, 217, 417, or 419. No credit granted to those who have completed or are enrolled in MATH 513. Students take only one course from among MATH 214, 217, 417, 419, and 513. (3). (BS). May not be repeated for credit. Credit can be earned for only one of MATH 214, 217, 417, or 419. No credit granted to those who have completed or are enrolled in MATH 513. F, W, Su.

MATH 422 / BE 440. Risk Management and Insurance

MATH 115, junior standing, and permission of instructor. (3). (BS). May not be repeated for credit.

MATH 423. Mathematics of Finance

MATH 217 and 425; EECS 183 or equivalent. (3). (BS). May not be repeated for credit.

MATH 424. Compound Interest and Life Insurance

MATH 215, 255, or 285 or permission of instructor. (3). (BS). May not be repeated for credit.

MATH 425 / STATS 425. Introduction to Probability

MATH 215. (3). (BS). May not be repeated for credit. F, W, Sp, Su.

MATH 429. Internship

Concentration in Mathematics. (1). (EXPERIENTIAL). May be elected three times for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of MATH 429, the final grade is posted for both term's elections. May not apply toward a Mathematics concentration. May be used to satisfy the Curriculum Practical Training (CPT) required of foreign students. Internship credit is not retroactive and must be prearranged. Offered mandatory credit/no credit.

MATH 431. Topics in Geometry for Teachers

MATH 215, 255, or 285. (3). May not be repeated for credit. F.

MATH 433. Introduction to Differential Geometry

MATH 215 (or 255 or 285), and 217. (3). (BS). May not be repeated for credit. F.

MATH 450. Advanced Mathematics for Engineers I

MATH 215, 255, or 285. (4). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 354 or 454. F, W, Su.

MATH 451. Advanced Calculus I

Previous exposure to abstract mathematics, e.g. MATH 217 and 412. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 351. F, W, Sp.

MATH 452. Advanced Calculus II

MATH 217, 419, or 513; and MATH 451. (3). (BS). May not be repeated for credit. W.

MATH 454. Boundary Value Problems for Partial Differential Equations

216,316/286. (3). (BS). May not be repeated for credit. Students with credit for MATH 354 can elect MATH 454 for one credit. No credit granted to those who have completed or are enrolled in MATH 450. F, W, Sp.

MATH 462. Mathematical Models

MATH 216, 256, 286, or 316; and MATH 214, 217, 417, or 419. Students with credit for MATH 362 must have department permission to elect MATH 462. (3). (BS). May not be repeated for credit. Students with credit for MATH 362 must have department permission to elect MATH 462.

MATH 463 / BIOINF 463 / BIOPHYS 463. Mathematical Modeling in Biology MATH 214, 217, 417, or 419; and MATH 216, 256, 286, or 316. (3). (BS). May not be

repeated for credit.

MATH 465. Introduction to Combinatorics

Linear Algebra (one of MATH 214, 217, 256, 286, 296, 417, or 419) or permission of instructor. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 565 or 566. Rackham credit requires additional work.

MATH 466 / EEB 466. Mathematical Ecology

MATH 217, 417, or 419; MATH 256, 286, or 316; and MATH 450 or 451. (3). May not be repeated for credit. Rackham credit requires additional work.

MATH 471. Introduction to Numerical Methods

MATH 216, 256, 286, or 316; and 214, 217, 417, or 419; and a working knowledge of one high-level computer language. No credit granted to those who have completed or are enrolled in MATH 371 or 472. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 371 or 472. F, W, Su.

MATH 472. Numerical Methods with Financial Applications

Differential Equations (MATH 256, 286, or 316); Linear Algebra (MATH 217, 417, or 419); working knowledge of a high-level computer language. Recommended: MATH 425. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 471 or 371.

MATH 475. Elementary Number Theory

At least three terms of college Mathematics are recommended. (3). (BS). May not be repeated for credit. W.

MATH 476. Computational Laboratory in Number Theory

Prior or concurrent enrollment in MATH 475 or 575. (1). (BS). May not be repeated for credit. W.

MATH 481. Introduction to Mathematical Logic

MATH 412 or 451 or equivalent experience with abstract mathematics. (3). (BS). May not be repeated for credit. F.

MATH 485. Mathematics for Elementary School Teachers and Supervisors

One year of high school algebra or permission of the instructor. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MATH 385. May not be included in a concentration plan in Mathematics. F, Su.

MATH 486. Concepts Basic to Secondary Mathematics

MATH 215, 255, or 285. (3). May not be repeated for credit. W.

MATH 489. Mathematics for Elementary and Middle School Teachers

385/485/P.I. (3). May not be repeated for credit. May not be used in any Graduate program in Mathematics.

MATH 490. Introduction to Topology

MATH 451 or equivalent experience with abstract mathematics. (3). (BS). May not be repeated for credit. W.

MATH 497. Topics in Elementary Mathematics

MATH 489 or permission of instructor. (3). (BS). May be repeated for a maximum of 6 credits. F.

MATH 498. Topics in Modern Mathematics

Senior Mathematics concentrators and Master Degree students in Mathematical disciplines. (3). (BS). May not be repeated for credit.

MATH 501. Applied & Interdisciplinary Mathematics Student Seminar

At least two 300 or above level math courses, and Graduate standing; Qualified undergraduates with permission of instructor only. (1). May be repeated for a maximum of 6 credits. Offered mandatory credit/no credit.

MATH 512. Algebraic Structures

MATH 451 or 513 or permission of instructor. (3). (BS). May not be repeated for credit. W.

MATH 513. Introduction to Linear Algebra

MATH 412 or equivalent experience with abstract mathematics. (3). (BS). May not be repeated for credit. Two credits granted to those who have completed MATH 214, 217, 417, or 419.

MATH 520. Life Contingencies I

MATH 424 and 425 with minimum grade of C-, plus declared Actuarial/Financial Mathematics Concentration. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

MATH 521. Life Contingencies II

MATH 520. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. W.

MATH 523. Risk Theory

MATH 425. (3). (BS). May not be repeated for credit.

MATH 525 / STATS 525. Probability Theory

MATH 451 (strongly recommended). MATH 425/STATS 425 would be helpful. (3). (BS). May not be repeated for credit.

MATH 526 / STATS 526. Discrete State Stochastic Processes

MATH 525 or STATS 525 or EECS 501. (3). (BS). May not be repeated for credit. MATH 528. Topics in Casualty Insurance

MATH 217, 417, or 419. (3). (BS). May not be repeated for credit.

MATH 555. Introduction to Functions of a Complex Variable with Applications MATH 451 or equivalent experience with abstract mathematics. (3). (BS). May not be repeated for credit.

MATH 556. Methods of Applied Mathematics I

MATH 217, 419, or 513; 451 and 555. (3). (BS). May not be repeated for credit. F. MATH 557. Methods of Applied Mathematics II

MATH 217, 419, or 513; 451 and 555. (3). (BS). May not be repeated for credit. W. MATH 558. Ordinary Differential Equation

MATH 451. (3). (BS). May not be repeated for credit.

MATH 559. Selected Topics in Applied Mathematics

MATH 451; and 217, 419, or 513. (3). (BS). May be repeated for a maximum of 6 credits.

MATH 561 / IOE 510 / OMS 518. Linear Programming I MATH 217, 417, or 419. (3). (BS). May not be repeated for credit. F, W, Sp.

MATH 562 / IOE 511. Continuous Optimization Methods

MATH 217, 417, or 419. (3). (BS). May not be repeated for credit.

MATH 565. Combinatorics and Graph Theory

MATH 412 or 451 or equivalent experience with abstract mathematics. (3). (BS). May not be repeated for credit. F.

MATH 566. Combinatorial Theory

MATH 412 or 451 or equivalent experience with abstract mathematics. (3). (BS). May not be repeated for credit.

MATH 567. Introduction to Coding Theory

One of MATH 217, 419, 513. (3). (BS). May not be repeated for credit.

MATH 571. Numerical Methods for Scientific Computing I MATH 214, 217, 417, 419, or 513; and one of MATH 450, 451, or 454. (3). (BS). May not be repeated for credit.

MATH 572. Numerical Methods for Scientific Computing II

MATH 214, 217, 417, 419, or 513; and one of MATH 450, 451, or 454. (3). (BS). May not be repeated for credit. W.

MATH 575. Introduction to Theory of Numbers I

MATH 451 and 513 or permission of instructor. (1 - 3). (BS). May not be repeated for credit. Students with credit for MATH 475 can elect MATH 575 for 1 credit. F.

MATH 582. Introduction to Set Theory

MATH 412 or 451 or equivalent experience with abstract mathematics. (3). (BS). May not be repeated for credit. W.

MATH 591. General and Differential Topology

MATH 451. (3). (BS). May not be repeated for credit. F.

MATH 592. Introduction to Algebraic Topology

MATH 591. (3). (BS). May not be repeated for credit. W.

MATH 593. Algebra I

MATH 513. (3). (BS). May not be repeated for credit. F. MATH 594. Algebra II

MATH 593. (3). (BS). May not be repeated for credit. W.

MATH 596. Analysis I

MATH 451. (3). (BS). May not be repeated for credit. Students with credit for MATH 555 may elect MATH 596 for two credits only.

MATH 597. Analysis II

MATH 451 and 513. (3). (BS). May not be repeated for credit. W.

Michigan Community Scholars Program (MCSP)

Couzens Hall 1300 East Ann Street (734) 647-4860 (phone) (734) 936-1203 (fax) www.lsa.umich.edu/mcs e-mail: mcsprogram@umich.edu Professor David Schoem (Sociology), Director

The Michigan Community Scholars Program (MCSP) is a residential learning community located in Couzens Hall emphasizing deep learning, engaged community, meaningful civic engagement/community service learning and intercultural understanding and dialogue. Students, faculty, community partners and staff think critically about issues of community, seek to model a just, diverse, and democratic community, and wish to make a difference throughout their lives as participants and leaders involved in local, national and global communities.

MCSP faculty create a small, stimulating college atmosphere within the U-M's large, world-class university. The Program offers a number

of first-year seminars taught in Couzens Hall with an emphasis on learning about community and community participation.

During the academic year, all first year MCSP students take:

- An MCSP First-Year Seminar
- A 1-credit course, UC 102. "The Student in the University" in the Fall
- A Community Service Learning course
- · Optional introductory English and Math courses in MCSP

Approximately 130 first-year students are admitted to the Program each year. In addition about 40 sophomores, juniors, and seniors return to serve as student leaders and peer advisors.

Inquiries should be addressed to:

Director Michigan Community Scholars Program Couzens Hall 1300 East Ann Ann Arbor, Michigan 48109-2050.

Program in Microbiology

Biology Undergraduate Office 1111 E.H. Kraus Natural Science Building 830 North University Avenue (734) 764-2446 (phone) (734) 647-0884 (fax) www.lsa.umich.edu/mcdb

Microbiology and Immunology (Graduate Program) U-M Medical School 5641 Medical Science Building, II 1150 West Medical Center Drive (734) 763-3531 (phone) (734) 764-3562 (fax) www.med.umich.edu/microbio

Microbiology is an Interdepartmental Program supervised by the Microbiology Concentration Committee, with academic support provided by the Program in Biology. Participating units include the Departments of Ecology and Evolutionary Biology (EEB) and Molecular, Cellular, and Developmental Biology (MCDB) in LSA; the Epidemiology Department in the School of Public Health; and the Departments of Microbiology & Immunology and Internal Medicine in the Medical School.

Microbiology Concentration Committee

Matthew Chapman (Associate Professor, Molecular, Cellular, and Developmental Biology)

Paul Dunlap (Associate Professor, Ecology and Evolutionary Biology)

Gary B. Huffnagle (Professor, Microbiology and Immunology, Internal Medicine)

Carl F. Marrs (Associate Professor, Epidemiology)

Janine Maddock (Professor, Molecular, Cellular, and Developmental Biology)

Microbiology (B.S.)

May be elected as an interdepartmental concentration program, supervised by the Microbiology Concentration Committee

Exclusions: Students who elect a concentration in Microbiology may not elect the following concentrations: Biology; General Biology; Cell and Molecular Biology; Ecology and Evolutionary Biology; Plant Biolo-

gy; Biochemistry; or Neuroscience. They may also not elect an academic minor in Biology; Ecology and Evolutionary Biology; Plant Biology; Chemistry; or Biochemistry.

Microbiology includes the study of viruses, algae, bacteria, protozoa, and fungi. Immunobiology is also included within the science of microbiology. A concentration in microbiology prepares students for graduate study in microbiology, biochemistry, agricultural science, and food science as well as for study in other areas of biology which emphasize cellular structures and their function. A bachelor's degree in microbiology may qualify students for entry-level positions in medical, industrial, or governmental laboratories.

Students intending to go to graduate school should have at least two terms of research experience. These can appear as graded courses, UROP participation, or be independent of the graded curriculum. Most graduate school-bound students will have 1-2 graded research courses (2-4 credits/each) on record. Students intending to go to graduate school will need research experience as well as two terms of Calculus and two terms of Physics. Students intending to go to medical school will need to take two terms of Physics and CHEM 230.

Prerequisites to Concentration.

- BIOLOGY 171, 172/174, and 173; or BIOLOGY 195; or BIOLOGY 162 or 163;
- CHEM 210/211 and 215/216;
- MATH 115 and 116;
- PHYSICS 125/127 and 126/128; or PHYSICS 135/141 and 235/241; or PHYSICS 140/141 and 240/241.

The PHYSICS 140/141 and 240/241 sequence is recommended for students interested in an Honors concentration and for those who anticipate graduate work in the field of microbiology.

Concentration Program

- 1. Core:
 - a. *Microbiology:* BIOLOGY 207.
 - Biochemistry: One of MCDB 310, or BIOLCHEM 415 or 451 (when elected with BIOLCHEM 452), or CHEM 451 (when elected with CHEM 452).
 - c. Advanced laboratory: MCDB 306, 429, or BIOLCHEM 416.
 - d. Genetics: BIOLOGY 305.

- Specified Electives (minimum 19 credits). A minimum of eleven credits must be selected from Groups 1 and 2 which must include at least two courses from Group 1 and one course from Group 2. The remaining eight credits may be selected from Groups 1, 2, or 3.
 - A. Group 1 Microbial Genetics, Physiology, Cellular Biology, Diversity and Ecology:

MCDB 415, 432, 589 EEB 315, 470 MICRBIOL 460/ INTMED 460.

B. Group 2 – Microbial Pathogenesis, General Virology & Immunology:

MICRBIOL 405, 415; EPID 460; MCDB 436 or MICRBIOL 440.

- C. Group 3 Advanced Electives. A maximum of eight credits from the courses listed below may be applied toward a Microbiology concentration.
 - i. Advanced Biochemistry, Molecular Biology, Cellular Biology:

MCDB 427, 428 MCDB 411 or CHEM 452.

- ii. *Ecology:*
 - EEB 476, EEB 483.
- iii. *Microbiology & Immunology:* Any MICRBIOL course at the 500-level or higher (with approval of advisor).
- iv. Advanced Mathematics: Any course with a MATH 116 prerequisite.
- v. *Statistics:* Any STATS course at the 400-level or above.
- vi. *Research:* MICRBIOL 399; EEB 400; MCDB 400 (maximum of 3 credits).

Note: A maximum of 3 credits of independent research can be applied to the concentration. **A course must be taken for a minimum of two credits and completed in a single term to count as an elective course.**

vii. Other courses with permission of advisor.

Field of Concentration. For purposes of calculating grade point average, the term "field of concentration" means the following:

- 1. All BIOLOGY, EEB, MCDB, and Biological Station courses, including cross-listed ones, at the 200-level and above.
- 2. All course used to satisfy concentration requirements.
- 3. All required cognate courses (if any).
- 4. All mandatory prerequisites.

Advising. Students will be advised by a combination of staff and faculty to discuss individual course selection based on their interests, as well as career counseling, and research opportunities. Students who are interested in the Microbiology concentration should consult a general advisor during the freshman year and are strongly encouraged to meet with a concentration advisor early in their academic career but no later than the second term of their sophomore year. It is not necessary to complete every prerequisite before declaring a concentration. To make an appointment come in person to the Undergraduate Program Office located in 1111 Kraus Natural Sciences Building.

Honors Concentration. The Microbiology B.S. degree is the basis for the Honors degree in Microbiology. Students must elect two terms of independent research, maintain a concentration GPA of 3.4, complete an Honors thesis, and give a research presentation based on their Honors work. Prior to applying to the Microbiology Honors Program, students must identify a research mentor in one of the participating departments. Students may conduct Honors research with faculty in other units on the University of Michigan campus, but must have a formal co-sponsor relationship with a research track or tenure-track faculty in one of the participating departments. Students Program in Microbiology by submitting a research proposal along with a letter from the research mentor indicating their willingness to sponsor the student's

research. **Using non-LSA coursework in the Microbiology concentration.** All courses in Biological Chemistry (BIOLCHEM) and Microbiology and Immunology (MICRBIOL) are listed in the *Online Schedule of Classes* under the Medical School; Epidemiology (EPID) courses are listed under the School of Public Health. Courses not listed in this *Bulletin* and not cross-listed through an LSA department count as non-LSA course work (see "Non-LSA Course Work" in Chapter III). BIOLCHEM 415 and 416 are listed in this *Bulletin* and therefore are not included in the non-LSA credits which may be applied toward the degree. Concentrators may elect 20 credits of non-LSA course work in the minimum 120 required for an A.B. or B.S. degree. Students pursuing a concentration in microbiology should elect cross-listed courses through the LSA department whenever possible.

Microbiology and Immunology

Microbiology and Immunology U-M Medical School 5641 Medical Science Building, II 1150 West Medical Center Drive (734) 763-3531 (phone) (734) 764-3562 (fax) www.med.umich.edu/microbio

Not a concentration program. Undergraduates may pursue Microbiology through a concentration offered by the interdepartmental program in Microbiology.

The Department of Microbiology and Immunology (Medical School) is a participating unit in the interdepartmental Microbiology concentration program listed in this *Bulletin* in *Chapter VI* under Microbiology.

COURSES IN MICROBIOLOGY AND IMMUNOLOGY (MICRBIOL)

Courses in Microbiology and Immunology are listed in the *Schedule of Classes* under the Medical School. The following count as LSA courses for LSA degree credit.

MICRBIOL 399. Independent Research for Undergraduates

Consent of instructor required. PER. INSTR. (1 - 8). May be repeated for credit.

MICRBIOL 405. Medical Microbiology & Infectious Diseases

BIOLOGY 207 and 305; and one of: MCDB 310, 311, BIOLCHEM 415 or 451, or CHEM 451. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MICRBIOL 415. Virology

BIOLOGY 207 and 305; and one of: MCDB 310, 311, BIOLCHEM 415 or 451, or CHEM 451. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MICRBIOL 440 / IMMUNO 440. Immunology

BIOLOGY 207 and 305; and one of: MCDB 310, 311, BIOLCHEM 415 or 451, or CHEM 451. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MICRBIOL 460 / INTMED 460. Eukaryotic Microbiology

BIOLOGY 207 and 305; and one of: MCDB 310, 311, BIOLCHEM 415 or 451, or CHEM 451. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MICRBIOL 675 / BIOLCHEM 675 / CDB 675. Advanced Topics in the Secretory-Endocytic Pathway: Current Issues in Protein and Membrane Assembly and Trafficking

CDB 530; Course in Cell Biology or graduate standing. (2). (BS). May not be repeated.

Center for Middle Eastern and North African Studies (MENAS)

1080 South University Avenue, Suite 2607 (734) 764-0350 (phone) (734) 764-8523 (fax) www.ii.umich.edu/cmenas e-mail: cmenas@umich.edu

Associate Professor Gottfried Hagen (Near Eastern Studies), Director

Professors Bardakjian (Near Eastern Studies), Beckman (Near Eastern Studies), Boccaccini (Near Eastern Studies), Bonner (Near Eastern Studies), Cole (History), Ekotto (Comparative Literature, Romance Languages), Endelman (History), J. Fine (History), Flannery (Anthropology), Gitelman (Political Science), Heath (Linguistics), Herbert (Classical Studies), Jackson (Near Eastern Studies; Law), Knysh (Near Eastern Studies), LeGassick (Near Eastern Studies), Lindner (History), Michalowski (Near Eastern Studies), Rammuny (Near Eastern Studies), Robertson (Anthropology), Rommuny (Near Eastern Studies), Robertson (Anthropology), Rommuny (Near Eastern Studies), Robertson (Anthropology), Van Dam (History), Waltz (Public Policy), Whallon (Anthropology), Wilson (Epi-demiology), Wright (Anthropology), Yoffee (Near Eastern Studies, Anthropology)

Associate Professors Alhawary (Near Eastern Studies), Babayan (Near Eastern Studies), Bardenstein (Near Eastern Studies), Cole (History), Eliav (Near Eastern Studies), Fadlalla (Women's Studies), Ginsburg (Near Eastern Studies), Göçek (Sociology), Hagen (Near Eastern Studies), Hayes (Romances Languages and Literatures), Mallette (Romances Languages and Literatures), Northrop (History, Near Eastern Studies), Ratté (Classics), Richards (Near Eastern Studies), Schmidt (Near Eastern Studies), Shryock (Anthropology), Soliman (Epidemiology), Thomas (History of Art), Tsoffar (Comparative Literature, Women's Studies), Verhoogt (Classics), Wilfong (Near Eastern Studies)

Assistant Professors Barzilai (Near Eastern Studies), Even (Art & Design), Fancy (History), Gursel (Anthropology), Konuk (Comparative Literature), Mattawa (English), Moyer (History), Muehlberger (Near Eastern Studies), Naber (American Culture, Women's Studies), Neis (History), Pinsker (Near Eastern Studies), Szpiech (Romance Languages), Ware (History)

The Middle East and North Africa together constitute a highly diverse cultural area within a world now undergoing rapid and large-scale change. In this context, the mission of the Center for Middle Eastern and North African Studies (CMENAS) is to enhance awareness of the peoples, cultures, and languages in this vitally important region of the world. The Center for Middle Eastern and North African Studies (CMENAS) is a nationally-recognized U.S. Department of Education supported National Resource Center and a constituent unit of the University of Michigan International Institute.

CMENAS offers an undergraduate concentration and an academic minor in Modern Middle Eastern and North African Studies. It also offers a general interdisciplinary Master of Arts program in Modern Middle Eastern and North African Studies.

Middle Eastern and North African Studies

May be elected as an area concentration program

The Center for Middle Eastern and North African Studies offers a multidisciplinary area concentration program to students who want to obtain a broad background on the modern Middle East and North Africa.

Prerequisites to Concentration. One of the following first-year language sequences or the equivalent:

- Arabic (AAPTIS 101 and 102)
- Armenian (AAPTIS 171 and 172, or 173; AAPTIS 181 and 182, or 183)
- Hebrew (HJCS 101 and 102)
- Persian (AAPTIS 141 and 142; or 143)
- Turkish (AAPTIS 151 and 152; or 155).

Strongly recommended:

- AAPTIS 100 (Peoples of the Middle East)
- AAPTIS 204 (Introduction to Islam).

Concentration Program. A minimum of 30 credits at the 200-level and above, chosen in consultation with, and approved by, the undergraduate concentration advisor. The courses chosen must include:

- 1. ANTHRCUL 409.
- 2. HISTORY 443 and one of the following: HISTORY 442, 538, 539, 542, 545.
- 3. Political Science, any one of the following: POLSCI 351, 352, 353.
- 4. One year of an appropriate language of the area (Arabic, Armenian, Hebrew, Persian, Turkish) beyond the first year level. For Arabic a student may count AAPTIS 201 and 202 or one year of colloquial Arabic (Egyptian, Levantine) as the second year of language study.
- 5. Two approved electives, selected in consultation with the advisor, with appropriate Middle East content from the Departments of Anthropology, History, History of Art, Middle East and North African Studies, Political Science, and Sociology.

Honors Concentration. Special arrangements are made for qualified students to elect an Honors concentration. Candidates for an Honors concentration undertake independent research which is reported in a senior Honors thesis. Prospective Honors concentrators should consult with the Honors concentration advisor before the end of the junior year and should enroll in one of the senior Honors thesis courses approved by the advisor.

Advising. Prospective concentrators are encouraged to work closely with the area concentration advisor not only to ensure completion of the program requirements, but also to provide support in planning for future opportunities. Academic advising appointments are scheduled at 1080 South University Avenue, Suite 2607.

Academic Minor in Modern Middle Eastern and North African Studies

An academic minor in Modern Middle Eastern and North African Studies is not open to students with a concentration in Middle Eastern and North African Studies or a concentration or academic minor in the Department of Near Eastern Studies.

The Center for Middle Eastern and North African Studies offers an interdisciplinary academic minor to students who wish to gain insight into the political, economic, and social issues affecting the Middle East and North African, and who wish to achieve an understanding of the region's history and culture. Emphasis in this academic minor is on the modern Middle East and North Africa.

Students interested in the academic minor in Modern Middle Eastern and North African Studies should develop a specific plan for its completion in consultation with the academic advisor. Appointments are scheduled the center's office at 1080 South University, Suite 2607, (734) 764-0350.

Prerequisites to the Academic Minor: ACABS 200 / AAPTIS 200 / HJCS 200, Introduction to World Religions: Near East.

Academic Minor Program: At least 15 credits of courses, chosen in consultation with and approved by advisor:

- 1. A 400-level history course
- 2. A 400-level social science course in either Anthropology, Political Science, or Sociology
- 3. MENAS 493.

Courses must be distributed over three of the following disciplines: 3^{rd} year of middle eastern language, anthropology, history, history of art, middle eastern literature, political science, religion, sociology, or women's studies.

Constraints: At least one half of the courses counting toward the academic minor must be taken at the UM–Ann Arbor campus. Elementary and intermediate-level language courses in Arabic, Armenian, Persian, and Turkish may not count toward the academic minor.

No course may be used to satisfy the requirements of more than one academic minor.

COURSES IN MIDDLE EASTERN & NORTH AFRICAN STUDIES (MENAS)

MENAS 244 / AAPTIS 244 / HISTORY 244 / HJCS 244 / JUDAIC 244. The Arab-Jewish Conflict in the Middle East, c. 1880 to the Present (4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

MENAS 334 / AAPTIS 364 / HISTORY 334. Selected Topics in Near and Middle Eastern Studies

(1 - 3). May not be repeated for credit.

MENAS 340 / AAPTIS 340 / ASIAN 340 / HISTORY 340 / REES 340. From Genghis Khan to the Taliban: Modern Central Asia

(4; 3 - 4 in the half-term). (SS). (R&E). May not be repeated for credit.

MENAS 398. MENAS Internship

Consent of instructor required. AAPTIS 101 or higher for Arabic or AAPTIS 151 or higher for Turkish. (1 - 3). May not be repeated for credit.

MENAS 491. Proseminar on the Arab World

(3). May be repeated for credit. May be elected more than once in the same term.

MENAS 493 / AAPTIS 493. Comparative Perspectives of the Middle East and North Africa

(1). May be repeated for a maximum of 12 credits. May be elected more than once in the same term. Rackham credit requires additional work.

MENAS 495. Senior Honors Thesis

Consent of instructor required. Open only to Honors concentrators with senior standing. (3 - 4). (INDEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of MENAS 496, the final grade is posted for both term's elections.

MENAS 496. Senior Honors Thesis

Consent of instructor required. MENAS 495; Open only to Honors concentrators with senior standing. (3 - 4). (INDEPENDENT). May not be repeated for credit.

MENAS 591. Interdisciplinary Middle East Topics Seminar

Upperclass standing; concentration in MENAS, NES or other fields with main interest in Middle Eastern Studies. (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

Molecular, Cellular, and Developmental Biology (MCDB)

1121 E.H. Kraus Natural Science Building 830 North University Avenue (734) 764-2446 (phone) (734) 647-0884 (fax) www.mcdb.lsa.umich.edu Professor Pamela Raymond, Chair

Professors

Julian P. Adams, Population Genetics

James Bardwell (Rowena G. Matthews Collegiate Professor of Molecular, Cellular, and Developmental Biology), *Catalysis of Protein Folding*

Robert A. Bender, Microbiology

Steven Clark, Plant Development, Molecular Genetics

Robert Denver, *Developmental Neuroendocrinology*

Cunming Duan, Molecular Animal Physiology

Richard I. Hume (Arthur F. Thurnau Professor), *Developmental Neurobiology and Cellular Neurophysiology*

Daniel J. Klionsky (Alexander G. Ruthven Professor of Life Sciences), Cell Biology

John Y. Kuwada, Developmental Neurobiology

Janine Maddock, Microbial Development

Eran Pichersky, Molecular Genetics

Pamela Raymond (Stephen S. Easter Collegiate Professor of Molecular, Cellular and Developmental Biology), *Neurobiology and Animal Physiology*

John W. Schiefelbein, Jr., *Plant Molecular Genetics and Development*

Charles F. Yocum (Alfred S. Sussman Professor of Biology), *Cell Biology, Photosynthesis*

Associate Professors

Mohammed Akaaboune, *Neurobiology* Kenneth Cadigan, *Developmental Biology* Amy Chang, *Cell Biology* Matthew Chapman, *Biochemistry and Microbiology* Jonathan Demb, *Neurobiology* Ursula Jakob, *Biochemistry and Cell Biology* Anuj Kumar, *Cell Biology and Functional Genomics* Jianming Li, *Plant Molecular Physiology* Laura Olsen (Arthur F. Thurnau Professor), *Plant Cell and Molecular Biology* Assistant Professors

Blaise Boles, Biochemistry, Cell Biology and Microbiology
Catherine Collins, Cell Biology, Development, Neurobiology, Animal Physiology
Györgyi Csankovszki, Cell Biology
Eric Nielsen, Cell Biology, Development, and Plant Molecular Biology
Orie Shafer, Cell Biology, Neurobiology & Animal Physiology
Lyle Simmons, Biochemistry, Cell Biology, and Plant Molecular Biology
Tzvi Tzfira, Cell Biology, Microbiology, and Plant Molecular Biology

Stefan Walter, *Biochemistry and Microbiology*

Yanzhuang Wang, Biochemistry and Cell Biology

Andrzej Wierzbicki, *Biochemistry, Cell Biology, and Plant Molecular Biology*

Patricia Wittkopp, Evolution of Development

Kwoon Wong, *Neurobiology and Animal Physiology* Haoxing Xu, *Neurobiology and Animal Physiology*

Lecturers

Rafiqa Ameziane, *Neurobiology* Marc Ammerlaan, *Microbiology* Kenneth Balazovich, *Molecular Biology and Biochemistry* Lynn Carpenter, *Phylogeography and Paleoecology* Sushama Denver, *Animal Physiology* Santhadevi Jeyabalan, *Genetics and Development* Diane Spillane, *Molecular Biology*

Associate Research Scientist

Raymond Barbehenn, *Biochemical aspects of plant-herbivore interactions*

Assistant Research Scientist

Deborah Kuzmanovic, Bacteriophage infection and virus structure

- Professors Emeriti Wesley M. Brown, Stephen S. Easter, Jr., Lewis J. Kleinsmith, John P. Langmore, Larry D. Noodén, Bruce Oakley
- Professors Emeriti of Biology Richard D. Alexander, John M. Allen, Sally L. Allen, Reeve M. Bailey, Charles B. Beck, James N. Cather, William R. Dawson, Harry A. Douthit, David M. Gates, Hiroshi Ikuma, Peter B. Kaufman, Michael M. Martin, Thomas E. Moore, Robert Shaffer, David G. Shappirio, Edward G. Voss, Conrad S. Yocum

Concentration Programs. The department offers concentrations in Cell and Molecular Biology (CMB) and a CMB-Biomedical Engineering joint B.S. and M.S. program. Students interested in concentrations in Biology or General Biology or the academic minor in Biology should refer to information listed under the Program in Biology in this *Bulle-tin.* Students interested in the concentration in Neuroscience or Microbiology should refer to the information listed under the Program in Neuroscience or the Program in Microbiology in this *Bulletin.*

Advising. Students will be advised by a combination of staff and faculty to discuss individual course selection based on the student's interests, as well as career counseling, and research opportunities. Students who are interested in the CMB concentration should consult a general advisor during the freshman year and are strongly encouraged to meet with a concentration advisor early in their academic career but no later than the second term of their sophomore year. It is not necessary to complete every prerequisite before declaring a concentration. To make an appointment come in person to the Undergraduate Program Office located in 1111 Kraus Natural Sciences Building.

Field of Concentration. For purposes of calculating grade point average, the term "field of concentration" (for all concentration programs) means the following:

- 1. All BIOLOGY, EEB, MCDB, and Biological Station courses, including cross-listed ones, at the 200-level and above.
- 2. All required cognate courses (if any).
- 3. All mandatory prerequisites.

Introductory Biology Credit Limitation: The maximum amount of credit that can be earned in introductory biology courses is 17 credits. Students interested in concentrating in Biology, General Biology, CMB, EEB, Microbiology, or Plant Biology must complete BIOLOGY 171, 172/174 and 173, or BIOLOGY 195 and 173, or equivalent.

Supporting Facilities. Modern teaching and research laboratories house electron microscopes, controlled environment rooms, analytical and preparative centrifuges, spectrophotometers, and other tools essential for modern research in all areas of the biological sciences.

Awards/Fellowships: *K.L. Jones Award.* Since 1977, this award has been made each year to the outstanding plant science undergraduate. The Kenneth L. Jones Undergraduate Award for excellence in botany was endowed by colleagues, friends, and alumni upon the retirement of Professor Jones and consists principally of a sum to enable the recipient to purchase books or equipment of his or her own choice.

Underwood-Alger Scholarship. This scholarship program is based on merit and intended to provide support for students concentrating in the biological sciences. For this program, special consideration is given to applicants who are female and who have financial need. A gift from Dr. Nelda E. Alger provides funding for this scholarship.

Anne Rudo Memorial Award. The award is designated for a student with dual interests in the disciplines of biology and psychology, and

superior academic achievement. Information is available in the Psychology Undergraduate Office, 1343 East Hall.

Cell and Molecular Biology

May be elected as a departmental concentration program

Exclusions: Students who elect a concentration in Cell and Molecular Biology may not elect the following concentrations: Biology; General Biology; Microbiology; Plant Biology; Biochemistry; or Neuroscience. They may also not elect an academic minor in Biology; Plant Biology; Chemistry; or Biochemistry.

The curriculum in Cell and Molecular Biology offers students an integrated program of study and training in the biological and physical sciences. It is a pathway to graduate study in areas of biology and medicine that emphasizes a quantitative and analytical approach to the life sciences.

Prerequisites to Concentration.

- BIOLOGY 171, 172/174 and 173; or BIOLOGY 195 and 173; or BIOLOGY 162 or 163
- CHEM 210/211 and 215/216;
- MATH 115 and 116;
- PHYSICS 125/127 and 126/128; or PHYSICS 135/141 and 235/241; or PHYSICS 140/141 and 240/241.

It is recommended that students interested in pursuing graduate work acquire a reading knowledge of French, German, or Russian.

Concentration Program.

- Required courses. Genetics: BIOLOGY 305; Biochemistry: MCDB 310; or CHEM 451 and 452; or BIOLCHEM 415; or BIOLCHEM 451 and 452; Cellular and Molecular Biology: MCDB 427; MCDB 428.
- Advanced laboratory requirement. Two advanced lab courses from among: MCDB 306, 400, 413, 419, 423, or 429.
- 3. Biology/Chemistry elective. One course chosen from:
 - BIOLOGY 207, 222, 225;
 - MCDB 307, 308, 321;
 - CHEM 230 or 260, 241/242, 452;
 - any advanced CMB course (See #4).
- 4. Advanced CMB courses. Choose two courses from:

MCDB 400*, 401, 402, 403, 404, 405, 408, 411, 415, 418, 422, 425, 426, 430, 432, 435, 436, 437, 444, 455, 456, 469, 504, and 589.

A third (or fourth) advanced CMB lab course (MCDB 306, 413, 419, 423, or 429) may also be used to meet this requirement.

Note:* Only three credits of independent study may count toward the concentration program. **Three credits must be completed in one term to meet the advanced laboratory requirement or advanced CMB course requirement.

- 5. Elective Course. Choose one course from the following:
 - a. Any BIOLOGY, EEB, or MCDB course at the 200-, 300-, or 400level (except BIOLOGY 200, 201, 202, 215, 262, or EEB 300, 302, or MCDB 300, 302, 320, or 412). A third advanced CMB course is permitted to meet this requirement.
 - b. One cognate course in Chemistry: CHEM 230 or 260, 241/242; CHEM 452 for students who elected the sequence CHEM 451-452; any Chemistry course that has CHEM 260 as a prerequisite.
 - c. One cognate course in Mathematics or Statistics (as approved by the concentration advisor): MATH courses with a MATH 116 prerequisite, or STATS 400 or BIOSTAT 503.

Cell and Molecular Biology and Biomedical Engineering Program (B.S. and M.S.)

May be elected as a departmental concentration program

Exclusions: Students who elect a concentration in CMB:BME may not elect the following concentrations: Biology; General Biology; Cell and Molecular Biology; Microbiology; Plant Biology; Biochemistry; or Neuroscience. They may also not elect an academic minor in Biology; Plant Biology; Chemistry; or Biochemistry.

This program is designed for students enrolled in the College of Literature, Science, and the Arts. The Department of MCDB (College of LSA) and the Department of Biomedical Engineering (BME) (College of Engineering) jointly administer the program. A matriculating student will receive the BS in Cell and Molecular Biology from the College of LSA and an MS in Biomedical Engineering from the College of Engineering upon completion of all program requirements. A student will apply to both the Molecular, Cellular, and Developmental Biology and Biomedical Engineering Departments for entrance. A student will be admitted into the program only after completing the first year of the concentration prerequisites with a GPA of 3.2 or higher. *Advisors from the Departments of MCDB and BME must approve admission to the program.*

Prerequisites to Concentration.

- BIOLOGY 171, 172/174, 173; or BIOLOGY 195 and 173; or BIOLOGY 162 or 163
- CHEM 210, 211, 215, 216;
- MATH 115 and 116;
- PHYSICS 125/127 and 126/128; or 135/141 or 140/141; and 235/241 or 240/241.

A. Undergraduate Concentration Program (BS Phase). 53 credits.

- 1. Core courses:
 - Genetics: BIOLOGY 305;

Biochemistry: MCDB 310 (or BIOLCHEM 415, or CHEM 451 and 452 [CHEM 452 counts as elective], or BIOLCHEM 451 and 452 [BIOLCHEM 452 counts as elective]);

Cellular and Molecular Biology: MCDB 306; MCDB 427; MCDB 428 or BIOMEDE 418; MCDB 429.

- 2. Engineering courses: Biomedical Engineering: BIOMEDE 221, 321, and 331
 - or

Chemical Engineering: CHE 230, 330, and either CHE 342 or 344.

- 3. Advanced Cell and Molecular Biology: one course (such as MCDB 405, 411, 413, 415, 418, 419, 422, 423, 426, 430, 435, 436, 437, 444, 455, 456, 469, 504, and 589; appropriate sections of MCDB 401; MCDB 400) selected in consultation with, and approved by, the program advisors. (BIOMEDE 584 is elected in the graduate phase, and does not count toward this requirement.)
- 4. *Undergraduate Engineering:* ENGR 101 or EECS 183; and BIOMEDE 419 (BIOMEDE 419 counts as an advanced CMB course in the CMB concentration).
- 5. *Biology Elective:* One course chosen in consultation with, and approved by, the program advisors. This course can be any BIOLOGY, EEB, or MCDB course at the 200-, 300-, or 400-level (except BIOLOGY 200, 201, 262; EEB 300, 302, MCDB 300, 302, 320, or 412). One course in Evolution, Ecology, or Organismal Biology is strongly encouraged, as is undergraduate research.
- 6. Cognates:
 - a. Statistics: STATS 400.
 - b. Mathematics: MATH 215 and 216.

B. MS (Graduate) Phase.

- 1. Advanced Cell and Molecular Biology: BIOMEDE 584.
- 2. *Graduate Biomedical Engineering Core:* BIOMEDE 500, 550, and 590.
- 3. *Graduate Engineering:* 7 credits, chosen in consultation with the program advisor.
- 4. *One advanced Mathematics course:* 3 credits, chosen in consultation with the program advisor.
- 5. *One advanced Statistics course:* 3 credits, chosen in consultation with the program advisor.

Advising. Upon acceptance into the program, each student will be assigned two advisors, one in MCDB and one in Biomedical Engineering. Student course selections must be approved by both advisors each term.

MS phase. A student is typically admitted into the MS phase at the end of the third year when the student achieves senior standing. The student must have completed all concentration prerequisites and be judged by both academic advisors as making adequate progress toward the B.S. At this time, the student must formally apply to the Rackham Graduate School for the MS program in Biomedical Engineering. All students with a 3.2 GPA or higher in the BS concentration phase and who are judged by both academic advisors as making timely progress toward the B.S. will automatically be admitted into the MS phase. Other CMB students who have reached senior standing with a 3.2 GPA or higher and have fulfilled all concentration prerequisites, but did not previously apply or were not admitted in the BS phase, can also apply for admittance into the MS phase. Students with senior standing will have two years to complete upper-level undergraduate and graduate courses, simultaneously fulfilling requirements for both the B.S. and M.S. degrees. Students will be charged graduate tuition for only one academic year. Students are never jointly enrolled in LSA and Rackham; students, however, can begin to take graduate BME courses as undergraduates with the permission of the instructor.

Honors Program

The CMB Honors Program trains students to conduct independent research in the fields of cell biology, genetics, biochemistry, and molecular biology. In addition to completing all the requirements for the CMB concentration, an Honors degree requires a concentration GPA of at least 3.4, and the completion of a significant piece of independent research that is reported in an Honors thesis and presented in a public forum. It is recommended that students discuss the Honors Program with a concentration advisor early in their undergraduate career.

Declaring an Honors Concentration in CMB. Students are encouraged to meet with a CMB advisor to declare their Honors concentration as soon as they have arranged an Honors research project with their prospective mentor.

The Honors Research and Thesis. Students conducting Honors research must register for independent research in MCDB (MCDB 300 or 400) for at least two terms. Students interested in Honors research in labs outside of the MCDB department must identify a cosponsor. It is important for these co-sponsored students to discuss their proposed project with a CMB advisor in advance to ensure that the subject matter is appropriate for a CMB Honors thesis.

The Honors thesis is expected to be a report of a substantial body of original results obtained during a sustained period of investigation. It is to be written in the form of a research paper that could be submitted to a journal in the student's area of interest, with the exception that the introduction is expected to provide substantially more background on the research area than is typical of a research article.

Prior to submitting the thesis, students should identify three readers for the thesis, one of whom is the sponsor. At least two readers must be faculty members in the Department of MCDB. The thesis must be submitted by April 1 (for May graduates), August 1 (for August graduates), or December 1 (for December graduates).

Based on material presented in the Honors thesis and the student's overall record, the readers of the thesis will recommend a rating of "No Honors," "Honors," "High Honors," or "Highest Honors". The CMB Curriculum Committee will review the reader recommendations and determine the appropriate level of Honors.

The Research Presentation. The presentation of the Honors research may be given at a poster session or as a formal talk. The student's mentor will confirm that this requirement has been met in the letter of evaluation.

COURSES IN MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY (MCDB)

MCDB 300. Undergraduate Research

Consent of instructor required. Eight credits of BIOLOGY/MCDB courses; 3.0 GPA in science courses. (1 - 3). (BS). (INDEPENDENT). May be repeated for a maximum of 9 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term (MCDB 300 or 400), the final grade is posted for both term's elections.

MCDB 302. Teaching Experience for Undergraduates

Consent of instructor required. Permission of instructor. (1 - 3). (EXPERIENTIAL). May not be repeated for credit.

MCDB 306. Introductory Genetics Laboratory

Prior or concurrent enrollment in BIOLOGY 305. (3). (BS). May not be repeated for credit. F and W. Satisfies a Biology laboratory requirement.

MCDB 307. Developmental Biology

BIOLOGY 305. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

MCDB 308. Developmental Biology Laboratory

Prior or concurrent enrollment in BIOLOGY 208 or MCDB 307 or permission of instructor. (3). (BS). May not be repeated for credit. W. Satisfies a Biology laboratory requirement.

MCDB 310. Introductory Biochemistry

BIOLOGY 162 or 163 or 172 or 174 or [195 and 173] AND CHEM 210. (Prerequisites enforced at registration.) Prior or concurrent enrollment in CHEM 215. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MCDB 311 (BIOLOGY 311), BIOLCHEM 415 or 451 or 515, or CHEM 451.

MCDB 311. Introductory Biochemistry

BIOLOGY 162 or 163 or 172 or 174 or [195 and 173] AND CHEM 210. (Prerequisites enforced at registration.) Prior or concurrent enrollment in CHEM 215. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in MCDB 310 (BIOLOGY 310), BIOLCHEM 415 or 451 or 515, or CHEM 451.

MCDB 321. Introductory Plant Physiology Lectures

BIOLOGY 162 or 163 or [171 and (172 or 174)] or 195. (Prerequisites enforced at registration.) College Physics recommended. (3). (BS). May not be repeated for credit.

MCDB 397 / EEB 397. Writing in Biology

MCDB 300 or 400, OR EEB 300 or 400, OR permission of instructor. (3). (BS). May not be repeated for credit. No credit granted for students who have completed or are enrolled in EEB 301 or MCDB 301.

MCDB 400, Advanced Research

MCDB 300. (Prereauisites enforced at registration.) 12 credits of biology. 3.0 gverage in science, and permission of faculty member in biology. (1 - 3). (BS). (INDEPENDENT). May be repeated for a maximum of 9 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of MCDB 400, the final grade is posted for both term's elections.

MCDB 401. Advanced Topics in Biology

CMB senior concentrators or Graduate standing. Prerequisites will be set by the instructor as appropriate for each section. (3). (BS). May be repeated for a maximum of 6 credits

MCDB 402. Molecular Biology of Pain and Sensation

BIOLOGY 222 or MCDB 422. (Prerequisites enforced at registration.) BIOLOGY 305; BIOLOGY/MCDB 310 or 311 or BIOLCHEM 415 or CHEM 351; MCDB 423. (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MCDB 403. Molecular and Cell Biology of the Synapse

MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or CHEM 351. (Prerequisites enforced at registration.) BIOLOGY 305 and MCDB 422. (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MCDB 404 / EEB 404. Genetics, Development, and Evolution

BIOLOGY 305. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

MCDB 405. Molecular Basis of Development

BIOLOGY 305 or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

MCDB 408. Genomic Biology

BIOLOGY 305; and MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or BIOLCHEM 451/CHEM 451. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MCDB 411. Protein Structure and Function

MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or CHEM 451; or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

MCDB 412. Teaching Biology

Consent of instructor required. (3). (EXPERIENTIAL). May be elected twice for credit. F. MCDB 413. Plant Molecular Biology Laboratory

BIOLOGY 305; and MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or BIOLCHEM 451/CHEM 451; or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. W. Satisfies a Biology laboratory reauirement.

MCDB 415. Microbial Genetics

BIOLOGY 305; and MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or BIOLCHEM 451/CHEM 451. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

MCDB 417. Chromosome Structure and Function

BIOLOGY 305. (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MCDB 418. Endocrinology

BIOLOGY 225 and 305; and MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or CHEM 351; or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

MCDB 419. Endocrinology Laboratory

Prior or concurrent enrollment in BIOLOGY 225 or 310 or 311, or MCDB 418 or 426. (3). (BS). May not be repeated for credit. F. Satisfies a Biology laboratory requirement.

MCDB 422. Cellular and Molecular Neurobiology MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or CHEM 351; or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

MCDB 423. Introduction to Research in Cellular and Molecular Neurobiology

BIOLOGY 222 or MCDB 422. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F and W. Satisfies a Biology laboratory requirement.

MCDB 425. Biotechnology: From Concepts to Technologies

BIOLOGY 305; and MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or BIOLCHEM 451/CHEM 451. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MCDB 426. Molecular Endocrinology

BIOLOGY 225; and MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or CHEM 351; or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

MCDB 427. Molecular Biology BIOLOGY 305; and MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or BIOLCHEM 451/CHEM 451; or Graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F.

MCDB 428. Cell Biology

MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or BIOLCHEM 451/CHEM 451; or Graduate standing. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. Students with credit for MCDB 320 must obtain permission of instructor. W.

MCDB 429. Laboratory in Cell and Molecular Biology

MCDB 427 or 428, or concurrent enrollment in MCDB 428. (3). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in BIOLCHEM 416 or 516. This course can be used to satisfy requirements for the Cell and Molecular Biology Concentration and the Biology Concentration. W. Satisfies a Biology laboratory requirement.

MCDB 430. Molecular Biology of Plants

BIOLOGY 305: and MCDB (BIOLOGY) 310. MCDB (BIOLOGY) 311. BIOLCHEM 415. or BIOLCHEM 451/CHEM 451; or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. W.

MCDB 432. Biochemistry and Physiology of Prokaryotes

BIOLOGY 305; and MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or BIOLCHEM 451/CHEM 451; or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F. Rackham credit requires additional work.

MCDB 435. Intracellular Trafficking

BIOLOGY 305 or Graduate Standing. (Prerequisites enforced at registration.) MCDB 428. (3). (BS). May not be repeated for credit.

MCDB 436. Introductory Immunology

MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or BIOLCHEM 451/CHEM 451; or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

MCDB 437. Microbial Communication and Development

BIOLOGY 305, and MCDB 310 or BIOLCHEM 415 or CHEM 351. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MCDB 444. Bacterial Cell Biology

BIOLOGY 305 and [MCDB 310, 311, or BIOLCHEM 415]. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MCDB 450. Genetics and Molecular Biology of Complex Behavior

BIOLOGY 222 and 305 and [MCDB 310 or BIOLCHEM 415]. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

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MCDB 455. Cell Biology of Neurodegeneration

BIOLOGY 222 or 305, AND MCDB 310 or BIOLCHEM 415 or CHEM 351. (Prerequisites enforced at registration.) MCDB 422 or 428. (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MCDB 456. Genes, Circuits, and Behavior

BIOLOGY 222 or MCDB 422, AND BIOLOGY 305. (Prerequisites enforced at registration.) MCDB 310 or BIOLCHEM 415 or CHEM 351. (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

MCDB 589. Mechanisms of Microbial Evolution

BIOLOGY 305; and MCDB (BIOLOGY) 310, MCDB (BIOLOGY) 311, BIOLCHEM 415, or BIOLCHEM 451/CHEM 451; or Graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

Museum Methods

Exhibit Museum of Natural History Ruthven Museums Building 1109 Geddes Avenue (734) 764-0478 (phone) (734) 647-2767 (fax) www.lsa.umich.edu/exhibitmuseum Amy Harris, Director

Not a concentration program

The College of LSA offers through the facilities of the Exhibit Museum of Natural History laboratory/discussion/lecture courses for students interested in natural science museum exhibits. Museum methods courses are open to undergraduate and graduate students. These courses focus mainly on the principles, methods, and techniques used by professional exhibit designers. Some basic concepts in educational design and theory, as related to museums, are also covered.

COURSES IN MUSEUM METHODS (MUSMETH)

MUSMETH 405. Special Problems in Museum Methods Permission of instructor; MUSMETH 406 is desired. (2 - 4). May be elected twice for credit. F.

MUSMETH 406 / UC 406. Special Problems in Museum Methods Permission of instructor. (4; 2 in the half-term). May be elected twice for credit. W.

MUSMETH 499. Independent Research

Permission of instructor. (1 - 4). (INDEPENDENT). May be elected three times for credit.

Museum Practice

Not a concentration program

COURSES IN MUSEUM PRACTICE (MUSPRACT)

MUSPRACT 407 / HISTART 407. Introduction to Museum Practice (*3; 2 in the half-term). May not be repeated for credit.*

Museum Studies

Charles H. Sawyer Center for Museum Studies UM Museum of Art 525 South State Street 734-936-6678 (phone) 734-786-0064 (fax) www.umich.edu/~ummsp e-mail: msp-ug@umich.edu Professor Raymond Silverman (History of Art, Afroamerican and African Studies), Director Bradley L. Taylor, Associate Director

Not a concentration program

Museum Studies Program Faculty Steering Committee

- Bob Bain, Associate Professor, History and Social Science Education, School of Education
- Kerstin Barndt, Associate Professor, Germanic Languages and Literatures
- Robert Frost, Associate Professor, School of Information
- Amy Harris, Director, U-M Exhibit Museum of Natural History
- Tim McKay, Thurnau Professor, Department of Physics; Director, LSA Honors Program

David Michener, Associate Curator, U-M Matthaei Botanical Gardens Keith Mitnick, Associate Professor, Architecture + Urban Planning

Sophia Psarra, Associate Professor of Architecture, Architecture and Urban Planning

Andrew Shryock, Associate Professor, Anthropology

- Raymond Silverman, Professor, Department of History of Art and Center for Afroamerican and African Studies; Director, Museum Studies Program
- Carla Sinopoli, Professor, Department of Anthropology; Director, U-M Museum of Anthropology
- Hannah Smotrich, Associate Professor, School of Art & Design
- Bradley Taylor, Associate Director, Museum Studies Program
- Laurie Talalay, Associate Director and Associate Curator, U-M Kelsey Museum of Archaeology

Core Faculty

- Raymond Silverman, Professor, Department of History of Art and Center for Afroamerican and African Studies; Director, Museum Studies Program
- Bradley Taylor, Associate Director, Museum Studies Program

The Museum Studies Program was established in 2002. The program offers an undergraduate academic minor through the College of Literature, Science, and the Arts, and a graduate certificate through the Rackham School of Graduate Studies.

Museums have changed dramatically in the last few decades. Today's museums are dynamic institutions playing increasingly important roles in the communities they serve. In addition to being a place for collecting, preserving, studying and exhibiting "objects," the mu-

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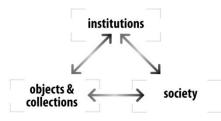
seum has become a vital arena for learning, exploring and negotiating the complex relationships that individuals and groups have with the social and natural environments in which they live.

In response to this movement, the museum profession has seen significant growth that has led to greater demand for qualified museum specialists. It is a profession that offers many exciting opportunities for the application of knowledge, skills and critical thinking associated with a variety of disciplines.

The field of museum studies is inherently interdisciplinary in nature. Interdisciplinarity is fostered through the inclusion of ideas drawn from a variety of subject areas and from a structured examination of collecting institutions of varying types *(e.g.,* art museums, science centers, botanical gardens, zoos), in various geographic settings, from different cultures, in both the past and the present. The curriculum is organized thematically, balancing history and theory with opportunities for practical engagement. This *applied theory* emphasis will feature ongoing exposure to the rich resources of the University of Michigan including museums, museum collections, and engaging museum professionals in the classroom as an integral part of student learning. Students will learn the value of bridging theory and practice.

Academic Minor in Museum Studies

The primary goal of the academic minor in museum studies is to teach students how museums work, both in historical and contemporary contexts. Doing so involves learning to critically engage the historical, social, cultural, artistic and scientific dimensions of heritage, both tangible and intangible, within the museum. The museum studies academic minor seeks to foster "museum literacy" by introducing students to the processes by which meaning is inscribed upon objects within the context of museums and to the roles museums, broadly defined, play in society. Institutions, objects and collections, and society thus form the curriculum's conceptual foci.



Objects and Collections – The artifact, collections of artifacts maintained by museums, and the information associated with them:

the nature of objects; learning from objects; disciplinary perspectives on the object; the role of museum artifacts in research; conservation; connoisseurship; collectors and collecting; tangible and intangible culture; how objects acquire their meaning; the real vs. the represented; exhibit design (how museums choose to display objects)

Institutions – The wide variety of organizations that collect and display artifacts for education, research, or entertainment:

the history of museums; administration, governance, and ethics; non-profit and for profit models of museums; national vs. local museums; museums in their various forms *(i.e.,* science centers, zoos, botanical gardens, history centers, art museums, themed experiences); the relationship of museums to libraries and archives; rationalizing the museum within society; museum design and architecture; assessment; technology in museums; organization of and access to museum information; professional associations at the state, national and international levels

Society – The audiences that museums engage, individually or collectively, and the communities whose cultures are represented in museum displays:

the role of museums in society; the representation of ethnicity, gender, race, and culture in museums; the role of museums in nation building; public culture; repatriation and debates over the ownership of cultural properties and cultural heritage; visitor studies; learning in museums; defining the museum experience; audience and visual perception studies

Investigations into the interrelationships that exist between these three foci will add to the wealth of material addressed in the curriculum. Indeed, some of the most interesting issues exist at the intersections of these foci.

Students will derive multiple secondary benefits from this course of study – new content knowledge, an enhanced ability to conduct research in one's academic discipline, a new means by which to understand other cultures and societies, a heightened awareness of the points of view afforded through multidisciplinary study and understanding the relationship of how one's discipline relates to other disciplines, an increased capacity for critical thinking and observation, and the personal empowerment derived from becoming more informed users of cultural assets, especially those available at the University of Michigan.

Despite being situated in the College of LSA, the undergraduate academic minor has been designed to accommodate concentrators from other schools and colleges at the university. While it has been broadly conceived, the museum studies academic minor will hold special appeal to students concentrating in Anthropology, Classical Archaeology, History, History of Art, American Culture, and Communication Studies, where students are first introduced to these topics.

Prerequisites to the Academic Minor: None for the academic minor *per se,* although individual courses elected to meet the requirements of the academic minor may have course prerequisites.

Students will be eligible to declare their desire to pursue the Museum Studies academic minor upon completion of MUSEUMS 301 (sophomore standing).

Academic Minor Program. The academic minor requires at least 18 credits as stated:

1. Core Courses: MUSEUMS 301 and 401.

MUSEUMS 301 and MUSEUMS 401 provide a theoretical/historical overview of museums as examined through the constructs of institutions, objects and collections, and society as well as an examination of the critical issues confronting museums in the contemporary world.

- 2. Museum-Based Practicum: MUSEUMS 409 (Practicum in Museums) will be available to students who have declared the academic minor in Museum Studies. MUSEUMS 409 establishes a critical bridge between theory and practice and through the use of mentoring, class discussion, and engagement with the principles of reflective practice will assure that students draw the most from this experiential requirement. Based on the premise that theoretical grounding is necessary for a successful practicum experience, students will *not* be allowed to seek MUSEUMS 409 credit for museum-based practical experiences undertaken before completing MUSEUMS 301. Students interested in acquiring additional museum experience may repeat MUSEUMS 409 for a total of six credits. In such instances the second three credits may replace one of the required three elective courses.
- 3. **Electives**: Three elective courses chosen in consultation with, and approved by, the museum studies faculty advisor. These courses are selected from designated 300- and 400-level courses in the three thematic areas (institutions, objects and collections, and society) of the program.

Students must elect one course from at least two of the three areas:

- A. Institutions
- B. Objects & Collections
- C. Society

A complete list of current electives can be found on the Museum Studies website.

The electives offer students the opportunity to take courses to further their knowledge of institutions, objects and collections, and society in many departments in the university. Those students selecting courses not directly focused on the museum will have the opportunity to make critical ties back to the field through the completion of mentored writing assignments. To receive elective credit for a course that is not explicitly museum-focused, upon receiving prior approval a student will be required to write a brief (5page) rationale paper that addresses the relationship between the content of the course and issues considered in the two museum studies core courses, MUSEUMS 301 and 401. The academic staff of the Museum Studies Program will evaluate these papers.

Advising. Advising responsibilities are divided between the Museum Studies Program Student Services Specialist and Museum Studies faculty, specifically the Director and Associate Director. General questions regarding curriculum requirements will be handled by the Student Services Specialist. The Specialist will also serve as the coordinator for the practicum requirement (MUSEUMS 409). The Director and Associate Director advise students on issues concerning elective course selection, graduate study, and career planning.

Museum Studies Program Partner Institutions

Students will benefit greatly from a diverse range of partnerships formed by the Museum Studies Program with museums, archives, special collections, and private businesses across the state. Students may encounter staff from these institutions as guest lecturers in the classroom, hosts for site visits, practicum sponsors, or through class assignments.

University of Michigan Institutions

Bentley Historical Library Exhibit Museum of Natural History Henry Ford's Fair Lane Estate Herbarium Kelsey Museum of Archaeology Map Library Museum of Anthropology Museum of Art Museum of Paleontology Museum of Zoology Nichols Arboretum and Matthaei Botanical Gardens Sindecuse Museum of Dentistry Special Collections Library

Stearns Collection of Music Instruments UM Detroit Observatory

Local and Regional Institutions

African American Cultural and Historical Museum of Washtenaw County American Museum of Magic Ann Arbor Hands-On Museum Arab American National Museum Charles H. Wright Museum of African American History Cranbrook Art Museum Cranbrook Institute of Science **Detroit Historical Museum Detroit Institute of Arts Detroit Observatory Detroit Science Center** Detroit Zoological Institute Flint Institute of Arts Frederik Meijer Gardens & Sculpture Park The Gerald R. Ford Presidential Library and Museum The Henry Ford Jim Crow Museum of Racist Memorabilia Museum of Contemporary Art Detroit Public Museum of Grand Rapids Toledo Museum of Art Toledo Zoo Yankee Air Museum

COURSES IN MUSEUM STUDIES (MUSEUMS)

MUSEUMS 301 / UC 304. Museums and Society

Sophomore standing or above. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

MUSEUMS 401 / UC 404. Contemporary Issues in Museums

MUSEUMS 301 or MSP 601. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

MUSEUMS 409 / UC 409. Practicum in Museums

Declared Minor in Museum Studies. (Prerequisites enforced at registration.) (3). (EX-PERIENTIAL). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. Offered mandatory credit/no credit.

MUSEUMS 498. Special Topics in Museum Studies

MUSEUMS 301 or MSP 601. (1 - 3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. Rackham credit requires additional work.

MUSEUMS 499. Independent Study in Museum Studies

Consent of department required. MUSEUMS 301 or MSP 601. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 4 credits. May be elected more than once in the same term. Offered mandatory credit/no credit.

Music, Theatre & Dance

School of Music, Theatre & Dance 2290 E.V. Moore Building 1100 Baits Drive (734) 763-0583 (phone) (734) 763-5097 (fax) www.music.umich.edu Professor Christopher Kendall, Dean

Music Performance Courses. Students of advanced ability may elect instrumental or voice instruction through the University of Michigan School of Music, Theatre & Dance provided teaching assistant or faculty time is available. This instruction, which consists of halfhour weekly lessons for two credits, is not available to beginners.

The online application proves for Studio (private) instruction opens at the end of each term, for the upcoming term. Students should go the School of Music, Theatre & Dance website (music.umich.edu), Current Students > Student Resources > Studio Application and fill out the online application per the directions. It is the student's responsibility to initiate contact with the assigned instructor. Students enrolled in

performance courses must provide their own instruments (except organ and piano); practice facilities are available at the University of Michigan School of Music, Theatre & Dance.

When registering, students should note that:

- (1).there is a different division number for each instrument (see Schedule of Classes);
- (2).LSA students should use course number 150; and
- (3).there is a different section number for each instructor.

Questions concerning registration for performance instruction should be directed to the SOMTD Office of Academic Affairs, 2277 Moore, phone 734-764-2516.

Please note that not all applicants can be placed - available teacherhours are limited, and priority is given to performance majors in the School of Music, Theatre & Dance. If you do not see a studio assignment by the second week of the term, you can assume the department was unable to accommodate you. You may, however, apply again before the start of the next term. Students who cannot earn degree credit for performance courses cannot be accommodated by this program.

Ensembles. A wide variety of music performing ensembles are available to LSA students. Principal among these, for instrumentalists, are Ensemble (ENS) 344 (University Campus Orchestra) and ENS 346 (Campus Band), as well as ENS 348 (U-M Marching Band), for which an audition is required. Other instrumental ensembles, both orchestras and bands, are designed primarily for University of Michigan School of Music, Theatre & Dance students, but LSA students with a performance background are encouraged to audition for these groups as well. Vocalists may audition for the University Arts Chorale (designated for the LSA population), but may also audition for the University of Michigan School of Music, Theatre & Dance vocal ensembles, including the University Choir (ENS 349), the University Chamber Choir (ENS 350), the Choral Union (ENS 354), and the Men's and Women's Glee Clubs (ENS 353 and 356). In addition, many LSA students have participated in performing ensembles sponsored by the ethnomusicology faculty, such as the Javanese gamelan (ENS 405), for which no prior background is required. No music performing ensemble carries LSA credit.

Creative Expression Distribution Credit.

The following University of Michigan School of Music, Theatre & Dance courses have Creative Expression distribution designation (Credits are counted as LSA courses):

Music Composition (COMP)

221. Introduction to Elementary Composition.

Dance

Dance Building 1310 North University Court (734) 763-5460 (phone) www.dance.umich.edu

Not an LSA concentration program. Students with an interest in Dance should contact the Department of Dance.

Music

sitemaker.umich.edu/Isamusic e-mail: Isamusicadvisor@umich.edu Professor Louise K. Stein (Musicology), Advisor Associate Professor Charles Garrett (Musicology), Advisor

May be elected as an interdepartmental concentration program

The Music Concentration provides students with broad experience in the study of music (both creative expression and critical analysis), through musicology and music theory, along with introductions to musical composition and performance. The LSA Concentration works in conjunction with the LSA Bachelors of Arts and Sciences degrees and provides a liberal arts alternative to the Bachelor of Musical Arts and Bachelors of Music degrees offered within the University of Michigan School of Music, Theatre & Dance.

The objectives of this concentration are to encourage the study of music as art and culture in the many contemporary and historical contexts of its creation, performance, dissemination, reception, and representation, including an understanding of the relationships and distinctions among the musical cultures of diverse historical epochs, civilizations, and geographical regions. Musical study fosters an awareness of the aesthetic, social, political, religious, and personal values that may be embedded in musical works and practices; an understanding of theoretical approaches to music and the relations between music and other arts and disciplines; and an awareness of the impact of technology on musical creation and production.

222. Composition.

Theatre and Drama (THTREMUS)

- 101. Introduction to Acting 1.
- 102. Introduction to Acting 2.
- 110. Introduction to Acting for the Camera.
- 181. Acting I
- 227 / ENGLISH 227. Introductory Playwriting.

240. Introduction to Design.

242. Directing II.

245. Introduction to Stage Management.

The following University of Michigan School of Music, Theatre & Dance courses have Creative Expression distribution designation (Credits are counted as Non-LSA):

Performance – Piano (PIANO)

110. Performance. (non-LSA).

111. Performance. (non-LSA).

Dance (DANCE)

100. Introduction to Dance. (non-LSA). 241. Congolese Dance 1. (non-LSA). 242. Congolese Dance 2. (non-LSA).

Ensemble (ENS): All Courses 100-399. (non-LSA).

Courses (100-399) in Music Performance SUBJECTS, (*viz.*, other than Piano Performance, may also be used for Creative Expression, but enrollment is restricted to students of advanced ability).

Concentration Program. A minimum of thirteen courses are required; with the permission of the concentration advisor, as many as five courses from outside the University of Michigan may be accepted to satisfy concentration requirements. Eight courses must be taken at the University of Michigan, including the following:

- 1. **Musicology (MUSICOL): one introductory course** in music (MUSICOL 121, 122, or 123 or the equivalent) and **two addi-tional courses** in Musicology or Ethnomusicology (MUSICOL 122, 123, 343, 345, 346, 351, 411, 450, 456, 458, and other 300-400 level courses, or the equivalent). MUSICOL 139, 140, 239, or 240, may be elected to meet requirements for the concentration with permission of the instructor and the concentration advisor.
- Music Theory (THEORY): two courses of basic music theory (THEORY 137 [section 001, plus a lab section 002–005] and 238 [section 001, plus a lab section 002–003], or 139/149 and 140/150, or 239/240 and 240/250 or the equivalent (by permission of instructor).
- Music Composition (COMP): COMP 221, 222, PAT 201, or equivalent (students with an historical or ethno-musicological focus within the concentration program may request that this requirement be waived through substitution of another 400-level course in Musicology).
- Music Performance: a total of four courses of performance instruction, selected from PIANO 110, 111, 112, 113 or private instruction 150. At least two courses of private instruction are

required (applied piano class is acceptable as "private" instruction). Ensemble may be elected to cover two of the four required terms.

 Two additional MUSICOL, THEORY, COMP, or PAT courses at the 400 level or above. One of these must be a juniorsenior seminar in MUSICOL or THEORY for concentrators with a focus in either of these areas.

The core requirements listed here typically demand approximately 30 credits. Music concentrators may select the remaining music courses in accordance with their personal interests. Students should acquaint themselves with graduate school requirements if they plan to do graduate work in composition, musicology, theory, or performance. The concentration advisor can assist students in arranging the best program in preparation for graduate studies and discuss the possibility of transferring into the University of Michigan School of Music, Theatre & Dance.

Honors Concentration. Qualified students are encouraged to consider an Honors concentration in Music. The standards for admission are a cumulative grade point average of at least 3.5 and evidence of outstanding ability in music. Application is made and admission is granted to the Honors concentration during the first term of the junior year. Two additional courses (in performance instruction or at the 400-level or above) are required, and the primary focus of an Honors program is a written senior Honors Thesis or a lecture recital with extensive program notes approved by a Music concentration advisor. Independent research study with an advisor may satisfy the additional course requirement (one term of 2 or 3 hours of independent study fulfills one term of junior-senior seminar in Musicology or Music Theory.

Advising. A concentration plan is developed in consultation with and must be approved by the music concentration advisor. Appointments are scheduled through the LSA Academic Advising Center, 1255 Angell Hall (764-0332).

For additional information regarding the music concentration and academic minor, see: sitemaker.umich.edu/Isamusic

Academic Minor in Music

An academic minor in Music is developed in consultation with an undergraduate advisor in music. Appointments are scheduled through the LSA Academic Advising Center, 1255 Angell Hall (764-0332).

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 15 credits (and five courses), to be chosen from the following two categories as stated below:

- Required Survey Course: MUSICOL 121, Introduction to Music, MUSICOL 122, Introduction to World Music, MUSICOL 123, Introduction to World Music, or the equivalent (MUSICOL 343, 345, 346), or MUSICOL 139/140, 239/240, or Introduction to Music Theory (THEORY 137, or 139/149), or the equivalent.
- Electives: at least 12 credits in Music courses, with at least two courses at the 300-level or above. Electives must include one or more courses in two of the following five areas: Composition, Musicology, Music Theory, Performance, and Performing Arts Technology.

AP credit: AP credits may not be used to satisfy requirements of the academic minor with one exception. AP Credit may qualify, if approved by the advisor, for the required Survey Course. In this instance, a minimum of 5 other courses, totaling 15 credits, must be elected for the academic minor.

Conditions: Upon approval of the concentration advisor, up to six credits earned outside of the University of Michigan or its sponsored programs may be used to satisfy requirements for the academic minor.

Exclusions: An academic minor in Music is not open to students with a concentration in Music, including those in the University of Michigan School of Music, Theatre & Dance.

Theatre & Drama

May be elected as a departmental concentration program

Walgreen Drama Center 1226 Murfin Avenue (734) 764-5350 (phone) (734) 647-2297 (fax) www.theatre.music.umich.edu e-mail: theatre.info@umich.edu Gregory Poggi, Chair

Professors

Enoch Brater (English / Theatre & Drama), *Dramatic Literature* Glenda Dickerson, *Theatre Studies; Advisor for African American Theatre minor* Erik Fredricksen, *Acting and Stage Combat* Barbara Hodgdon (English / Theatre & Drama), *Shakespeare* Philip Kerr, *Acting* John Neville-Andrews, *Acting and Directing; Head of Performance* OyamO, *Playwriting; African American Theatre* Gregory Poggi, *Arts Administration; Chair* Leigh A. Woods, *Theatre Studies; Head of Theatre Studies*

Associate Professors

Jessica Hahn, Costume Design; Head of Design & Production
Holly Hughes (Art & Design / Theatre & Drama), Performance Art; Interarts Co-Head
Petra Kupper (English / Theatre & Drama), Performance Studies
Annette Masson, Voice; Jr/Sr advisor
Vince Mountain, Set Design; BFA advisor Rob Murphy, *Lighting Design; BFA advisor* Mbala Nkanga, *Theatre Studies, African American Theatre; BA advisor* sor

Assistant Professors

Gary Decker, *Technical Theatre; BFA advisor* Sarah-Jane Gwillim, *Acting* Janet Maylie, *Acting; Foundation advisor* Christianne Myers, *Costume Design; BFA advisor* Jerald Schwiebert, *Acting, Movement* Malcolm Tulip, *Acting; Movement; Directing; Directing Concentration Advisor; Interarts Co-Head* E.J. Westlake, *Theatre Studies; BTA advisor*

Lecturers

Toni Auletti, *Scene Painting* George Bacon, *Costume Construction* Mark Berg, *Sound and Lighting* Lynn Holbrook, *Costume Construction* Rich Lindsay, *Technical Production* Henry Reynolds, *Sound* Arthur Ridley, *Properties* Kerianne Tupac, *Arts Administration*

Adjunct Assistant Professor

Jeffrey S. Kuras, *Managing Director, University Productions* Nancy Uffner, *Stage Manager, University Productions*

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The undergraduate A.B. program in Theatre & Drama is intended to promote an understanding and appreciation of both those subjects, while recognizing their ultimate inseparability. The program's curriculum is designed primarily for those looking for a liberal arts education, one which could also lead to further academic study of theatre and drama. (For students planning a professional career in theatre, the department's B.F.A. or B.T.A. programs may be more appropriate.) The A.B. program also offers many courses to the nonconcentrator who is interested in theatre and drama and who may wish to participate in the processes of theatre-making.

Productions and Facilities. A number of fully executed productions are presented each year by the Theatre & Drama Department in three campus theatres – The Arthur Miller Theatre, Power Center for the Performing Arts, and the Lydia Mendelssohn Theatre. Scenery, properties, and costumes for all departmental productions are prepared, with substantial student assistance, in studios and shops in the Arthur Miller Theatre and Power Center. In addition, students have the opportunity to direct, design, stage, and perform in their own low-budget and experimental productions through Basement Arts. This student-run production organization performs in the Walgreen Drama Center.

Concentration Program. Students who are considering a concentration in Theatre & Drama are strongly encouraged to begin taking the foundation sequence of courses during their first or second year. These courses are: THTREMUS 211, 101 or 233, 250 and 251. Concentrators may, however, take these foundation courses after they have formally declared a Theatre concentration. The program requires a minimum of 40 to 43 credits including the cognate requirements indicated below. Each individual's program should be planned in consultation with the A.B. concentration advisor at the Department of Theatre and Drama. Inquire at the Department Office for a more detailed description of the concentration program.

Concentration Core. THTREMUS 102 or 240; 252; 321 and 322; 323; and 402. In addition, two cognate courses in drama: Shakespeare and Modern Drama (usually ENGLISH 367 and 447 or approved Residential College drama courses).

Students are also required to elect at least six credits in courses beyond the core, either in an area of specialty (History / Drama / Criticism; Performance; Design / Tech; or Administration) or in the general field of Theatre & Drama, as approved by the concentration advisor.

Honors Concentration. Qualified students are eligible for a departmental Honors concentration. Those with a cumulative grade point average of at least 3.4 are invited to contact the department office for further information.

African American Theatre Academic Minor

An academic minor in African American Theatre is not open to students with any concentration program in the Department of Theatre and Drama.

This academic minor provides students from CAAS, Women's Studies, Screen Arts and Cultures, and other departments with the opportunity to complement their major course of study with exposure to the history, literature, and practice of African American theatre. It fosters interdisciplinary thinking and practice among students matriculating in disciplines which naturally lend themselves to interdisciplinarity, using theatre as a matrix.

Students wishing to pursue an academic minor in African American Theatre must develop a specific plan for its completion in consultation with the Department of Theatre and Drama's designated advisor, Glenda Dickerson. For further information, contact her at glendad@umich.edu.

Prerequisites to the Academic Minor: THTREMUS 222, Introduction to Black Theatre.

Academic Minor Program: At least 15 credits of courses, to be chosen from the following three categories as stated:

- 1. Core Courses (9 credits):
 - 233, Acting and the Black Experience 324, Contemporary Black Theatre 326, Script Analysis for Black Writers and Directors
- Electives (6 credits): Students must select two elective courses. At least one (though usually both) of them must be from List A. In some circumstances, the second elective may be chosen from List B, but only in consultation with the academic minor advisor.

List A

- 332, Drama from Oral Sources
- 340, Black Theatre Workshop
- 440, Special Topics in African American Theatre and Drama 001: Comparing Black Aesthetics: Caribbean, African American & African Drama 002: African American Dramatic Literature

List B

- 212, Introduction to World Performance
- 240, Introduction to Design
- 242, Directing II
- 327, Playwriting II
- 442, Directing III

COURSES IN THE UNIVERSITY OF MICHIGAN SCHOOL OF MUSIC, THEATRE & DANCE

Credit Policies. Courses in the University of Michigan School of Music, Theatre & Dance are listed in the *Schedule of Classes* under the School of Music, Theatre & Dance. The courses listed below count as LSA courses for LSA degree credit. All other courses from the University of Michigan School of Music, Theatre & Dance are counted as non-LSA courses.

JAZZ & IMPROVISATIONAL STUDIES (JAZZ)

JAZZ 466. Jazz Improvistn I

Consent of instructor required. Music major or permission of instructor. (3). May be repeated for credit.

JAZZ 467. Jazz Improvistn II

Consent of instructor required. Permission of instructor. (3). May be repeated for credit.

MUSIC COMPOSITION (COMP)

COMP 139. Intro Basic Craft FR.COMP.MAJ. (3; 2 in the half-term). May be repeated for credit. COMP 140. Intro Basic Craft COMP 139. (2 - 3). May be repeated for credit. COMP 221. Intro Elem Comp NON-MUS ONLY. (3; 2 in the half-term). (CE). May be repeated for credit.

COMP 222. Composition COMP 221. (3; 2 in the half-term). (CE). May be repeated for credit.

COMP 239. Contd Basic Craft

Consent of instructor required. SO.COMP.MAJ. (2 - 3). May be repeated for credit. COMP 240. Contd Basic Craft

Consent of instructor required. COMP 239. (2 - 3). May be repeated for credit.

COMP 339. Adv Composition Consent of instructor required. JR.COMP.MAJ. (2 - 4). May be repeated for credit.

COMP 340. Adv Composition Consent of instructor required. COMP 339. (2 - 4). May be repeated for credit. COMP 415. Intro Electron Mus

(2). May be repeated for credit. COMP 416. Sem Electron Mus

COMP 415. (2). May be repeated for credit.

COMP 421. Creative Comp MUS&NON-MUS. (3; 2 in the half-term). May be repeated for credit.

COMP 422. Creative Comp *COMP 421. (3; 2 in the half-term). May be repeated for credit.*

COMP 423. Adv Composition

Consent of instructor required. Comp. 421 and 422. (2 - 4). May be repeated for credit. COMP 424. Adv Composition

Consent of instructor required. COMP 423. (2 - 4). May be repeated for credit.

COMP 425. Adv Composition Consent of instructor required. Composition 424. Individual instruction. Open to music students and students outside the School of Music. (2 - 4). May be repeated for credit.

COMP 426. Adv Composition Consent of instructor required. COMP 425. (2 - 4). May be repeated for credit.

COMP 439. Adv Composition Consent of instructor required. SR.COMP.MAJ. (2 - 4). May be repeated for credit.

COMP 440. Adv Composition Consent of instructor required. COMP 439. (2 - 4). May be repeated for credit.

COMP 450. Undergrad Seminar Elect concurrently with THEORY 239, 240, 339, 340, 439, 440, 423, 424, 425, 426. (1). May be repeated for credit. Non-Rackham Graduate credit.

COMP 515. Intro Electron Mus (2). May be repeated for credit.

COMP 516. Sem Electron Mus *COMP 515. (2). May be repeated for credit.*

COMP 526. Adv Stdy Elec Mus Consent of instructor required. 516/EQ/P.I. (2 - 4). May be repeated for credit.

COMP 601. Independent Study Consent of instructor required. (2 - 4). May be repeated for credit.

MUSIC HISTORY AND MUSICOLOGY (MUSICOL)

MUSICOL 111 / THEORY 111. The Foundations of Rock (3). (HU). May not be repeated for credit.

MUSICOL 121. Introduction to the Art of Music NON-MUS ONLY. (3). (HU). May not be repeated for credit. No prior musical experience is required. W.

MUSICOL 122. Intro World Music NON-MUS ONLY. (3). (HU). May not be repeated for credit.

MUSICOL 123. Introduction to Popular Music (3). (HU). May not be repeated for credit. F.

MUSICOL 130. Special Course (2 - 3). May be repeated for a maximum of 6 credits.

MUSICOL 131. Special Course (2 - 3). May be repeated for a maximum of 6 credits.

MUSICOL 139. Intro to Mus S M STU ONLY. (2). (HU). May not be repeated for credit.

MUSICOL 140. History of Music S M STU ONLY. (2). (HU). May not be repeated for credit.

MUSICOL 239. History of Music S M STU ONLY. (2). (HU). May not be repeated for credit.

MUSICOL 240. History of Music S M STU ONLY. (2). (HU). May not be repeated for credit.

MUSICOL 305. Special Course NON-MUS ONLY. (3). May not be repeated for credit.

MUSICOL 343. Music and Islam (3). (ID). May not be repeated for credit.

MUSICOL 345. History of Music NON-MUS ONLY. (3). (HU). May not be repeated for credit.

MUSICOL 346. History of Music NON-MUS ONLY. (3). (HU). May not be repeated for credit.

MUSICOL 405. Special Course UG.ONLY. (1 - 3; 1 - 2 in the half-term). May be repeated for credit.

MUSICOL 406. Special Course (2 - 4; 1 - 2 in the half-term). May be repeated for credit.

MUSICOL 407. Special Course UG.ONLY. (1 - 3; 1 - 2 in the half-term). May be repeated for credit.

MUSICOL 408. Special Course UG.ONLY. (1 - 3; 1 - 2 in the half-term). May be repeated for credit.

MUSICOL 411. Hist of Symphony UG.ONLY. (3). May not be repeated for credit.

MUSICOL 413. History of Opera UG.ONLY. (3; 2 in the half-term). May not be repeated for credit.

MUSICOL 414. 19-20th Cent Opera UG ONLY. (3). May not be repeated for credit.

MUSICOL 417. History of Jazz (3). May not be repeated for credit.

MUSICOL 420. Mus of the Baroque UG.ONLY. (3; 2 in the half-term). May not be repeated for credit. MUSICOL 421. Mus Classic Era UG.ONLY. (3; 2 in the half-term). May not be repeated for credit.

MUSICOL 422. 19th C Music UG.ONLY. (3; 2 in the half-term). May not be repeated for credit.

MUSICOL 423. 20th C Music 240/EQ. (3; 2 in the half-term). May not be repeated for credit.

MUSICOL 424. The Art Song UG.ONLY. (3). May not be repeated for credit.

MUSICOL 426. Music and Language (3). May not be repeated for credit.

MUSICOL 450. Music in U S UG.ONLY. (3). May not be repeated for credit.

MUSICOL 458. Mus in Culture UG ONLY. (3). May not be repeated for credit.

MUSICOL 460. Eur-Am Folk&Pop Mus UG ONLY. (3). May not be repeated for credit.

MUSICOL 464 / CAAS 464. Music of Latin America and the Caribbean CAAS 202. (3). May not be repeated for credit.

MUSICOL 466. Music of Asia I (3). May not be repeated for credit.

MUSICOL 467. Music of Asia II

(3). May not be repeated for credit. **MUSICOL 477. Medieval Music** UG ONLY. (3). May not be repeated for credit.

MUSICOL 478. Renaissance Music UG ONLY. (3). May not be repeated for credit.

MUSICOL 481. Special Projects Consent of instructor required. UG W P.I. (1 - 4). May not be repeated for credit.

MUSICOL 509. Teaching an Introduction to Music

(2). May not be repeated for credit.

MUSICOL 705. Special Course See Time Schedule for title in any particular term. (3; 2 in the half-term). May not be repeated for credit.

MUSICAL THEATRE (MUSTHTRE)

MUSTHTRE 133. Intro Mus Thtre I FRSH M T MAJ. (2). May not be repeated for credit.

MUSTHTRE 134. Intro Mus Thtre I I FRSH M T MAJ. (2). May not be repeated for credit. (non-LSA).

MUSTHTRE 441. Hist Musical Theatr SEE BULLETIN. (3). May not be repeated for credit. MUSTHTRE 442. Hist Musical Theatr

Consent of instructor required. SEE BULLETIN. (3). May not be repeated for credit.

PERFORMING ARTS TECHNOLOGY (PAT)

PAT 201. Introduction to Computer Music Consent of instructor required. PER.INSTR. (3). May not be repeated for credit.

MUSIC THEORY (THEORY)

THEORY 111 / MUSICOL 111. The Foundations of Rock (3). (HU). May not be repeated for credit.

THEORY 135. Intro Music Theory Music Theory Major *THTR MAJORS. (3). May be repeated for credit.*

THEORY 137. Intro Mus Theory No previous formal training in music theory only basic understanding of musical notation. (3). (HU). May not be repeated for credit.

THEORY 139. Bmus Aural Sk I 129/SURV TEST. (1). May not be repeated for credit.

THEORY 140. Bmus Aural Sk I I THEORY 139. (1). May not be repeated for credit.

THEORY 149. Bmus Wrtg Sk I (2). May not be repeated for credit.

THEORY 150. Bmus Wrtg Sk I I THEORY 149. (2). May not be repeated for credit.

THEORY 160. Accel Wrtg Sk I l Consent of instructor required. THEORY 139; 149; by invitation only. (3). May not be repeated for credit.

THEORY 211. Basic Th at Keybd THRY 140,150. (2). May not be repeated for credit.

THEORY 212. Basic Th at Keybd THEORY 211. (2). May not be repeated for credit.

THEORY 236. Intro Music Analysis Music Theatre Major THEORY 135. (3). May be repeated for credit.

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THEORY 238. Introduction Music Analysis THEORY 137. (3; 2 in the half-term). (HU). May not be repeated for credit.

THEORY 239. Bmus Aural Sk I I I

THEORY 140. (1). May not be repeated for credit.

THEORY 240. Bmus Aural Sk I V THEORY 239. (1). May not be repeated for credit.

THEORY 249. Bmus Wrtg Sk III THEORY 140; 150. (2). May not be repeated for credit.

THEORY 250. Bmus Wrtg Sk I V THEORY 249. (2). May not be repeated for credit.

THEORY 259. Accel Wrtg Sk III Consent of instructor required. THEORY 140; 160. (3). May not be repeated for credit. THEORY 334. Soph Thry-Writn Skl

THRY 332&333. (2). May not be repeated for credit. THEORY 407. Directed Indiv Stdy

Consent of instructor required. Permission of department chairman. (2 - 4). May be repeated for credit.

THEORY 408. Senior Project Consent of instructor required. SR.MAJ THRY. (2). May not be repeated for credit.

THEORY 430. Advanced Anl Tonal Music *THEORY 240; 250 or 259. (3). May not be repeated for credit.*

THEORY 433. Analysis of 20th-Century Modernist Music *THEORY 240; 250 or 259. (3). May be repeated for credit.*

THEORY 435. Pop-Rock Music Theory THEORY 240; 250 or 259. (3). May be repeated for credit. Non-Rackham Graduate credit.

THEORY 436. Analytical History of Jazz THEORY 240; 250 or 259. (3). May not be repeated for credit.

THEORY 442. 18th C Counterpoint THEORY 240; 250 or 259. (3). May not be repeated for credit. F.

THEORY 443. 18th C Counterpoint *THEORY 442. (3). May not be repeated for credit.*

THEORY 454. Orchestration I THEORY 240; 250 or 259. (3). May not be repeated for credit.

THEORY 455. Orchestration II THEORY 454. (3). May not be repeated for credit.

THEORY 460. Special Courses Consent of instructor required. 250 or permission of instructor. (3). May be repeated for credit.

THEORY 531. Schenkerian Theory and Analysis I Consent of instructor required. Music Theory 430 or 461; permission of instructor. (3; 2 in the half-term). May not be repeated for credit.

THEORY 532. Schenkerian Theory and Analysis II THEORY 531 with permission of instructor. (3). May not be repeated for credit.

THEORY 534. Twentieth Century Music: Theory and Analysis I Consent of instructor required. THEORY 433 or 533; or permission of instructor. (3). May not be repeated for credit.

THEORY 535. Pop-Rock Music Theory

THEORY 240; 250 or 259; or permission of instructor. (3). May be repeated for credit. THEORY 537. Proseminar in the Analysis of Music

THEORY 430 or 461; or permission of instructor. (3; 2 in the half-term). May not be repeated for credit.

THEORY 552. Project in Tonal Composition

Consent of instructor required. Theory majors only; permission of instructor. (2). May not be repeated for credit.

THEORY 560. Special Studies

Consent of instructor required. THEORY 240; 250 or 259; with permission of instructor. (2 - 3). May be repeated for credit.

THEORY 570. Directed Individual Study

Consent of instructor required. Must secure permission from chairman, Dept of Music Theory, during term prior to that of enrollment. (1 - 4). May be repeated for credit.

THEORY 590. Teaching Tonal Theory Consent of instructor required. THEORY 430 or 461; with permission of instructor. (3). May not be repeated for credit.

THEORY 805. Seminar in Theory

Permission of instructor. (3; 2 in the half-term). May not be repeated for credit.

THEORY 807. Research Project

Consent of instructor required. Permission of department chairman. (2 - 4). May not be repeated for credit.

THEATRE AND DRAMA (THTREMUS)

THTREMUS 101. Introduction to Acting I

Consent of instructor required. Open to non-concentrators. Consent of instructor required. (3). (CE). May not be repeated for credit. THTREMUS 102. Intro to Acting II

Consent of instructor required. Consent of instructor. (3). (CE). May not be repeated for credit.

THTREMUS 110. Introduction to Acting for the Camera

THTREMUS 101 and/or permission of instructor. (3). (CE). May not be repeated for credit.

THTREMUS 211 / ENGLISH 245 / RCHUMS 280. Introduction to Drama and Theatre (3; 2 in the half-term). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RCHUMS 281.

THTREMUS 222 / CAAS 341. Introduction to Black Theatre CAAS 201. (3; 2 in the half-term). (HU). May not be repeated for credit.

THTREMUS 227 / ENGLISH 227. Introductory Playwriting (3; 2 in the half-term). (CE). May not be repeated for credit.

THTREMUS 233 / CAAS 342. Acting and the Black Experience Permission of instructor (brief interview). CAAS 201 recommended. (3). (HU). May not be repeated for credit.

THTREMUS 240. Introduction to Design THTREMUS 250. (3). (CE). May not be repeated for credit.

THTREMUS 245. Introduction to Stage Management THTREMUS 250. (2 - 3). (CE). May not be repeated for credit.

THTREMUS 250. Introduction to Technical Theatre Practices

(3; 2 in the half-term). May not be repeated for credit. THTREMUS 251. Prod Practicum I

Permission of instructor. (1). May not be repeated for credit.

THTREMUS 252. Prod Practicum II THTREMUS 251 and permission of instructor. (1). May not be repeated for credit.

THTREMUS 256. Lighting Design I THTREMUS 250. (3). May not be repeated for credit.

THTREMUS 260. Scene Design I THTREMUS 250. (3). May not be repeated for credit.

THTREMUS 261. Prod Practicum III THTREMUS 250 and 251. (1). May not be repeated for credit.

THTREMUS 262. Prod Practicum IV *THTREMUS 261. (1). May not be repeated for credit.*

THTREMUS 270. Costume Design I THTREMUS 240/P.I. (3). May not be repeated for credit.

THTREMUS 277. History of Dress *Permission of instructor. (3). May not be repeated for credit.*

THTREMUS 321 / ENGLISH 443. History of Theatre I (3). May not be repeated for credit.

THTREMUS 322 / ENGLISH 444. History of Theatre II (3). May not be repeated for credit.

THTREMUS 323 / ENGLISH 349. American Theatre and Drama (3). (HU). May not be repeated for credit.

THTREMUS 324. Contemporary Black Theatre THTREMUS 222. (3). May not be repeated for credit.

THTREMUS 326. Script Analysis for Black Writers and Directors THTREMUS 222. (3 in the half-term). May not be repeated for credit.

THTREMUS 327 / ENGLISH 327. Intermediate Playwriting ENGLISH 227. (3; 2 in the half-term). May not be repeated for credit.

THTREMUS 332. Performing Gender: Drama from Oral Sources

THTRE 222. (3 in the half-term). May not be repeated for credit. THTREMUS 340. Black Theatre Workshop

THTREMUS 222/233/P.I. (3 in the half-term). May not be repeated for credit.

THTREMUS 345. Stage Mgmt Pract Consent of instructor required. THTREMUS 245. (2 - 6). May be repeated for a maximum of 6 credits.

THTREMUS 350. Scenic Constructn I THTREMUS 250&362/P.I. (3). May not be repeated for credit.

THTREMUS 351. Prod Practicum V THTREMUS 261 and 262. (1 - 3). May not be repeated for credit.

THTREMUS 352. Prod Practicum VI THTREMUS 351. (1 - 3). May not be repeated for credit.

THTREMUS 353. Sound for Theatre Consent of instructor required. Consent of instructor required. THTREMUS 250&P.I. (2). May be elected five times for credit. W.

THTREMUS 356. Lighting Design II Consent of instructor required. Consent of instructor required. THTREMUS 256/P.I. (3). May not be repeated for credit.

THTREMUS 360. Scene Design II Consent of instructor required. Consent of instructor required. THTREMUS 260/P.I. (3). May not be repeated for credit.

THTREMUS 385. Performing Arts Management

Consent of instructor required. THTREMUS 250 and permission of instructor. (2). May not be repeated for credit.

THTREMUS 386. Prac Perfor Art Mgt Consent of instructor required. PER. INSTR. (3). May not be repeated for credit.

THTREMUS 399. Topics in Drama (1 - 4). May be repeated for credit.

THTREMUS 400. Directed Reading

Consent of instructor required. Undergraduate standing; and consent of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

THTREMUS 401. Independent Study

Consent of instructor required. PER. INSTR. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

THTREMUS 402. Ideas of Theatre

PER. INSTR. (3). May not be repeated for credit.

THTREMUS 403. Des&Prod Forum I (2). May not be repeated for credit.

THTREMUS 404. Des&Prod Forum II (2). May not be repeated for credit.

THTREMUS 427 / ENGLISH 427. Advanced Playwriting

Consent of instructor required. ENGLISH 327. (3; 2 in the half-term). May be repeated for a maximum of 6 credits.

THTREMUS 429. Playwr Production

Consent of instructor required. THTREMUS 327/P.I. (3). May not be repeated for credit. W. **THTREMUS 440. Special Topics in African American Theatre and Drama** *THTREMUS 222. (3 in the half-term). May not be repeated for credit.*

THTREMUS 445. Stage Mgmt Pract Consent of instructor required. THTREMUS 245. (2 - 6). May be repeated for a maximum of 6 credits.

THTREMUS 452. Costume Construction Consent of instructor required. (3). May not be repeated for credit. W.

THTREMUS 462. Drafting Consent of instructor required. THTREMUS 250. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in THTREMUS 362. Undergraduates must elect THTREMUS 362.

THTREMUS 464. Sc Paint for Theatr THTREMUS 250. (3). May not be repeated for credit.

THTREMUS 466. History of Decor

Permission of instructor. (3). May not be repeated for credit. W.

THTREMUS 471. Womens Pattern Drafting Consent of instructor required. THTREMUS 452. (3). May not be repeated for credit.

THTREMUS 476. Costume Crafts

Consent of instructor required. (3). May not be repeated for credit.

Native American Studies (see American Culture)

Near Eastern Studies

4111 Thayer Academic Building 202 South Thayer Street (734) 764-0314 (phone) (734) 936-2679 (fax) www.umich.edu/~neareast Professor Gary Beckman, Chair

Professors

Kevork Bardakjian (Marie Manoogian Professor of Armenian Language and Literature), Armenian language, literature, and culture

Gary Beckman, Hittite and Mesopotamian studies, ancient history

- Jeffrey Heath, *historical linguistics, morphology, Arabic, linguistics anthropology*
- Sherman Jackson (Arthur F. Thurnau Professor), *medieval Islamic law and theology*
- Alexander Knysh, Islamic studies and the Arabian Peninsula
- Trevor LeGassick, Arabic writings: imaginative, poetic, and nonfictional, 19th and 20th centuries
- Piotr Michalowski (George G. Cameron Professor of Ancient Near Eastern Languages and Civilizations), *Sumerian and Akkadian languages, literatures, and history; literary theory*

Raji M. Rammuny, Arabic language, culture, and teacher training

Anton Shammas, Middle Eastern literature

Norman Yoffee, Assyriology, Mesopotamian civilizations, Near Eastern archaeology, anthropology

Associate Professors

Mohammad T. Alhawary, *Arabic studies and second language acquisition*

Kathryn Babayan, Iranian history and culture

Carol Bardenstein, Arabic language, literature, and culture

Gabriele Boccaccini, second temple Judaism and early Rabbinic literature

Michael Bonner, medieval Islamic history

Yaron Eliav, Rabbinic literature, Jewish history of late antiquity

Elliot Ginsburg, Jewish thought

Gottfried Hagen, Turkish language and culture

Karla Mallette, Medieval Mediterranean literature in Italian, Arabic, Latin

Janet Richards, *Egyptology*

Brian B. Schmidt, Ancient West Asian cultures and the Hebrew Bible

Arthur Verhoogt*, Papyrology and Greek* Terry Wilfong, *Egyptology*

Assistant Professors

Maya Barzilai, *modern Hebrew and Jewish culture* Ellen Muehlberger, *Christianity in late antiquity* Shachar Pinsker, *Hebrew literature and culture*

Professors Emeriti James A. Bellamy, Edna Amir Coffin, John Kolars, Charles Krahmalkov, Ernest N. McCarus, George E. Mendenhall, Louis L. Orlin, Gene Schramm, Gernot L. Windfuhr

The Department of Near Eastern Studies offers instruction in the languages, literatures, histories, cultures and religions of the ancient Near East and the medieval and modern Middle East. The department's language offerings provide the foundation for the academic study of the literatures, histories, cultures and religions of the region. The ancient language offerings include Sumerian, Egyptian, Akkadian, Hittite, Ugaritic, Avestan, Aramaic, and Classical Hebrew. The medieval and modern language offerings include Armenian, Arabic, Hebrew, Persian, Turkish, and Uzbek. The undergraduate programs in the department are designed to initiate the academic study of the region, enhance the student's critical skills, and promote an increased understanding of the historical processes underlying the transformation of cultures.

Prerequisite to Concentration. All Near Eastern Studies concentrators must complete the prerequisite course ACABS 100/AAPTIS 100/HJCS 100/HJSTORY 132: Peoples of the Middle East.

Concentration Programs. The student must select one of four divisions in Near Eastern Studies in which to pursue a concentration. Three divisions with special language requirements are: Ancient Civilizations and Biblical Studies (ACABS); Arabic, Armenian, Persian, Turkish and Islamic Studies (AAPTIS); or Hebrew and Jewish Cultural Studies (HJCS). Each of the three divisions provides specific programs to enhance the focus of the concentration. The department also offers a general studies concentration in Near Eastern Civilizations (NEC), a concentration without the language component of other program concentrations. A concentration in the department requires completion of course work in four categories: the prerequisite courses, the required language courses, the divisional elective courses and the optional elective or cognate courses. The divisions and their programs are described below. Near Eastern Studies also

offers academic minors in Near Eastern Languages and Cultures and Early Christian Studies.

All Near Eastern Studies concentrators must complete a minimum of thirty hours of concentration credit in the languages, literatures, histories, cultures and religions of the region. In addition, each concentrator must select two additional courses from offerings other than those provided by the division of concentration. Both cognate courses must be approved by the director of undergraduate studies and the student's concentration advisor. The student must maintain at least a grade of a C in each term of a required concentration language. Those courses for which a student receives a lesser grade must be repeated.

Honors Concentration. Concentrators who qualify as candidates for Honors in Near Eastern Studies are those who meet the requirements for a regular concentration, maintain a GPA of at least 3.4 overall and 3.5 in the concentration, and complete the writing of a senior thesis with distinction. Honors concentrators are required to enroll in the thesis course (498) both academic terms of their senior year, for not less than three or more than six credits per term. Further information concerning the Honors concentration can be obtained at the departmental office or the Honors Program Office (1330 Mason Hall).

Advising. Students interested in the department's concentration programs in ACABS, AAPTIS, HJCS, or NEC should contact the department's director of undergraduate studies who will direct the student to the appropriate concentration advisor. Students who plan to complete the concentration requirements for a Bachelor of Arts degree in Near Eastern Studies must complete the LSA concentration/minor *Declaration Form*. This form is available at the departmental office, or at the Academic Advising Center (1255 Angell Hall).

Arabic Language Flagship Program. The University of Michigan Arabic Language Flagship Program (ALF) is a three-year program that provides training in Arabic language and culture at the undergraduate level. Qualified students are given the opportunity to achieve the ACTFL Superior Level proficiency in Arabic while pursuing an undergraduate major of their choice. The program also offers students the opportunity to study abroad through the Language Flagship Center in Alexandria, Egypt administered by the American Councils for International Education. For more information visit www.umich.edu/~neareast/arabic/flagship.html.

Undergraduate Prizes. The Department of Near Eastern Studies awards eight annual student prizes for excellence in ancient Near Eastern and medieval and modern Middle Eastern studies:

- The George G. Cameron Award in Ancient Civilizations and Biblical Studies
- The George and Celeste Hourani Award in Arabic, Persian, Turkish, and Islamic Studies
- K. Allin Luther Award for Excellence in Persian
- Ernst McCarus Prize in Arabic
- The Ernest T. Abdel Massih Award in Arabic
- The Leroy T. Waterman Award in Hebrew and Jewish Cultural Studies
- The Wechsler Award for Hebrew Writing
- Esther and Wolf Snyder Award in Hebrew and Jewish Cultural Studies

Associated Units and Resources. The department's offerings represent only a part of the total number of the University's courses devoted to the study of the ancient Near East and medieval and modern Middle East. Other campus units that can provide resources and relevant course offerings to the concentrator include:

- The Center for Middle Eastern and North African Studies (CME-NAS)
- The Center for Judaic Studies
- The Program in Comparative Literature

For other resources and course offerings, applicants should consult the listings in the departments and program units of Anthropology, Classical Studies, History, History of Art, Linguistics, Philosophy, and Political Science.

Study Abroad. The department has affiliations with several universities and programs abroad, and concentrators are strongly encouraged to spend all or part of an academic year overseas in order to further their formal training. In addition to consulting the University of Michigan's Center for Global and Intercultural Study (CGIS), the International Center and the International Institute, concentrators should contact their concentration advisor and the director of undergraduate studies concerning such a course of study. A program should be decided upon in advance in order to ensure that transfer credit can be awarded and that courses will satisfy concentration requirements.

Ancient Civilizations and Biblical Studies (ACABS)

May be elected as a departmental concentration program

The division of *Ancient Civilizations and Biblical Studies (ACABS)* offers instruction at the introductory to advanced levels in the languages, literatures, histories, cultures, and religions of the ancient Near East (Anatolia, Egypt, Mesopotamia, Israel, Jordan, and Syria). The concentrator in ACABS can select from *one of four options* within the division designed to meet the special interests of the student:

- · Ancient Mesopotamia,
- · Hebrew Bible and Ancient Israel,
- New Testament and Early Christianity, or
- Ancient Egypt.

The course, ACABS 100: Peoples of the Middle East, is the prerequisite to the ACABS concentration. The concentrator in ACABS is required to complete four terms of language. The languages for which four terms of instruction are offered include Akkadian, Classical Hebrew, and Classical Greek. Fourth-term proficiency in Classical Hebrew or Classical Greek satisfies the language requirement of the College of LSA. The student has the option to complete only two terms of one of those three languages and two subsequent terms of a second (and third) language. In place of four terms of one language, the concentrator can select one of the following language options:

- one year of Akkadian followed by one year of Sumerian
- one year of Classical Hebrew followed by one term of Aramaic and another of Ugaritic
- one year of Classical Hebrew followed by one year of Classical Greek
- one year of Middle Egyptian and one year of one of the following languages: Classical Greek, Classical Hebrew, or Akkadian.

In addition to the four terms of language, the ACABS concentrator must elect six additional courses in the languages, literatures, histories, and cultures and religions of the ancient Near East. These six divisional courses are to be selected from the four course levels: one at the 100-level, one at the 200-level, one at the 300-level, and three at the 400-500-level. The concentrator must also complete two cognate courses outside the division of concentration. The concentration courses must be approved by the director of undergraduate studies and the concentration advisor. Please contact the departmental secretary to make an appointment with the concentration advisor.

Arabic, Armenian, Persian, Turkish, and Islamic Studies (AAPTIS)

May be elected as a departmental concentration program

The division of *Arabic, Armenian, Persian, Turkish, and Islamic Studies (AAPTIS)* offers instruction at the introductory to the advanced levels in medieval and modern Arabic, Armenian, Persian, and Turkish languages and literatures. Courses in the histories and

cultures of select regions represented by these language groups are also offered as are a wide range of topics in Islamic studies. The concentrator in AAPTIS can select from *one of five options* within the division designed to meet the special interests of the student:

- Arabic,
- Armenian,
- Persian,
- Turkish, or
- Islamic Studies.

The course, AAPTIS 100: Peoples of the Middle East, is the prerequisite to the AAPTIS concentration. A concentrator in AAPTIS must complete four terms of a single language. Fourth-term proficiency in Arabic, Armenian, Persian, or Turkish satisfies the language requirement of the College of LSA. These concentrators must also select five other courses in the languages, literatures, linguistics, histories, cultures, and religions most closely related to their language of choice. Two of the five courses must be at the 400-level or above. The concentrator must complete two cognate courses outside the division of concentration. These courses must be approved by the director of undergraduate studies and the concentration advisor. Students in Islamic Studies must either concentrate on Arabic (four terms) or complete two terms of Arabic and two terms of Armenian, Persian, or Turkish depending on their area of focus.

The student should consult with the director of undergraduate studies and the concentration advisor in selecting the appropriate concentration program. Please contact the departmental secretary to make an appointment with the concentration advisor.

Hebrew and Jewish Cultural Studies (HJCS)

May be elected as a departmental concentration program

The division of *Hebrew and Jewish Cultural Studies (HJCS)* offers instruction at the introductory to the advanced level in Hebrew language, literature and culture. Learning the language enables students to engage in the study of historical, literary and religious texts, as well as study the politics, folklore, anthropology of the culture, using texts and various media, including film. The study of Classical and Modern Hebrew texts provides students with an integrated view of the development of Hebrew and Jewish literature and culture. The program offers a variety of upper division courses in these areas, making it possible for students to create a concentration in HJCS.

Summary: All concentrators in HJCS are required to complete HJCS 100: Peoples of the Middle East. A HJCS concentrator must complete four terms of Hebrew (HJCS 101, 102, 201, 202) and five additional courses, including advanced Hebrew (HJCS 301), two upper-division courses taught in Hebrew, or which require the reading of Hebrew texts, and two additional courses in the fields of Jewish, Israeli or Hebrew literature, history, or culture. A student who places out of HJCS 301 is required to take an additional Hebrew course. The concentrator must also complete two cognate courses outside HJCS. These courses must be approved by the concentration advisor.

Prerequisites to Concentration. HJCS 100, 101 and 102.

Concentration Program. A minimum of 24 credits, distributed as follows:

- 1. Language courses: HJCS 201, 202, and 301
- Language, Literature, History & Culture courses: four courses, two of which must be offered in Hebrew.
- 3. **Cognates:** In consultation with the concentration advisor and the director of undergraduate studies, the student must select a minimum of two cognate courses outside HJCS. This may include course selections from Biblical and Rabbinic studies, from other divisions within the department of Near Eastern Studies, and cross-listed courses.

Near Eastern Civilizations (NEC)

May be elected as a departmental concentration program

The Department of Near Eastern Studies also offers a general departmental studies concentration. The purpose of this concentration is to provide the student with an intensive survey of the literatures, histories, cultures, and religions of the ancient Near East and the medieval and modern Middle East but without the language component of the other program concentrations. The student who wishes to declare a concentration in Near Eastern Civilizations (NEC) may substitute for the four terms of language an equal number of courses in literature, history, or culture and religion. The NEC concentrator must complete at least six of the ten total courses in one of the three SUBJECTs within the department, ACABS, AAPTIS, or HJCS, three of these must be at the 400-500 level. At least one course must be taken in each of the other SUBJECTs. In addition, the student must take two cognate courses in SUBJECTs other than the main SUBJECT in Near Eastern Studies, or outside the department. As with the other concentrations, the minimum number of credits for NEC is 30 and the prerequisite course is ACABS 100/AAPTIS 100/HJCS 100/HISTORY 132, Peoples of the Middle East. Honors is not normally awarded to the student in NEC, although petitions for exceptions can be made to the director of undergraduate studies.

To declare this concentration, the student must obtain prior approval from the director of undergraduate studies and the concentration advisor. Please contact the departmental secretary to make an appointment with the concentration advisor.

NEC Requirements in summary:

- A. Prerequisites to the Concentration
 - 1. Approval of director of undergraduate studies
 - 2. ACABS 100/AAPTIS 100/HJCS 100/HISTORY 132: Peoples of the Middle East
- B. Distribution by SUBJECT
 - 1. Six of ten courses in one SUBJECT
 - 2. A minimum two other courses with one in each of the other two $\ensuremath{\mathsf{SUBJECTs}}$
 - 3. Two cognate courses outside the main SUBJECT
- C. Levels Distribution
 - 1. Five of ten at 400-500 level
 - 2. Three at 400-500 level in SUBJECT where the six courses are selected
 - 3. At least one each at 100-, 200-, and 300-level.

Near Eastern Studies Academic Minors

Early Christian Studies

An academic minor in Early Christian Studies is not open to students with a concentration or another academic minor in the Department of Near Eastern Studies or Classical Studies.

The academic minor in Early Christian Studies provides students with the opportunity of gaining fundamental knowledge of early Christianity in its Near Eastern and Classical contexts, through the study of lower and upper level language and humanities courses in the Near Eastern Studies and Classical Studies Departments.

Students interested in the academic minor in Early Christian Studies should develop a specific plan for its completion in consultation with the appropriate advisor. Appointments are scheduled in the department office.

Prerequisites to the Academic Minor:

- 1. ACABS 122/ RELIGION 122: Introduction to the New Testament
- 2. Three terms of classical or koine Greek

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Academic Minor Program: At least 16 credit hours of courses to be chosen from the following categories.

- At least one broad introductory course in the fundamentals of early Christianity (ACABS 221: Jesus and the Gospels), or in early Christianity in its Near Eastern context (ACABS 200: Introduction to World Religions: Near Eastern Religions), or its Mediterranean context (HISTORY 201: The Roman Empire and its Legacy). [4 credits minimum]
- 2. At least two upper-level courses in the literature of early Christianity in the original Greek (GREEK 307, 308, 427, 428, 429 and courses currently under development). [6 credits minimum]
- At least two upper level (300-400 level) courses in early Christianity and its Mediterranean roots. [6 credits minimum]
 - ACABS 322, 323, 421, 491 (section subtitled "Jewish Life in Late Antiquity)
 - CLARCH 442
 - CLCIV 456, 466, 476
 - HISTORY 307, 405
 - HISTART 442
 - RELIGION 359, 468, 476

Near Eastern Languages and Cultures

An academic minor in Near Eastern Languages and Cultures is not open to students with a concentration or another academic minor in the Department of Near Eastern Studies.

The academic minor in Near Eastern Languages and Cultures provides students with the opportunity of gaining fundamental knowledge of Near East civilizations, through the study of lower and upper level language and humanities courses in one of the three divisions of the Near Eastern Studies Department, Ancient Civilizations and Biblical Studies (ACABS), Arabic, Armenian, Persian, Turkish, and Islamic Studies (AAPTIS), and Hebrew and Jewish Cultural Studies (HJCS).

Students interested in the academic minor in Near Eastern Languages and Cultures should develop a specific plan for its completion in consultation with the appropriate advisor. Appointments are scheduled in the department office.

Prerequisites to the Academic Minor:

- 1. AAPTIS 100 / ACABS 100 / HJCS 100 / HISTORY 132: Peoples of the Middle East.
- 2. First three terms of a Near Eastern language: Akkadian and Sumerian, Classical Hebrew, Arabic, Armenian, Persian, Turkish, or Modern Hebrew

Academic Minor Program: At least 16 credits of courses to be chosen from the following categories:

- 1. **Language course:** Fourth term of the Near Eastern language chosen for the prerequisite.
- Culture/Society courses: at least three courses in the same division as the language chosen for the prerequisite, one of which must be at the 400- or 500-level.

Because of the great variety of divisions in Near Eastern Studies, and the diversity of its curriculum, there is no pre-set sequence, but courses are chosen from the set of courses open for concentration. Each student determines his or her course work in consultation with a concentration advisor at the beginning of the program. Student progress will be regularly monitored by the appropriate undergraduate advisor.

COURSES IN NEAR EASTERN STUDIES

ANCIENT CIVILIZATIONS & BIBLICAL STUDIES (ACABS)

ACABS 100 / AAPTIS 100 / HISTORY 132 / HJCS 100. Peoples of the Middle East (4). (HU). May not be repeated for credit. Taught in English.

ACABS 101. Elementary Classical Hebrew I

(3). May not be repeated for credit. F.

ACABS 102. Elementary Classical Hebrew II ACABS 101. (3). May not be repeated for credit. W.

ACABS 121 / RELIGION 121. Introduction to the Tanakh/Old Testament (3). (HU). May not be repeated for credit.

ACABS 122 / RELIGION 122. Introduction to the New Testament (4; 3 in the half-term). (HU). May not be repeated for credit.

ACABS 200 / AAPTIS 200 / HJCS 200 / RELIGION 201. Introduction to World Religions: Near Eastern

(4; 3 in the half-term). (HU). May not be repeated for credit. F.

ACABS 201. Intermediate Classical Hebrew, I ACABS 102. (3). May not be repeated for credit. F.

ACABS 202. Intermediate Classical Hebrew, II

ACABS 201. (3). (Lang Req). May not be repeated for credit. W.

ACABS 221 / RELIGION 280. Jesus and the Gospels (4; 3 in the half-term). (HU). May not be repeated for credit.

ACABS 238 / AAPTIS 238 / GEOSCI 238 / HISTORY 238. A History of Everything (4; 3 - 4 in the half-term). (ID). May not be repeated for credit.

ACABS 261. Ancient Egypt: Religion and Culture

(4; 3 in the half-term). May not be repeated for credit.

ACABS 270 / HJCS 270 / JUDAIC 270 / RELIGION 270. Introduction to Rabbinic Literature

(3). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in HJCS 470/JUDAIC 470 or HJCS 570/ACABS 570/JUDAIC 570. Taught in English.

ACABS 277 / AAPTIS 277 / HISTORY 277 / HJCS 277 / JUDAIC 277 / RELIGION 277. The Land of Israel/Palestine through the Ages

(4; 3 in the half-term). (HU). May not be repeated for credit. Taught in English.

ACABS 281. Ancient Egypt and its World

(4; 3 in the half-term). (HU). May not be repeated for credit.

ACABS 291. Topics in Ancient Civilizations and Biblical Studies

(3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

ACABS 307 / GREEK 307. The Synoptic Gospels: Matthew, Mark and Luke

GREEK 101 and 102; and permission of instructor. (3). May not be repeated for credit. Taught in Greek. The language requirement is satisfied with successful completion of both ACABS 307 AND 308.

ACABS 308 / GREEK 308. The Acts of the Apostles

GREEK 101 and 102; and permission of instructor. (3). (Lang Req). May not be repeated for credit. Taught in Greek. The language requirement is satisfied with successful completion of both ACABS 307 AND 308.

ACABS 321 / HISTORY 306 / RELIGION 358. Israel Before the Exile (587 BCE): Its History & Religion

(3). (HU). May not be repeated for credit.

ACABS 322 / HISTORY 307 / RELIGION 359. History and Religion of Ancient Judaism May be elected independently of ACABS 321/HISTORY 306/RELIGION 358. (4; 3 in the half-term). (HU). May not be repeated for credit.

ACABS 323 / RELIGION 350. Christianity after the New Testament: The First Six Centuries

(4; 3 in the half-term). May not be repeated for credit.

ACABS 324 / ANTHRARC 384 / HISTORY 324. Ancient Mesopotamia: History and Culture

Junior standing. (4; 3 in the half-term). (ID). May not be repeated for credit.

ACABS 382 / ANTHRARC 381 / HISTART 382. Introduction to Egyptian Archaeology (4; 3 in the half-term). (HU). May not be repeated for credit.

ACABS 395. Ancient Civilizations and Biblical Studies: Directed Readings

Consent of instructor required. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits. F, W, Sp/Su, Sp, Su.

ACABS 411. Introduction to Akkadian (3). May not be repeated for credit. F.

ACABS 412. Akkadian Texts

ACABS 411. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ACABS 415. Elementary Hittite

(3). May not be repeated for credit.

ACABS 425 / AAPTIS 425 / HJCS 425. Near Eastern Studies Capstone Seminar Senior standing. (Prerequisites enforced at registration.) Juniors with permission of instructor. (3). May be repeated for a maximum of 6 credits.

ACABS 427 / GREEK 473. Advanced Koine

Two years of Greek, one term of New Testament Greek (300 level or equivalent). (3). May not be repeated for credit.

ACABS 470 / HJCS 470 / JUDAIC 470. Reading the Rabbis

HJCS 202. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ACABS 270/HJCS 270/JUDAIC 270 or ACABS 570/HJCS 570/JUDAIC 570.

ACABS 483. Aramaic I

ACABS 102. (3). May not be repeated for credit.

ACABS 484. Aramaic, II

ACABS 483. (3). May not be repeated for credit.

ACABS 485. Introduction to Middle Egyptian, I (3). May not be repeated for credit.

ACABS 486. Introduction to Middle Egyptian, II

ACABS 485. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ACABS 491. Topics in Ancient Civilizations and Biblical Studies

(3). May be repeated for a maximum of 6 credits.

ACABS 498. Senior Honors Thesis

Consent of instructor required. (1 - 6). (INDEPENDENT). May be elected twice for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of ACABS 498, the final grade is posted for both term's elections. F, W, Sp/Su, Sp, Su.

ACABS 511. Introduction to Sumerian

(3). May not be repeated for credit. F.

ACABS 512. Sumerian Texts ACABS 511. (3). May not be repeated for credit.

ACABS 585. Advanced Middle Egyptian

ACABS 486. (3). May not be repeated for credit.

ACABS 587. Selected Topics in Ancient Egyptian History and Culture ACABS 281 or ACABS 382/HISTART 382/ANTHRARC 381. (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits.

ACABS 591. Topics in Ancient Civilizations and Biblical Studies (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term

ACABS 592. Seminar in Ancient Civilizations and Biblical Studies (3). May be repeated for a maximum of 6 credits.

ACABS 610. Akkadian Literary Texts

ACABS 412. (3). May not be repeated for credit.

ACABS 611. Akkadian Documents ACABS 412 or equivalent. (3). May not be repeated for credit.

ACABS 612. Akkadian Readings ACABS 412. (3). May not be repeated for credit.

ARABIC, ARMENIAN, PERSIAN, TURKISH, & ISLAMIC STUDIES (AAPTIS)

AAPTIS 100 / ACABS 100 / HISTORY 132 / HJCS 100. Peoples of the Middle East (4). (HU). May not be repeated for credit. Taught in English.

AAPTIS 101. Elementary Modern Standard Arabic, I (5). May not be repeated for credit.

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AAPTIS 102. Elementary Modern Standard Arabic, II AAPTIS 101. (5). May not be repeated for credit.

AAPTIS 103. Intensive Elementary Modern Standard Arabic I and II

Recommended for undergraduates concentrating in Arabic and those who need Arabic for academic and research purposes. (10 in the half-term). May not be repeated for credit. No credit granted for students enrolled in or having completed AAPTIS 101-102.

AAPTIS 119 / ASIANLAN 119. Introductory Central Asian Language I (4 - 5). May be elected three times for credit. May be elected more than once in the same term. AAPTIS 519.

AAPTIS 141. Elementary Persian, I

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 143. F.

AAPTIS 142. Elementary Persian, II

AAPTIS 141. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 143. W.

AAPTIS 151. Elementary Turkish, I

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 155. F.

AAPTIS 152. Elementary Turkish, II

AAPTIS 151 or equivalent. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 155. W.

AAPTIS 153. Elementary Uzbek, I

(4). May not be repeated for credit.

AAPTIS 154. Elementary Uzbek, II AAPTIS 153. (4). May not be repeated for credit.

AAPTIS 171 / ARMENIAN 171. Western Armenian, I

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ARMENIAN 173/AAPTIS 173.

AAPTIS 172 / ARMENIAN 172. Western Armenian, II

AAPTIS/ARMENIAN 171. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS/ARMENIAN 173.

AAPTIS 200 / ACABS 200 / HJCS 200 / RELIGION 201. Introduction to World Religions: Near Eastern

(4; 3 in the half-term). (HU). May not be repeated for credit. F.

AAPTIS 201. Intermediate Modern Standard Arabic, I

AAPTIS 102 or 103. (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 205.

AAPTIS 202. Intermediate Modern Standard Arabic, II

AAPTIS 201. (5). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 205. W.

AAPTIS 203. Intermediate Arabic for Communication I AAPTIS 102 or 103. (5). May not be repeated for credit.

AAPTIS 205. Intensive Intermediate Modern Standard Arabic I and II

AAPTIS 102 with at least a C. (Prerequisites enforced at registration.) AAPTIS 102 or 103. Recommended for Arabic concentrators and those who need Arabic for academic and research purposes. (10). (Lang Req). May not be repeated for credit. No credit given for students who are enrolled or have completed AAPTIS 201-202.

AAPTIS 210 / AMCULT 215. Introduction to Arab-American Studies

(4). (HU). (R&E). May not be repeated for credit.

AAPTIS 215. Colloquial Egyptian Arabic I AAPTIS 102 or 103. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 415 or 515, or 419.

AAPTIS 216. Colloquial Egyptian Arabic II

AAPTIS 215. (Prerequisites enforced at registration.) (3). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 416 or 516, or 419.

AAPTIS 217. Colloquial Levantine Arabic I

AAPTIS 102 or 103. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 417 or 517, or 420.

AAPTIS 218. Colloquial Levantine Arabic II

AAPTIS 217. (Prerequisites enforced at registration.) (3). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 418 or 518.

AAPTIS 238 / ACABS 238 / GEOSCI 238 / HISTORY 238. A History of Everything (4; 3 - 4 in the half-term). (ID). May not be repeated for credit.

AAPTIS 241. Intermediate Persian, I

AAPTIS 142 or 143. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 243. F.

AAPTIS 242. Intermediate Persian, II

AAPTIS 241. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 243. W.

AAPTIS 244 / HISTORY 244 / HJCS 244 / JUDAIC 244 / MENAS 244. The Arab-Jewish Conflict in the Middle East, c. 1880 to the Present

(4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

AAPTIS 251. Intermediate Turkish, I

AAPTIS 152 or 155. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 255. F.

AAPTIS 252. Intermediate Turkish, II

AAPTIS 251. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in AAPTIS 255. W.

AAPTIS 253. Intermediate Uzbek, I

AAPTIS 154. (4). May not be repeated for credit. AAPTIS 254. Intermediate Uzbek, II

AAPTIS 253. (4). May not be repeated for credit.

AAPTIS 261. The Civilization of Medieval Islam Taught in English. (4). (HU). May not be repeated for credit. Taught in English.

AAPTIS 262 / RELIGION 204. Introduction to Islam

(4; 3 in the half-term). (HU). May not be repeated for credit. W.

AAPTIS 269 / HISTORY 278. Introduction to Turkish Civilizations (4). (HU). May not be repeated for credit. Taught in English.

AAPTIS 271 / ARMENIAN 271. Intermediate Western Armenian, I

AAPTIS/ARMENIAN 172 or 173, or equivalent. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ARMENIAN 273/AAPTIS 273.

AAPTIS 272 / ARMENIAN 272. Intermediate Western Armenian, II

AAPTIS/ARMENIAN 271 or equivalent. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ARMENIAN 273/AAPTIS 273.

AAPTIS 274 / ARMENIAN 274. Armenia: Culture and Ethnicity (3). (HU). May not be repeated for credit. Taught in English.

AAPTIS 277 / ACABS 277 / HISTORY 277 / HJCS 277 / JUDAIC 277 / RELIGION 277. The Land of Israel/Palestine through the Ages

(4; 3 in the half-term). (HU). May not be repeated for credit. Taught in English.

AAPTIS 285 / HISTART 285. Visual Culture Islam (4). (HU). (R&E). May not be repeated for credit.

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AAPTIS 291. Topics in Arabic, Armenian, Persian, Turkish and Islamic Studies (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

<code>AAPTIS 325 / ASIAN 324 / HISTORY 325 / RELIGION 325. The History of Islam in South Asia</code>

(4). (HU). (R&E). May not be repeated for credit.

AAPTIS 331. Introduction to Arab Culture: Race, Ethnicity, and Gender Issues (4). (HU). May not be repeated for credit. Taught in English. W.

AAPTIS 332. Introduction to Persian Culture and Language

(3). (HU). May not be repeated for credit. Taught in English.

 AAPTIS 335 / CAAS 335 / RELIGION 310. African-American Religion Between Christianity and Islam

(4). (HU). May not be repeated for credit.

AAPTIS 339. Turkey: Language, Culture, Society Between East and West

(3). May not be repeated for credit. Taught in English. A knowledge of Turkish is not required.

AAPTIS 340 / ASIAN 340 / HISTORY 340 / MENAS 340 / REES 340. From Genghis Khan to the Taliban: Modern Central Asia

(4; 3 - 4 in the half-term). (SS). (R&E). May not be repeated for credit.

AAPTIS 352. Advanced Turkish II AAPTIS 351 or EQ. (3). May not be repeated for credit.

AAPTIS 361. Jihad in History

(4; 3 in the half-term). (HU). May not be repeated for credit.

AAPTIS 364 / HISTORY 334 / MENAS 334. Selected Topics in Near and Middle Eastern Studies

(1 - 3). May not be repeated for credit.

AAPTIS 365. The Prophet Muhammad in Islam

(3). (HU). May not be repeated for credit.

AAPTIS 368 / AMCULT 368 / WOMENSTD 368. Women and War in the Middle East (3). May not be repeated for credit.

AAPTIS 381. Introduction to Arab Literature in Translation (3). (HU). May not be repeated for credit. Taught in English.

AAPTIS 383. The Arab-Israeli Conflict in Middle Eastern Literature (3). (HU). May not be repeated for credit.

AAPTIS 395. Directed Undergraduate Readings

Consent of instructor required. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits. F, W, Sp/Su, Sp, Su.

AAPTIS 403. Advanced Modern Standard Arabic I

AAPTIS 202 or 205 or equivalent. (4). May not be repeated for credit. F.

AAPTIS 404. Advanced Modern Standard Arabic II AAPTIS 403 or equivalent. (4). May not be repeated for credit.

AAPTIS 411, Classical Arabic Grammar

Three years of Arabic study. (3). May not be repeated for credit. Taught in English.

AAPTIS 412. Intensive Advanced Business Arabic I and II

AAPTIS 202, or 204, or 205 with at least a C. (Prerequisites enforced at registration.) This course is for students, community members, and government personnel who have completed at least two years of Arabic and wish to continue Arabic study for career and professional purposes. (8 in the half-term). May not be repeated for credit. No credit given for students who are enrolled or have completed AAPTIS 409-410. Rackham credit requires additional work.

AAPTIS 419. Intensive Colloquial Egyptian Arabic I and II

AAPTIS 102 with at least a C. (Prerequisites enforced at registration.) Recommended for learners who plan to travel to work in Egypt and those need Arabic for immediate oral communication. (6 in the half-term). (Lang Req). May not be repeated for credit. No credit granted for students who are enrolled in or have completed AAPTIS 215/515 and 216/516. Rackham credit requires additional work.

AAPTIS 420. Intensive Colloquial Levantine Arabic I and II

AAPTIS 102 with at least a C. (Prerequisites enforced at registration.) Recommended for those who plan to travel or to work in the Levant and those who need Arabic for immediate oral use. (6 in the half-term). (Lang Req). May not be repeated for credit. No credit granted to those who are enrolled in or have completed AAPTIS 217/517 and 218/518. Rackham credit requires additional work.

AAPTIS 425 / ACABS 425 / HJCS 425. Near Eastern Studies Capstone Seminar

Senior standing. (Prerequisites enforced at registration.) Juniors with permission of instructor. (3). May be repeated for a maximum of 6 credits.

AAPTIS 432. Arabic Phonology and Morphophonology

One year of Arabic or permission of instructor. (3). May not be repeated for credit. Taught in English.

AAPTIS 433 / LING 433. Arabic Syntax and Semantics

AAPTIS 202 or 205 and AAPTIS 432. (3). May not be repeated for credit.

AAPTIS 434. Arabic Historical Linguistics and Dialectology

Permission of instructor. (3). May not be repeated for credit.

AAPTIS 437. Arabic Teaching Methodology

AAPTIS 404. (Prerequisites enforced at registration.) Upperclass standing. (3). May not be repeated for credit.

AAPTIS 438. Arabic Curriculum Development

AAPTIS 437. (Prerequisites enforced at registration.) (2). May not be repeated for credit. AAPTIS 440. The Literature of the Turks (3). May not be repeated for credit. Taught in English.

AAPTIS 451. Introductory Ottoman Turkish, I TURKISH 152 or equivalent. (3). May not be repeated for credit.

AAPTIS 459. Ottoman Turkish Culture (3). May not be repeated for credit. Taught in English.

AAPTIS 461 / HISTORY 442. The First Millennium of the Islamic Near East Junior standing. (3). May not be repeated for credit. Taught in English.

AAPTIS 465 / RELIGION 465. Islamic Mysticism (3). May not be repeated for credit. Taught in English.

AAPTIS 467 / HISTORY 487 / RELIGION 467. Shi'ism: The History of Messianism and the Pursuit of Justice in Islamdom

Junior standing or permission of instructor. (3). May not be repeated for credit. AAPTIS 468. Islamic Law

AAPTIS 262 or RELIGION 204. (3). May not be repeated for credit. Taught in English. AAPTIS 469. Islamic Intellectual History

Taught in English. (3). May not be repeated for credit. Taught in English.

AAPTIS 474 / ARMENIAN 416. An Introduction to Modern Armenian Literature (3). May not be repeated for credit. Taught in English.

AAPTIS 475. Rumi and the Great Persian Mystical Poets (3). May not be repeated for credit. Taught in English.

AAPTIS 476 / MEMS 476. The Church of Armenia: Profile of a National Institution Upper-class undergraduates or graduate students. (3). May not be repeated for credit. Rackham credit requires additional work.

AAPTIS 486. Topics in Modern Arabic Literature in Translation (3). May be elected three times for credit. Taught in English.

AAPTIS 487 / HISTORY 443. Modern Middle East History

(4). May not be repeated for credit. AAPTIS 488. History of Arabic Literature in English

(3). May not be repeated for credit. Taught in English.

AAPTIS 489. Advanced Central Asian Language I

Consent of instructor required. Relevant language experience. (3 - 4). May be elected three times for credit. May be elected more than once in the same term. May not repeat the same language at the same level.

AAPTIS 490. Advanced Central Asian Language II

Consent of instructor required. AAPTIS 489 and relevant language experience. (3 - 4). May be elected three times for credit. May be elected more than once in the same term. May not repeat the same language at the same level.

AAPTIS 491. Topics in Arabic, Armenian, Persian, Turkish, and Islamic Studies (3). May be repeated for a maximum of 6 credits. May be elected more than once in

(3). May be repeated for a maximum of 6 creatis, may be elected more than once in the same term.

AAPTIS 493 / MENAS 493. Comparative Perspectives of the Middle East and North Africa

(1). May be repeated for a maximum of 12 credits. May be elected more than once in the same term. Rackham credit requires additional work.

AAPTIS 495 / HISTORY 429 / RELIGION 496 / WOMENSTD 471. Gender and Sexuality in Pre-Modern Islam

Students should preferably have had one course in Islamic Studies. (3). May not be repeated for credit. Taught in English.

AAPTIS 498. Senior Honors Thesis

Consent of instructor required. (1 - 6). (INDEPENDENT). May be elected twice for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of AAPTIS 498, the final grade is posted for both term's elections. F, W, Sp/Su, Sp, Su.

AAPTIS 501. Advanced Arabic Conversation and Composition

AAPTIS 404 or equivalent. Taught in Arabic. (3). May not be repeated for credit. Taught in Arabic. F.

AAPTIS 502. Advanced Arabic Readings in Special Subjects

AAPTIS 501 or equivalent. Taught in Arabic. (3). May not be repeated for credit. Taught in Arabic.

AAPTIS 504. Advanced Arabic Media I

AAPTIS 404 or equivalent. (4). May not be repeated for credit. Taught in Arabic.

AAPTIS 505. Advanced Arabic Media II

AAPTIS 404. (Prerequisites enforced at registration.) Upperclass students or graduate standing with advanced knowledge of Arabic. (4). May not be repeated for credit.

AAPTIS 506. Intensive Advanced Arabic Media I and II

AAPTIS 404. (Prerequisites enforced at registration.) (8). May not be repeated for credit. Rackham credit requires additional work.

AAPTIS 531. Reading Modern Arab Authors in Arabic

AAPTIS 501 and permission of instructor. (3). May be repeated for a maximum of 6 credits.

AAPTIS 541. Classical Persian Texts

AAPTIS 242 or 243. (3). May be elected four times for credit. Taught in English.

AAPTIS 544. Modern Persian Fiction

AAPTIS 242 or 243. (3). May not be repeated for credit. Taught in Persian.

for credit. ed for both term's elections. F, W, IS 215/515 AAPTIS 501 Advanced Arabic Con

AAPTIS 545. Modern Persian Nonfiction

NES,AAPTIS 242 or equivalent. Taught in Persian. (3). May not be repeated for credit. Taught in Persian.

AAPTIS 553. Modern Turkish Readings AAPTIS 252 or 255. (3). May not be repeated for credit.

AAF 115 252 01 255. (5). Whay not be repeated for the

AAPTIS 561. Modern Arabic Fiction

AAPTIS 403 or reading knowledge of Arabic. (3). May not be repeated for credit. AAPTIS 563. Modern Arabic Nonfiction

AAPTIS 403 or reading knowledge of Arabic. (3). May not be repeated for credit. AAPTIS 567. Readings in Classical Islamic Texts

AAPTIS 404 or equivalent. Taught in English. (3). May not be repeated for credit. Tauaht in English.

AAPTIS 583. Medieval Arabic Historical, Biographical, and Geographical Texts *AAPTIS 404. (3). May be repeated for a maximum of 9 credits.*

AAPTIS 584. Persianate History Through Political and Cultural Texts Advanced reading knowledge of Persian. (3). May be repeated for a maximum of 9 credits.

AAPTIS 591. Topics in Arabic, Armenian, Persian, Turkish, and Islamic Studies (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

AAPTIS 592. Seminar in Arabic, Armenian, Persian, Turkish, and Islamic Studies (3). May be repeated for a maximum of 6 credits.

AAPTIS 593. Mini Course - Topics in Arabic, Armenian, Persian, Turkish, and Islamic Studies

(1). May not be repeated for credit.

HEBREW & JEWISH CULTURAL STUDIES (HJCS)

HJCS 100 / AAPTIS 100 / ACABS 100 / HISTORY 132. Peoples of the Middle East (4). (HU). May not be repeated for credit. Taught in English.

HJCS 101. Elementary Modern Hebrew, I (5). May not be repeated for credit. F.

HJCS 102. Elementary Modern Hebrew, II

HJCS 101. (5). May not be repeated for credit. W.

HJCS 192. First Year Seminar in Hebrew and Jewish Cultural Studies

Only first-year students, including those with sophomore standing, may pre-register for First-Year Seminars. All others need permission of instructor. (3). (HU). May not be repeated for credit. Taught in English.

HJCS 200 / AAPTIS 200 / ACABS 200 / RELIGION 201. Introduction to World Religions: Near Eastern

(4; 3 in the half-term). (HU). May not be repeated for credit. F.

HJCS 201. Intermediate Modern Hebrew, I

HJCS 102. (5). May not be repeated for credit. F.

pleted or are enrolled in JUDAIC 505/HJCS 576.

HJCS 202. Intermediate Modern Hebrew, II HJCS 201. (5). (Lana Rea). May not be repeated for credit. W.

HJCS 244 / AAPTIS 244 / HISTORY 244 / JUDAIC 244 / MENAS 244. The Arab-Jewish Conflict in the Middle East, c. 1880 to the Present

(4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

HJCS 270 / ACABS 270 / JUDAIC 270 / RELIGION 270. Introduction to Rabbinic Literature

(3). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in HJCS 470/JUDAIC 470 or HJCS 570/ACABS 570/JUDAIC 570. Taught in English.

HJCS 276 / JUDAIC 205. Introduction to Jewish Civilizations and Culture (4). (HU). May not be repeated for credit. No credit granted to those who have com-

HJCS 277 / AAPTIS 277 / ACABS 277 / HISTORY 277 / JUDAIC 277 / RELIGION 277. The Land of Israel/Palestine through the Ages

(4; 3 in the half-term). (HU). May not be repeated for credit. Taught in English.

HJCS 281 / JUDAIC 281 / SLAVIC 281. Jews in the Modern World: Texts, Images, Ideas

(4). (HU). (R&E). May not be repeated for credit.

HJCS 291. Topics in Hebrew and Judaic Cultural Studies (3). May be repeated for credit. May be elected more than once in the same term. Taught in English.

HJCS 301. Advanced Hebrew, I

HJCS 202. (3). May not be repeated for credit. F.

HJCS 302. Advanced Hebrew, II

HJCS 301. (3). May not be repeated for credit.

HJCS 381 / JUDAIC 381. Introduction to Israeli Literature and Culture (4). (HU). May not be repeated for credit. Tauaht in English.

HJCS 395. Directed Undergraduate Readings

Consent of instructor required. Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits. F, W, Sp/Su, Sp, Su.

HJCS 425 / AAPTIS 425 / ACABS 425. Near Eastern Studies Capstone Seminar

Senior standing. (Prerequisites enforced at registration.) Juniors with permission of instructor. (3). May be repeated for a maximum of 6 credits.

HJCS 470 / ACABS 470 / JUDAIC 470. Reading the Rabbis

HJCS 202. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ACABS 270/HJCS 270/JUDAIC 270 or ACABS 570/HJCS 570/JUDAIC 570.

HJCS 471. Reading Hebrew Literature

HJCS 302. (4). May be repeated for a maximum of 12 credits. No credit granted to those who have completed HJCS 381 or JUDAIC 381.

HJCS 472. Introduction to Modern Hebrew Literature, II HJCS 302. (3). May not be repeated for credit.

HJCS 477 / JUDAIC 478 / RELIGION 478. Modern Jewish Thought (3). May not be repeated for credit. Taught in English.

HJCS 478 / JUDAIC 468 / RELIGION 469. Jewish Mysticism

(3). May not be repeated for credit. Taught in English.

HJCS 491. Topics in Hebrew and Jewish Cultural Studies

(3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

HJCS 495. Directed Undergraduate Readings

Consent of instructor required. (1 - 3). (INDEPENDENT). May be elected twice for credit.

HJCS 498. Senior Honors Thesis

Consent of instructor required. Permission of instructor. (1 - 6). (INDEPENDENT). May be elected twice for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of HJCS 498, the final grade is posted for both term's elections. F, W, Sp/Su, Sp, Su.

HJCS 572. Israeli Literature, II

HJCS 302. (3). May be elected twice for credit.

HJCS 577 / JUDAIC 467 / RELIGION 471. Seminar: Topics in the Study of Judaism (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

HJCS 591. Topics in Hebrew and Jewish Cultural Studies

(3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

Program in Neuroscience

MCDB Undergraduate Office 1111 E.H. Kraus Natural Science Building 830 North University Avenue (734) 764-2446 (phone) (734) 647-0884 (fax) www.lsa.umich.edu/mcdb

Psychology Department 1343 East Hall 530 Church Street (734) 764-2580 (phone) (734) 764-3520 (fax) www.lsa.umich.edu/psych Neuroscience is an Interdepartmental Program administered jointly by the Department of Psychology and the Department of Molecular, Cellular, and Developmental Biology (MCDB).

Faculty Steering Committee

Joshua Berke (Assistant Professor, Psychology)

Jonathan Demb (Associate Professor, Molecular, Cellular, and Developmental Biology)

John Kuwada (Professor, Molecular, Cellular, and Developmental Biology)

Terry Robinson (Professor, Psychology)

Neuroscience (B.S.)

May be elected as an interdepartmental concentration program, supervised by the Undergraduate Neuroscience Steering Committee

Exclusions: Students who elect a concentration in Neuroscience may not elect the following concentrations: Brain, Behavior, and Cognitive Sciences; Biology, General Biology; Cell and Molecular Biology; Microbiology; Plant Biology; or Biochemistry. They may also not elect an academic minor in Biology; Plant Biology; Chemistry; or Biochemistry.

The overall goals of this concentration are to: (1) provide a course of study in the discipline of Neuroscience that integrates cell/molecular and behavioral components of the field; and (2) provide a course of study that better prepares students for graduate training in the field of Neuroscience than do the current concentrations in Cellular and Molecular Biology (CMB), Biology, or Brain, Behavior, & Cognitive Science (BBCS). An understanding of how the nervous system functions spans both molecular and cellular activity that is best taught by cell and molecular neurobiologists, and behavior that is best taught by psychologists. The well-trained student will receive instruction that allows her or him to understand the usefulness of genetics, cellular biology, and behavioral tests in this complex field. This degree will provide the cross-disciplinary training that will provide a head-start into postgraduate studies in Neuroscience.

Prerequisites to Concentration.

- BIOLOGY 171 and 172/174; or BIOLOGY 195; or BIOLOGY 162 or 163; and
- CHEM 210/211 and 215/216.

It is recommended that students interested in pursuing advanced training in Cellular and Molecular Neuroscience elect MATH 115 and 116, CHEM 230, PHYSICS 125/126 & 127/128 or 140/141 & 240/241, or 135/141 and 235/241. Those interested in advanced training in Behavioral Neuroscience should take at least one Statistics course.

Students intending to go to graduate school should have at least two terms of research experience. These can appear as graded courses, UROP participation, or be independent of the graded curriculum. Most graduate school-bound students will have 1-2 graded research courses (2-4 credits/each) on record. Students intending to go to graduate school in Neuroscience within a CMB-type program will need research experience as well as two terms of Calculus and two terms of Physics. Students intending to go to medical school will need to take two terms of Physics and CHEM 230.

Concentration Program. A minimum of 36 credits are required.

- 1. *Core:*
 - A. Neurobiology: BIOLOGY 222 [This course should be taken as early as possible but no later than the end of the first term of the student's fourth year]
 - B. Genetics: BIOLOGY 305
 - C. *Biochemistry:* one of MCDB 310, BIOLCHEM 415, or CHEM 351
 - D. Biopsychology: PSYCH 230.
- 2. Electives (6 courses, minimum 18 credits).
 - A. *Introductory Lecture Courses.* At least one, and up to two courses from:
 BIOLOGY 225
 MCDB 307, 405
 PSYCH 240, 345.
 - B. Advanced lecture and discussion courses in Neuroscience (300-400 level). At least three courses (and up to five courses). At least one course must be from Group B1 and one course from Group B2. One advanced course from Group C may be used toward this requirement.

(1). Cell and Molecular Neuroscience:

MCDB 402, 403, 418, 422, 426, 450, 455, 456.

(2). Behavioral Neuroscience:
BIOLOGY 541;
PSYCH 346, 347, 402, 433, 434, 435, 436, 437, 438, 500, 531, 532, 533;
NEUROSCI 520.

Additional courses may be approved as advanced neuroscience courses by the concentration advisory panel.

C. Additional Advanced Course:

MCDB 411, 427, 428, 435, 469; EEB 492; PSYCH 420; 447; STATS 250 (or 350) or 400; 401 or 405.

Additional advanced courses may be approved as cognates by the concentration advisory panel.

- 3. *Lab requirement.* At least two different courses for a minimum of five credits total from the following categories, with at least one course being a Methods-Based laboratory:
 - A. *Method-Based Laboratory courses:* Choose at least one course from: PSYCH 231/UC 261; BIOLOGY 226; MCDB 306, 308, 419, 423, 429.
 - B. Research-Based Laboratory Courses: MCDB 300, 400; PSYCH 331, 332, 422, 424/426.

Note: Each course must be taken for a minimum of two credits each and be completed in a single academic term. **Only three credits of independent study may count toward the concentration program.**

- 4. Quantitative Requirement Cognate. Two courses are required. (While 100-level courses may be used to satisfy this requirement, the credits for 100-level courses may not be used toward the minimum number of credits required for the concentration.)
 - STATS 250 (or 350) or 400 (only allowed if not used in Group C)
 - STATS 401 or 405 (only allowed if not used in Group C)
 - PSYCH 448
 - MATH 115 or 185
 - MATH 116 or 186
 - PHYSICS 125 or 140 or 160 or 135
 - PHYSICS 126 or 240 or 260 or 235.

Advising. Students choosing Neuroscience as a field of concentration develop an approved concentration plan with a concentration advisor who must approve the original concentration plan and any exceptions to the stated concentration requirements. Students should also consult a concentration advisor when planning the final term's elections to ensure that all concentration requirements have been met and to secure an advisor's approval on a *Concentration Release* form. Appointments for students are scheduled at the Department of Psychology, 1343 East Hall, (734) 764-2580) and in person at the Biology Program Office located in 1111 E.H. Kraus Natural Science Building.

Honors Concentration. The Neuroscience B.S. degree is the basis for the Honors degree in Neuroscience. Students must elect two terms of independent research (under PSYCH 424 & 426, MCDB 300, or MCDB 400), maintain a GPA of 3.4 overall, complete an Honors thesis and give a research presentation based on their Honors work. Prior to applying to the Neuroscience Honors Program students must identify a research mentor in the Department of Psychology or MCDB. Students may conduct Honors research with faculty in other units on the University of Michigan campus, but must

have a formal co-sponsor relationship with a research track or tenuretrack faculty in Psychology or MCDB. Students apply to the Honors Program in Neuroscience by submitting a *Neuroscience Honors Application* with a research proposal to either Psychology or MCDB, depending on the affiliation of the mentor/sponsor or co-mentor/cosponsor. Students with a Psychology mentor/co-mentor should also submit a letter from the research mentor indicating their willingness to sponsor the student's research. Students must submit the *Honors Application* **no later than the first two week of the term in which they intend to turn in their thesis.** Written evaluations of the Honors thesis must be submitted by the mentor and two faculty readers. Honors theses must be submitted no later than one calendar month prior to the date of graduation.

COURSES IN NEUROSCIENCE (NEUROSCI)

Courses in Neuroscience are listed in the *Schedule of Classes* under the Medical School. The following count as LSA courses for LSA degree credit.

NEUROSCI 520 / PSYCH 533. Sleep: Neurobiology, Medicine, and Society BIOLOGY 222, MCDB 422, or PSYCH 230; and permission of instructor. (3). (BS). May not be repeated for credit.

Organizational Studies

713 David M. Dennison Building 500 Church Street (734) 764-6767 (phone) (734) 764-6554 (fax) www.lsa.umich.edu/orgstudies

e-mail: org.studies@umich.edu

Professor Richard H. Price (Barger Family Professor of Organizational Studies), Director

Professor Richard H. Price (Barger Family Professor of Organizational Studies, Ross School of Business, Psychology)

- Associate Professors Elizabeth Armstrong (Sociology), Jason Owen-Smith (Sociology)
- **Assistant Professors** Stephen Garcia (Psychology), Michael Heaney (Political Science), Victoria Johnson (Ross School of Business, Sociology)

Affiliated Faculty

- **Professors** Wayne Baker (Ross School of Business, Sociology), Kim Cameron (Ross School of Business), Gerald Davis (Ross School of Business, Sociology), Jane Dutton (Ross School of Business, Psychology), Andrew Hoffman (Ross School of Business, School of Natural Resources and Environment), Mark Mizruchi (Sociology, Ross School of Business), Christopher Peterson (Psychology), Lance Sandelands (Psychology, Ross School of Business), Carl Simon (Complex Systems, Economics, Math, Public Policy), David Winter (Psychology), Oscar Ybarra (Psychology, Research Center for Group Dynamics)
- **Associate Professors** Jane Banaszak-Holl (Public Health), Michael Bastedo (Center for the Study of Higher and Postsecondary Education), Ramaswami Mahalingam (Psychology), Diane Vinokur (Social Work)

Professor Emeritus Mayer Zald (Sociology)

Organizational Studies Advisory Committee

- Richard H. Price, Director (Professor, Organizational Studies, Psychology, and Ross School of Business)
- Wayne Baker (Professor, Ross School of Business, Sociology)
- Victoria Johnson (Professor, Organizational Studies, Ross School of Business, Sociology)
- Susan Juster (Associate Dean Social Sciences, LSA)

Mark Mizruchi (Professor, Sociology, Ross School of Business) Jason Owen-Smith (Professor, Organizational Studies, Sociology) Carl Simon (Professor and Director, Study of Complex Systems)

Organizational Studies is an interdisciplinary concentration program, emphasizing the influence of economic, psychological, sociological, political, and other factors on individuals and complex organizational systems. The field is concerned with how organizational systems function, their effects on individuals and the larger society, and with the processes of organizational change. The program is intended to make graduates attractive job candidates or applicants to graduate studies. The curriculum is designed to provide:

- core courses focusing on concepts fundamental to organizational theory and research;
- (2) cluster and elective courses to provide breadth and depth in understanding links between the individual and organizations on the one hand, and organizations and society on the other; and
- (3) courses designed to provide field based experience in organizational research, analysis and practice.

The concentration is also designed to balance the study of challenging theoretical issues with diverse and refined methods of empirical inquiry.

Students may find this concentration appropriate preparation for careers or graduate work in business administration, consulting, communication, education, human resources, industrial and organizational psychology, public health, public policy, social and non-profit administration, the sociology of work and organizations, and related fields.

The Barger Leadership Institute

The Barger Leadership Institute was established in 2007 to realize the leadership potential of Organizational Studies students through field-based learning, research, and scholarship. The Institute's guiding principles encourage student initiative, foster learning from a broad base of experience, and promote active reflection. The Institute supports leadership development through study abroad scholarships, internship fellowships, research, and exposure to a variety of leadership experiences. The Institute involves leaders and researchers through a visitors program. For more information, visit the Institute on-line at: www.lsa.umich.edu/orgstudies/bli

Organizational Studies

May be elected as an interdepartmental concentration program

- *Prerequisites to concentration.* Students must complete one course in each of the following three areas:
- 1. Introduction to Economics (ECON 101)
- 2. Introduction to Psychology (PSYCH 111, 112, 114, or 115)
- 3. Introduction to Sociology (SOC 100, 101, 102, or 195).

All students should be aware that additional prerequisites are required for many of the upper-level courses in the OS curriculum. Depending on their particular area of interest, students may wish to complete additional entry-level courses in political science, communication studies, women's studies, and/or economics as they prepare to apply to the OS Program.

Application. Students must apply for and be accepted into the concentration program. **Students are declared into the concentration by the concentration advisor only.**

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Application for the concentration can be submitted during the sophomore year. It is preferred that applicants have all three prerequisites completed at the time of application. At a minimum, to be eligible to apply, students must have completed (with final grades showing) at least two of the three prerequisite courses, and be currently enrolled in the third. Admission is very competitive and enrollment in the concentration will be limited to assure a high quality educational experience. Program faculty will make admission decisions based on overall grade point average at the time of application, with special attention given to grades in the three prerequisite courses, resume, and a personal statement written by the applicant.

Concentration Program: The concentration requires a minimum of 37 credits, distributed as follows:

- 1. *Core requirements.* Two courses are required [6 credits]:
 - ORGSTUDY 305 Inside Organizations
 - ORGSTUDY 310 Formal Organizations and Environments
- Cluster A and B Requirement. Minimum of four courses total, with at least two courses in each cluster listed below [12 credits minimum]. The cluster requirements are designed to provide disciplinary variety in the study of organizations, drawing on courses in a number of fields, and ranging across multiple levels of organizational analysis.

Courses taken as ORGSTUDY 395 *Current Issues in Organizational Studies* and ORGSTUDY 495 *Special Topics* may be included, when appropriate and in consultation with the concentration advisor, as a course in Cluster A, Cluster B, or Cluster C.

A. Organizations and Individuals (Cluster A). Cluster A courses focus mainly on questions and topics concerning the organized behavior of individuals or the behavior of individuals in organizations. These courses may address the relations of individuals to larger structures such as the family or formal organizations, but their concern with the larger structures will typically remain the impact thereof on *individual* psychology or *individual* behavior.

A complete list of acceptable Cluster A courses is available on the Organizational Studies website.

B. Organizations and Society (Cluster B). Cluster B courses are those that focus mainly on questions and topics concerning the organization of social groups (*e.g.*, ethnic groups), historical processes (*e.g.*, the rise of capitalism), and /or medium to large social structures (*e.g.*, corporations, national governments, or global governing bodies). Although they may at times address the impact of such larger social structures and processes on individual behavior or may include attention to particular individuals from U.S. or world history, the primary concern of Cluster B courses is with questions about how social groups, historical processes, and social structures emerge, remain stable, and/or change.

A complete list of acceptable Cluster B courses is available on the Organizational Studies website.

- 3. *Field Research and Quantitative Skills Requirements: Analysis, Research and Practice in Organizations [7 credits].* The field research and quantitative skills requirement is designed to provide both quantitative analytic and experiential learning opportunities for research, analysis, and practice in a wide range of organizational settings. One course from each area is required; the research requirement must be completed in the senior year.
 - A. Quantitative Skills: One course from the following: SOC 210; STATS 250 (or 350), 400 or 405; ECON 404 or 405.
 - B. Senior Field Research* Requirement (prior or concurrent enrollment in the quantitative skills requirement is strongly recommended):

A complete list of acceptable Senior Field Research courses is available on the Organizational Studies website.

*The research requirement must be completed in the senior year. Any research courses taken in the junior year will count in Cluster C. Any extra courses taken in the research section may count in cluster C or as electives.

4. Interest Cluster Courses (Cluster C) [minimum of 9 credits]. Cluster C courses are electives intended to allow concentrators to pursue their curriculum pathway interests in a more specialized way. These should have an organizational theme and can be of either the micro or macro variety, but are almost always more narrow and focused in their content.

A complete list of acceptable Cluster C courses is available on the Organizational Studies website.

5. *Electives (as needed).* Students may choose electives from any requirement area on the OS curriculum list as needed to reach the overall 37 credit requirement for the OS concentration.

Additional courses may on occasion be used as part of the concentration plan with written approval from the concentration advisor. Also, no more than six credits of upper-level independent study / experiential credit may count toward the concentration.

Advising: Appointments may be scheduled with the concentration advisor, or the prospective student advisors via our online web scheduling system. See our homepage: www.lsa.umich.edu/orgstudies.

Honors Program

The Organizational Studies Honors Concentration (OSHC) is designed to enable advanced undergraduate students to gain experience in the design, conduct, and analysis of research on organizations and organizational behavior. In the program, the Honors student will collaborate directly with a faculty mentor to complete an original research project. For students with strong academic records and an interest in research, the Honors program can serve as a capstone for undergraduate studies, and as important preparation for graduate studies or other future endeavors.

The Organizational Studies Honors Concentration is focused solely on research skills and activities, and interested students should be certain that they have a serious interest in academic research and the capability and desire to complete a prolonged independent study project culminating in a major empirical research paper.

Overall Structure and Effort for Honors Concentration

During the junior year, interested students must apply for and be accepted into the OSHC. The application must include a detailed research proposal, supported and signed by the faculty mentor. If admitted, the student will enroll in the OS Senior Honors Research sequence in the senior year (ORGSTUDY 497 & 498). These are independent study courses in which the student will work on research and a thesis with a faculty mentor.

For OSHC students, the Honors thesis will become the defining feature of the senior year. Completing an Honors research project requires a commitment of at least two terms working in an independent study format, meeting on a regular basis with a faculty mentor. A complete first draft of the thesis should be submitted to the faculty mentor early in the second term of the project. The Honors student must submit the final thesis for evaluation by a faculty panel by March. The student will also present the research at the Organizational Studies Honors Symposium in April. If the thesis is approved and LSA cumulative GPA requirements are met, an Honors designation will appear on the student's transcript and diploma.

Arrange Student-Faculty Collaboration on a Specific Project

Students interested in the OSHC should begin exploring research interests during the first term of the junior year. By February 1 of the junior year, the student should identify a specific U-M faculty mem-

ber who has research interests similar to the student's own. The faculty mentor must be a tenure-track faculty member at the University of Michigan (may be non-LSA). Successful partnerships often result from projects that extend ongoing research by the faculty mentor, but an original student project is also possible. For the Honors project, student and faculty mentor agree to work as a team for two terms to design and complete an empirical study.

Formal Application to the OS Honors Concentration

To qualify for the OSHC, students must have a cumulative GPA of 3.5 or higher, and must maintain it through graduation. To apply to the OSHC, an application including a project proposal that has been approved by the faculty mentor must be submitted. The proposal should be a minimum of 5 pages, and must include:

- A brief overview of the project, including the research question to be answered;
- An explanation of the research design, data collection methods or data source to be used (include Institutional Review Board submission info);
- A brief discussion of the analysis plan and expected results;
- A list of relevant references to the literature;
- An initial plan of work with a timeline.

ORGSTUDY 215 / SOC 215. Organization and Society

ORGSTUDY 299. Undergraduate Internship

fered mandatory credit/no credit.

ORGSTUDY 305. Inside Organizations

One introductory course in Sociology. (4). May not be repeated for credit.

Consent of department required. Must be declared concentrator and have permission of concentration advisor. Internship credit may not be used to satisfy electives for the

concentration. (1). (EXPERIENTIAL). May be repeated for a maximum of 2 credits. May

not be used to satisfy requirements for the organizational studies concentration. Of-

Introductory Psychology (PSYCH 111, 112, 114, or 115), introductory sociology (SOC

Introductory Psychology (PSYCH 111, 112, 114, or 115), introductory sociology (SOC

Introductory psychology and sociology, and ECON 101. (1 - 2). May be elected three

Restricted to Org Studies senior cohort. One of the following: STATS 250 (350) or

100, 101, 102, or 195), and ECON 101. (3). May not be repeated for credit.

100, 101, 102, or 195), and ECON 101. (3). May not be repeated for credit.

ORGSTUDY 410. Advanced Research Methods in Organizational Studies

ORGSTUDY 310. Formal Organizations and Environments

ORGSTUDY 395. Current Issues in Organizational Studies

times for credit. May be elected more than once in the same term

Deadline for submitting OS Honors Concentration application: First Friday in March of the junior year.

Applications may be obtained at the OS Program office (713 Dennison) or on the OS website. If approved, research may start in the summer if feasible.

Program Completion

An original research report (thesis) must be completed, in collaboration with the faculty mentor. The thesis must be formatted as a standard research journal submission, and is typically 30-40 pages in length. The Honors student must submit the final thesis to the faculty mentor by the first Friday in March of their senior year, and also must present the findings at the OS Honors Symposium in early April.

Each thesis is evaluated by a faculty panel consisting of three readers: the faculty mentor, an independent faculty reader, and the OS Program Director. The independent faculty reader is chosen by the student and the faculty mentor, must be a tenure-track faculty member (may be non-LSA), and should be someone who has adequate knowledge of the research area but no previous connection to the project. The readers will complete their evaluation of the thesis by April 20.

To receive an Honors designation on the college degree, the faculty readers must approve the thesis, and the Honors student must have a cumulative GPA of at least 3.50 at graduation.

Students interested in the Organizational Studies Honors Concentration may obtain further information at the OS Program office (713 Dennison) or on the OS website.

COURSES IN ORGANIZATIONAL STUDIES (ORGSTUDY)

STATS 400 or ECON 404 or ECON 405 (may be elected concurrently). (4). May not be repeated for credit.

ORGSTUDY 490. Advanced Research Team

Consent of instructor required. Enrollment in either ORGSTUDY 305 or 310 & STATS course. (3). (EXPERIENTIAL). May be elected three times for credit. May be elected more than once in the same term.

ORGSTUDY 495. Special Topics in Organizational Studies

Restricted to Organizational Studies concentrators. (3). May be elected four times for credit. May be elected more than once in the same term.

ORGSTUDY 497. Senior Honors Research I

Consent of department required. Must be accepted into the OS Honors program by review of proposal. (3 - 4). (INDEPENDENT). May not be repeated for credit. F.

ORGSTUDY 498. Senior Honors Research II

Consent of department required. Must be accepted into the OS Honors program by review of proposal. (3 - 4). (INDEPENDENT). May not be repeated for credit. W.

ORGSTUDY 499. Independent Study

Consent of instructor required. Restricted to Organizational Studies concentrators who have completed the core course requirements. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. No more than six credits of independent study credit may count toward an Organizational Studies concentration. F, W.

Philosophy

2215 Angell Hall 435 South State Street (734) 764-6285 (phone) (734) 763-8071 (fax) www.lsa.umich.edu/philosophy Professor Louis Loeb, Interim Chair

Professors

Elizabeth Anderson (John Rawls Collegiate Professor of Philosophy and Women's Studies; Arthur F. Thurnau Professor), *Moral and Political Philosophy, Feminist Philosophy, Philosophy of the Social Sciences*

Gordon Belot, Philosophy of Physics, Philosophy of Science

Victor Caston, History of Ancient Greek & Roman Philosophy, Medieval Philosophy, Austrian Philosophy

- Edwin Curley (James B. and Grace J. Nelson Professor of Philosophy), *History of Modern Philosophy*
- Allan Gibbard (Richard B. Brandt Distinguished University Professor of Philosophy), *Ethics, Social Choice Theory, Decision Theory, Metaphysics, Philosophy of Language*
- Daniel Herwitz (Mary Fair Croushore Professor of Humanities), Aesthetics, Culture of Modernism and Postmodernism, Wittgenstein, Poststructuralism, Postcolonial Theory, Film and Philosophy
- Daniel Jacobson, Ethics, Moral Psychology, Aesthetics
- James Joyce, Decision Theory, Epistemology, Philosophy of Science
- Louis Loeb (Arthur F. Thurnau Professor), *History of Modern Philoso-phy*
- Peter Railton (John Stephenson Perrin Professor of Philosophy; Arthur F. Thurnau Professor), *Ethics, Philosophy of Science, Politi*cal Philosophy

- Laura Ruetsche, Philosophy of Physics, Philosophy of Science; Plato, Feminist Epistemology, Logic
- Tad Schmaltz, History of Early Modern Philosophy, History of Philosophy of Science, Philosophy of Mind, Metaphysics
- Lawrence Sklar (Carl G. Hempel and William K. Frankena Distinguished University Professor of Philosophy), *Philosophy of Physics*, *Philosophy of Science*, *Epistemology*
- Richmond H. Thomason, Logic, Philosophy of Language, Linguistics, Artificial Intelligence
- Kendall Walton (Charles L. Stevenson Collegiate Professor of Philosophy), Aesthetics, Philosophy of Mind, Metaphysics, Philosophy of Language

Associate Professors

Sarah Buss, Ethics, Action Theory, Moral Psychology

- Eric Lormand, Philosophy of Mind, Philosophy of Cognitive Science, Epistemology
- Jamie Tappenden, *Philosophy of Language, Philosophy and History of Mathematics, Philosophical Logic*

Assistant Professors

David Baker, Philosophy of Physics, Philosophy of Science, Moral Philosophy; Logic, Philosophy of Mind, Philosophy of Religion

David Manley, *Metaphysics, Epistemology, Philosophy of Language* Sarah Moss, *Philosophy of Language, Metaphysics, Epistemology* Chandra Sripada, *Ethics, Moral Psychology, Mind, Cognitive Science* Eric Swanson, *Philosophy of Mind, Metaphysics, Philosophy of Language*

Professors Emeriti Frithjof Bergmann, Stephen Darwall, George Mavrodes, Donald Munro

Philosophy is the systematic study of questions any thoughtful human being faces concerning the nature of knowledge, reality, thought, and value. What is valuable and what is value? What gives thought and language meaning? What is truth, and how can we know it? The main value of philosophy lies in its contribution to a liberal arts education. It can, however, also provide excellent preparation for a wide variety of professions (notably, law), because of the training it provides in rigorous thinking and incisive and clear writing. Philosophy cuts across other academic disciplines by examining their concepts, methods, and presuppositions. So a concentration or academic minor in Philosophy can also be a superb complement to a concentration in another field. Further details are available on the department's web page: www.lsa.umich.edu/philosophy

Departmental Awards. *Elsa L. Haller Prize Scholarship*, which carries an award of \$200, is awarded periodically for essays of exceptional merit written in conjunction with intermediate and advanced courses in Philosophy. Individual faculty nominate outstanding papers for consideration.

The William K. Frankena Prize, which carries a stipend of \$500, is awarded yearly in the spring for excellence in the concentration.

Undergraduate Philosophy Club. The Undergraduate Philosophy Club provides a forum for students interested in philosophy to meet one another and to meet faculty members. The Club holds a series of talks, discussions and lunches over the course of the year. Notices about its activities are posted outside 1156 Angell Hall and on electronic mail. The department has an electronic message group for general announcements as well as a discussion group. You need not be a concentrator or academic minor to join. If you wish to be added to either group, please call the Philosophy office at (734) 764-6285 or send an email to philosophy.staff@umich.edu. The staff will be glad to put interested students in touch with the club officers and assist you in joining the e-mail groups.

Meteorite. Meteorite is the student journal of philosophy, a nonprofit enterprise that seeks to engage society, especially the broader student population, in a creative dialogue with the discourses of philosophy, and hopes to open to society the possibility of speaking philosophy, and writing philosophy, in new vocabularies and in new directions.

Philosophy

May be elected as a departmental concentration program

Prerequisites to Concentration. One of PHIL 181, 182, 202, 232, 234, or 297. None of these courses counts toward the concentration requirements.

Concentration Program. Concentrators must take at least 25 credits of Philosophy. *At least 16 credits, including requirement 5a, must be taken in residence.* No course will count toward the concentration unless the student receives a grade of C– or better.

In fulfilling the credit requirement students must also satisfy the following distribution requirements:

- 1. Logic: PHIL 296, 303, or 414
- History of Philosophy: Two courses from among: PHIL 388, 389, 405, 406, 458, 461, 462, 463, and 492
- Value: Either PHIL 361 (Ethics) or 366 (Political Philosophy) or 367 (Social and Political Philosophy)
- 4. *Mind and Reality:* Either PHIL 345 (Language and Mind) or 383 (Knowledge and Reality)
- 5. Three additional courses:
 - a. Two additional 400-level courses (other than PHIL 419, 455, 498, or 499). *Note:* students are not permitted to use any course to satisfy more than one requirement. For example, if you use a 400-level course to satisfy the logic or history requirements, you cannot use that same course to satisfy this requirement.
 - b. One additional course at the 300-level or higher, such as PHIL 345 (Language and Mind), 383 (Knowledge and Reality), and 385 (European Social Thought from Hegel to Foucault).

The courses needed to satisfy these requirements are not always offered every term. Concentrators should plan their programs so that they can be sure to take the courses they need before they can graduate.

Honors Concentration. Qualified students who are interested in an Honors concentration in Philosophy should consult a concentration advisor as early as possible. Except in cases where special permission is granted, students must have a cumulative grade point average of at least 3.4 and a 3.5 average in completed courses in philosophy in order to be eligible for admission. Honors concentrators are required to complete 28 (rather than 25) credits in the concentration, including PHIL 401 and 498 or 499, which is taken in the senior year. Before enrolling in PHIL 498 or 499, students must submit a thesis proposal for the department's approval. Only students who have written an Honors thesis will be considered for graduation with Honors degrees. Students are admitted to the Honors concentration at the beginning of the junior year (or later) by permission of the Honors concentration advisor.

Advising. Prospective concentrators, especially Honors students and students contemplating graduate work in philosophy, should consult a concentration advisor as early as possible in order to work out an appropriate, unified program. Appointments are scheduled through the on-line scheduling system available on the department's web page:

www.lsa.umich.edu/philosophy/undergraduate/advisorappointments

Academic Minors in Philosophy

An academic minor in Philosophy is not open to students with a concentration in Philosophy.

Students wishing to pursue an academic minor in Philosophy must develop a specific plan for its completion in consultation with the department's designated advisor. Appointments are scheduled through the on-line scheduling system available on the department's web page:

www.lsa.umich.edu/philosophy/undergraduate/advisorappointments

The Philosophy Academic Minors are designed to provide students with an education in philosophy that will complement a concentration in some other discipline and that will, among other things, illuminate philosophical issues that arise in that other discipline. Because students who elect an academic minor in philosophy will have a variety of philosophical interests, the department offers a choice of a number of distinct minors namely: (a) General Philosophy; (b) History of Philosophy; (c) Moral and Political Philosophy; (d) Mind and Meaning; and (e) Epistemology and Philosophy of Science. The specialized minors (b)-(e) focus on particular areas within philosophy, and complement several different concentrations.

The *General Philosophy academic minor* aims to provide students basic philosophical skills and training, exposure to rigorous core courses, and some advanced work, but does not aim for the breadth and comprehensiveness of the concentration or for depth in any particular area.

The *History of Philosophy academic minor* aims to provide students both a comprehensive foundation in the central evaluative and theoretical philosophical areas, which are required in order to best appreciate the history of philosophy, and broad study of the history of philosophy. It is aimed at students with serious interests in the history of philosophy, or in studying philosophy from an historical perspective, but who, for various reasons, are unable to concentrate in philosophy. This academic minor will enable them to develop their interests in a way that assured they had sufficient background in the main philosophy.

The *Moral and Political Philosophy academic minor* aims to give students a basic foundation in general philosophy, core systematic training in either moral or political philosophy, along with broad study across a range of areas in moral and political philosophy and intensive advanced-level work. It should appeal to students who want to study moral and political philosophy in conjunction with other concentration, for example, Political Science, Sociology, and Economics, or want to study the subject for pre-professional reasons *(e.g., because they are interested in ethical issues concerning medicine or the law).*

Fundamental issues of metaphysics, epistemology, and the philosophies of language and mind arise in concentration with many concentration, such as Psychology, Linguistics, and the sciences. The *Mind and Meaning academic minor* will provide students who cannot concentrate in Philosophy a systematic way to pursue and develop these interest. It aims to give students a basic foundation in philosophy, logical skills necessary to do serious study in the areas of metaphysics, epistemology, philosophy of language and philosophy of mind, and rigorous exposure and advanced-level work in some subset of these areas.

The academic minor in *Epistemology and Philosophy of Science* is designed to provide a basic familiarity with the philosophical problems and techniques in these fields. The academic minor offers an opportunity for students to develop basic skills of philosophical reflection and argument in the context of questions about ordinary as

well as scientific knowledge. The intended audience for this academic minor includes students concentrating in scientific or mathematical disciplines who wish to explore the philosophical aspects of their subject, as well as students who have a more general interest in theory of knowledge or philosophy of science – including, for example, students of literature, history, anthropology, or sociology – who wish to acquire the necessary background to understand recent debates relating to the sociology of knowledge.

Prerequisites to the Academic Minor: None.

Academic Minor Program: Minors must take at least 15 credits of Philosophy, in one of the following patterns.

Constraints: At least nine credits, including the required 400-level course, must be taken in residence. No course will count toward the academic minor unless the student receives a grade of C- or better.

Prerequisites for all minors: None

COMMON REQUIREMENTS FOR ALL PHILOSOPHY ACADEMIC MINORS

- 1. One general introduction to Philosophy (PHIL 181, 182, 196, 202, 232, 234, or 297)
- 2. At least one course at the 400-level
- 3. A minimum of 15 credits of Philosophy, at least 9 of which (including the required 400-level course) must be taken in residence.
- 4. No course will count toward the academic minor unless the student receives a grade of C- or better.

SPECIFIC REQUIREMENTS FOR EACH PHILOSOPHY ACA-DEMIC MINOR

1. General Philosophy

- a. One course in logic (PHIL 180, 201, 296, 303, or 414)
- b. Two courses from: PHIL 345, 361, 365, 366, 367, 383, 388, 389
- c. 400-level course must not include PHIL 401, 402, 414, or 455

2. History of Philosophy

- a. Either PHIL 345, 361, 366, 367, or 383
- b. Two courses from: PHIL 388, 389, 405, 406, 458, 461, 462
- c. One additional course from "b" expanded to include: PHIL 371, 385, 433, 463, 466, 474, 492

3. Moral and Political Philosophy

- a. Either PHIL 361 or 366 or 367
- b. Three additional courses from: PHIL 355, 356, 359, 361, 366, 369, 385, 429, 430, 431, 433, 442, 443, 485

4. Mind and Meaning

- a. One course in symbolic logic: PHIL 296, 303, or 414
- b. PHIL 345 or 383
- c. Two additional courses from: PHIL 340, 345, 383, 409, 450, 481, 482

5. Epistemology and Philosophy of Science

- a. One course in symbolic logic: PHIL 296, 303, or 414
- b. PHIL 345 or PHIL 383
- c. Two other courses from: PHIL 320, 322, 383, 420, 422, 423, 425, 443, 477

COURSES IN PHILOSOPHY (PHIL)

PHIL 151. Philosophical Dimensions of Personal Decisions

Students are strongly advised not to take more than two Philosophy Introductions. (3; 2 in the half-term). (HU). May not be repeated for credit. Students are strongly advised not to take more than two Philosophy Introductions.

PHIL 155. The Nature of Science

Students are strongly advised not to take more than two Philosophy Introductions. (3; 2 in the half-term). (HU). May not be repeated for credit. Students are strongly advised not to take more than two Philosophy Introductions.

PHIL 160. Moral Principles and Problems

(4; 3 in the half-term). (HU). May not be repeated for credit.

PHIL 180. Introductory Logic

(3; 2 in the half-term). May not be repeated for credit. Credit is granted for only one of PHIL 180 or 201. F, W, Su.

PHIL 181. Philosophical Issues: An Introduction

(3; 2 in the half-term). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHIL 182, 202, 231, 232, 234, or 297. F, W, Sp, Su.

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PHIL 196. First Year Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit.

PHIL 201. Introduction to Logic

(3; 2 in the half-term). May not be repeated for credit. Credit is granted for only one of PHIL 180 or 201.

PHIL 202. Introduction to Philosophy

(3; 2 in the half-term). (HU). May not be repeated for credit. No credit aranted to those who have completed or are enrolled in PHIL 181, 182, 231, 232, 234, or 297.

PHIL 224. Global Justice

(4; 2 in the half-term). (ID). May not be repeated for credit.

PHIL 230 / ASIAN 230 / RELIGION 230. Introduction to Buddhism

(4). (HU). May not be repeated for credit.

PHIL 232. Problems of Philosophy

(4; 2 in the half-term). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHIL 181, 182, 202, 231, 234, or 297.

PHIL 234. Introduction to Philosophy: Types of Philosophy

(4; 2 in the half-term). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHIL 181, 182, 202, 231, 232, or 297.

PHIL 240, Environmental Ethics

(3; 2 in the half-term). (HU). May not be repeated for credit.

PHIL 262 / RELIGION 262. Introduction to the Philosophy of Religion (4; 3 in the half-term). (HU). May not be repeated for credit.

PHIL 265 / ASIAN 265 / HISTART 265 / RCHUMS 265. The Arts and Letters of China (4). (HU). May not be repeated for credit.

PHIL 296. Honors Introduction to Logic

Honors students or permission of instructor. (3; 2 in the half-term). (MSA). (BS). (QR/1). May not be repeated for credit. Credit is granted for only one of PHIL 296 or 303

PHIL 297. Honors Introduction to Philosophy

Honors students or permission of instructor. (3; 2 in the half-term). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHIL 181, 182, 202, 231, 232, or 234.

PHIL 303. Introduction to Symbolic Logic

(4; 3 - 4 in the half-term). (MSA). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHIL 296 or 414. F, W, Sp.

PHIL 320. The World-View of Modern Science

(3; 2 in the half-term). (HU). May not be repeated for credit.

PHIL 322. The Methods of Science

(3; 2 in the half-term). (ID). May not be repeated for credit.

PHIL 340. Minds and Machines

(4; 2 in the half-term). (HU). May not be repeated for credit.

PHIL 345. Language and Mind

One philosophy course. (3). (HU). May not be repeated for credit.

PHIL 355. Contemporary Moral Problems

(4; 3 in the half-term). (HU). (R&E). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHIL 455.

PHIL 356. Issues in Bioethics

No prerequisites; one philosophy introduction is recommended. (4; 3 in the half-term). (HU). May not be repeated for credit.

PHIL 359. Law and Philosophy

(4; 2 in the half-term). (HU). (R&E). May not be repeated for credit.

PHIL 361. Ethics

One philosophy introduction. (4; 3 in the half-term). (HU). May not be repeated for credit. F.

PHIL 365 / RELIGION 365. Problems of Religion

(4; 2 in the half-term). (HU). May not be repeated for credit.

PHIL 366. Introduction to Political Philosophy

One philosophy introduction. (4; 2 in the half-term). (HU). May not be repeated for credit.

PHIL 367. 19th Century Social and Political Philosophy

One intro course in Philosophy. (4; 3 in the half-term). (HU). May not be repeated for credit.

PHIL 371. Phenomenology and Existential Philosophy

PHIL 181, 196, 202, 232, 234, or 297 with a grade of C- or better. (Prerequisites enforced at registration.) (3; 2 in the half-term). (HU). May not be repeated for credit.

PHIL 375. Nietzsche's Philosophical Thought

(3; 2 in the half-term). (HU). May not be repeated for credit.

PHIL 383. Knowledge and Reality

One course in Philosophy. (4; 3 in the half-term). (HU). May not be repeated for credit. PHIL 388 / CLCIV 388. History of Philosophy: Ancient

One philosophy course with at least a C-. (Prerequisites enforced at registration.)

Knowledge of Greek or Latin is not required. (4; 2 in the half-term). (HU). May not be repeated for credit. Taught in English. F.

PHIL 389. History of Philosophy: Seventeenth and Eighteenth Centuries

One philosophy course with at least a C-. (Prerequisites enforced at registration.) (4; 2 in the half-term). (HU). May not be repeated for credit. W.

PHIL 399. Independent Study

Consent of instructor required. One philosophy introduction and permission of instructor. (1 - 4). (INDEPENDENT). May be elected twice for credit. F, W, Sp.

PHIL 401. Undergraduate Honors Seminar

Open to Honors concentrators in Philosophy and others by permission of instructor. (3; 2 in the half-term). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. F.

PHIL 402. Undergraduate Seminar in Philosophy

Philosophy concentrators only. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit.

PHIL 405. Philosophy of Plato

One PHIL introduction course. (3; 2 in the half-term). May not be repeated for credit. PHIL 406, Aristotle

PHIL 181, 196, 202, 232, 234, or 297 with a grade of C- or better, or graduate. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit.

PHIL 408 / ECON 408. Philosophy and Economics

ECON 401 with a C- or better. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

PHIL 409. Philosophy of Language

PHIL 296, 303, or 414. (3; 2 in the half-term). May not be repeated for credit.

PHIL 413. Formal Philosophical Methods

Satisfaction of QR/1 with either 2nd semester calculus, an advanced course in logic, a course in statistics above STATS 265, or a course in economics. (3; 2 in the half-term). (BS). May not be repeated for credit.

PHIL 414. Mathematical Logic

One PHIL or MATH course. (3; 2 in the half-term). (BS). (QR/1). May not be repeated for credit. F.

PHIL 417. Logic and Artificial Intelligence

PHIL 414 or permission of instructor. (3). May not be repeated for credit.

PHIL 420. Philosophy of Science

One course in Philosophy or Science at the 300 level or higher with a grade of C- or better or graduate standing. (3). (BS). May not be repeated for credit. W.

PHIL 423. Problems of Space and Time

One logic introduction and either one other philosophy course or 12 credits of science. (3; 2 in the half-term). (BS). May not be repeated for credit.

PHIL 425. Philosophy of Biology

One course in Philosophy or Biology. (3). (BS). May not be repeated for credit.

PHIL 426. Philosophy and Linguistic Theory

One philosophy introduction, one logic introduction, or concentration in Linguistics. (3; 2 in the half-term). May not be repeated for credit.

PHIL 427. Science and Gender

Nine credits of Philosophy, Science or Women's Studies. (3; 2 in the half-term). May not be repeated for credit.

PHIL 429. Ethical Analysis

PHIL 361 or 366 with a grade of C- or better, or graduate. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit.

PHIL 430. Topics in Ethics

PHIL 361 or 366 with a grade of C- or better, or graduate. (Prerequisites enforced at registration.) (3; 2 in the half-term). May be repeated for a maximum of 6 credits.

PHIL 431. Normative Ethics

PHIL 181, 196, 202, 232, 234, or 297 with a grade of C- or better, or graduate. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for cre-

PHIL 433. History of Ethics

PHIL 361 OR 366 with a grade of C- or better, or graduate. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit.

PHIL 435. Philosophy of Logic

One Logic introduction. (3; 2 in the half-term). (BS). May not be repeated for credit. PHIL 439. Aesthetics

PHIL 445. Philosophy of Law

for Philosophy concentrators.

for credit.

term). May not be repeated for credit.

PHIL 455. Contemporary Moral Problems

PHIL 456 / ASIAN 466. Interpreting the Zhuangzi

PHIL 450. Philosophy of Cognition

One philosophy introduction. (3; 2 in the half-term). May not be repeated for credit. PHIL 442. Topics in Political Philosophy

forced at registration.) (3; 2 in the half-term). May not be repeated for credit.

Two courses in Philosophy. (3). May not be repeated for credit.

One course in political philosophy or permission of instructor. (3; 2 - 3 in the half-

Not open to Graduate students in Philosophy. (4; 2 in the half-term). (R&E). May not

be repeated for credit. No credit granted to those who have completed or are enrolled

in PHIL 355. Does not meet the Philosophy Department's 400-level course requirement

ASIAN/PHIL 263 or another introductory philosophy course. (3). May not be repeated

PHIL 361 or 366 with a grade of C- or better; or graduate standing. (Prerequisites en-

PHIL 458. Philosophy of Kant

PHIL 389 with a grade of C- or better or graduate standing. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit.

PHIL 460. Medieval Philosophy

One philosophy introduction. (3; 2 in the half-term). May not be repeated for credit.

PHIL 461. Philosophical Thought in the 17th Century

PHIL 389 with a grade of C- or better or graduate standing. (Prerequisites enforced at registration.) (3; 2 in the half-term). May not be repeated for credit.

PHIL 463. Topics in the History of Philosophy

PHIL 388 or 389, or permission of instructor. (3). May not be repeated for credit. PHIL 477. Theory of Knowledge

PHIL 345 or 383. (3; 2 in the half-term). May not be repeated for credit.

PHIL 482. Philosophy of Mind

PHIL 345 or 383. (3; 2 in the half-term). May not be repeated for credit.

PHIL 485. Philosophy of Action

Two courses in Philosophy or permission of instructor. (3). May not be repeated for credit.

PHIL 486 / WOMENSTD 486. Topics in Feminist Philosophy

Two courses in either Philosophy or Women's Studies or permission of instructor. (3). May not be repeated for credit.

PHIL 492. Frege, Russell, and Wittgenstein

PHIL 296, 303, or 414 with C- or higher; OR graduate standing. (Prerequisites enforced at registration.) Permission of instructor for students with a substantial background in mathematics or computer science. (3; 2 in the half-term). May not be repeated for credit.

PHIL 498. Senior Honors in Philosophy

Consent of instructor required. Permission of department. (3; 2 in the half-term). (IN-DEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of PHIL 499, the final grade is posted for both term's elections. W, Su.

PHIL 499. Senior Honors in Philosophy

Consent of instructor required. Permission of department. (3; 2 in the half-term). (IN-DEPENDENT). May not be repeated for credit.

Physics

2477 Randall Laboratory 450 Church Street

(734) 764-4437 (phone)

(734) 763-9694 (fax)

www.lsa.umich.edu/physics

e-mail: physics.sso@umich.edu

Professor Bradford Orr, Chair

- Associate Professor Çagliyan Kurdak, Associate Chair for Graduate Program
- Associate Professor James T. Liu, Associate Chair for Undergraduate Studies
- Professor David Gerdes, Associate Chair for Computing, Research & Facilities

Professors

Fred C. Adams, Theoretical astrophysics

Carl Akerlof, Experimental high-energy physics, Astrophysics

- Ratindranath Akhoury, Theoretical physics, elementary particles
- James W. Allen (Joachin M. Luttinger Collegiate Professor of Physics), Experimental condensed matter physics
- Dante E. Amidei, *Experimental high-energy physics, elementary particles*
- Frederick D. Becchetti, Jr., *Experimental nuclear physics, heavy ion physics*

Paul Berman, Theoretical atomic physics

- Myron K. Campbell, Experimental high-energy physics
- Timothy E. Chupp, *Experimental atomic, molecular, and optical phys*ics
- Roy Clarke, Applied physics, experimental physics, solid state and condensed matter physics
- Charles R Doering, Condensed Matter
- August Evrard (Arthur F. Thurnau Professor), *Theoretical astrophys*ics
- Stephen Forrest (Vice President for Research) (William Gould Dow Professor of Electrical Engineering, College of Engineering), photonic materials, devices and systems
- Katherine Freese (George E. Uhlenbeck Collegiate Professor of Physics), *Theoretical astrophysics*
- David Gerdes (Arthur F. Thurnau Professor), *Experimental highenergy physics*
- David W. Gidley, *Experimental atomic physics, fundamental low* energy research, positrons and positronium
- Sharon Glotzer, *Materials Science and Engineering, Macromolecular Science and Engineering*

Rachel Goldman, High Energy

Gordon L. Kane (Victor Weisskopf Collegiate Professor of Physics), Theoretical physics, elementary particles Jean P. Krisch (Arthur F. Thurnau Professor), *Theoretical physics,* general relativity

Karl Michael Krusheinick, AMO

- Wolfgang Lorenzon, Experimental high-energy physics
- Timothy McKay (Arthur F. Thurnau Professor), *Experimental astro-physics*

Roberto D. Merlin (Peter A. Franken Collegiate Professor of Physics), Experimental solid state physics, condensed matter physics

- Homer A. Neal (Samuel A. Goudsmit Distinguished University Professor of Physics), *Experimental high-energy physics*
- Mark Newman (Paul A.M. Dirac Collegiate Professor of Physics), *Statistical physics theory*
- Bradford G. Orr, *Experimental condensed matter physics, Applied physics*
- Jianming Qian, Experimental high-energy physics
- Georg Raithel, Experimental atomic, molecular, optical physics
- Stephen C. Rand, Experimental applied physics
- J. Keith Riles, Experimental high-energy physics
- Leonard M. Sander, *Theoretical physics, condensed matter and solid state physics*
- Robert S. Savit, *Theoretical physics, condensed matter and statistical physics*
- Duncan G. Steel (Peter S. Fuss Professor of Engineering), Experimental physics, laser physics, atomic physics
- Gregory Tarlé, *Experimental astrophysics, particle physics, nuclear physics*
- Rudolf P. Thun, *Experimental high-energy physics, electron-positron* colliding beam experiments
- Ctirad Uher, Experimental solid state physics, condensed matter physics
- James Wells, Theoretical physics, elementary particles
- Bing Zhou, Experimental high-energy physics

Associate Professors

Luming Duan, *Theoretical atomic physics* Çagliyan Kurdak, *Experimental condensed matter physics*

Finn Larsen, *Particle Theory* James T. Liu, *Theoretical physics, elementary particles*

Jens-Christian P. Meiners, *Experimental biophysics*

Leopoldo Pando Zayas, Particle Theory

Michal Zochowski, Biophysics

Assistant Professors

Robert Deegan, Experimental nonlinear dynamics

Hui Deng, Experimental quantum optics; quantum information processing; many-body physics; semiconductor physics

Henriette Elvang, *High Energy*

Dragan Huterer, Astrophysics theory

Aaron Leanhardt, *Experimental atomic, molecular, and optical physics*

David Lubensky (Norman M. Leff Assistant Professor of Physics), *Theoretical and computational biophysics and statistical physics* Jeffrey John McMahon, *High Energy*

Jennifer Ogilvie, *Experimental biophysics*

Aaron Pierce, *Theoretical Particle Physics*

Vanessa Sih, *Experimental condensed matter physics*

Scott Watson, *High-energy theory*

Research Scientists

H. Richard Gustafson, *Experimental high-energy physics, astrophysics*

Shawn McKee, *High-energy astrophysics* Franco M. Nori, *Theoretical condensed matter*

Associate Research Scientists

Ralph Conti, *Experimental atomic physics: positronic physics* Kevin Coulter, *Experimental atomic physics* Edward Diehl, *Experimental high-energy physics* Daniel S. Levin, *Experimental astrophysics* Michael Schubnell, *Experimental Astrophysics* Monica Tecchio, *Experimental high-energy*

Assistant Research Scientists

Codrin Cionca, *Applied Physics* Abigail Reid Mechtenberg Durga Prasad Rajaram, *Experimental high-energy physics* Richard S. Raymond, *Experimental high energy* Haijun Yang, *Experimental high-energy*

Adjunct Faculty

Alexander Chao, *Accelerator physics* Ernest Courant, *Experimental high-energy physics* Yaroslav Derbenev, *Experimental high-energy physics* Edward N. Glass, *Theoretical physics* James Kolata, *Nuclear Physics* Dennis Sivers, *Experimental high-energy physics* Victor K. Wong, *Theoretical condensed matter physics*

Professors Emeriti Daniel Axelrod, J. Wehrley Chapman, C. Tristram Coffin, Martin B. Einhorn, George W. Ford, Walter S. Gray, Wayne E. Hazen, Karl T. Hecht, Dennis J. Hegyi, Alfred Z. Hendel, Joachim W. Janecke, Lawrence W. Jones, Ernst Katz, Samuel Krimm, Alan D. Krisch, Robert Lewis, Michael J. Longo, Donald Meyer, William C. Parkinson, Byron P. Roe, Marc H. Ross, T. Michael Sanders, Richard H. Sands, Yukio Tomozawa, John C. van der Velde, Martinus J.G. Veltman **(1999 Nobel Prize Winner)**, John F. Ward, Gabriel Weinreich, David N. Williams, Alfred C.T. Wu, York Peng (Ed) Yao, Jens C. Zorn

Research Scientist Emeritus Ali M.T. Lin

The University of Michigan has one of the country's premier programs for the training of undergraduate and graduate students in physics. The Physics Department has abundant facilities for instruction in physics and offers a wide variety of experimental and theoretical research programs open to undergraduate and graduate students.

Undergraduates concentrating in physics have several degree choices:

- B.S. in Physics (Honors)
- B.S. in Interdisciplinary Physics (Honors)
- A.B. in Interdisciplinary Physics (Honors)
- academic minor in Physics

Interested undergraduates may also want to look into work in medical physics (a promising path for pre-med students) in the Applied Physics program, or in the Engineering Physics program.

The analytical and quantitative thinking skills you will develop as you work toward any of these degrees will be of great value in many different careers. Most physics concentrators at U-M follow one (or more) of three paths after graduation:

- graduate work in physics or another field
- employment in industry, software development, or associated field
- professional school in medicine, business, law, or associated area.

Teaching Certificate. Those seeking a Physics degree with a teaching certificate in Physics must fulfill departmental as well as School of Education requirements. Students who plan to earn a teaching certificate with a teaching major or minor in Physics should contact the School of Education Teacher Education office, 1228 School of Education Building, (734) 615-1528 to be connected with a program coordinator. Course requirements can be viewed at www.soe.umich.edu/secondary/index.html.

Advising. Students with any questions about courses or concentrations in Physics should speak with Physics concentration advisors. Advising appointments can be scheduled in the Physics Student Services Office, 2464 Randall Lab [(734) 764-5539] or via the online advising calendar:

www.lsa.umich.edu/physics/undergraduate/advising

Physics Help Room (1416 Randall Lab). The Physics Help Room was created to help students in Introductory Physics classes. The Help Room is staffed (usually between the hours of 10 a.m. and 6 p.m. in the fall and winter, with limited spring hours) with graduate students, undergraduate students, and faculty on a full time basis. Help Room staff are available to answer questions on most undergraduate physics courses. Services in the Physics Help Room are free to all U-M students.

The University of Michigan C. Wilbur Peters Chapter of Society of Physics Students. The Society of Physics Students (SPS) is an independent branch of the American Institute of Physics (AIP) dedicated to serving physics undergraduate and graduate students and furthering interest in physics throughout the student body and the local community.

Our program has been recognized by AIP as an Outstanding SPS Chapter for six consecutive years. The recognition was received because of our community outreach projects and our exciting seminar series. It's not all academic though. SPS students participate in several department-sponsored intramural teams and also organize an annual faculty/student softball game. Meetings are generally held every other Tuesday evening. For more information, visit the SPS webpage at: sps.physics.lsa.umich.edu

Departmental Awards and Prizes

Otho Lyle Tiffany and Mary Lois Tiffany Fellowship. This award, in the amount of \$1000, is given to undergraduate students who show promise in physics deserving of recognition and encouragement. The Otho Lyle Tiffany and Mary Lois Tiffany Fellowship is made possible by a generous gift from the family of Otho Lyle Tiffany and Mary Lois Tiffany.

Bodine Scholarship. The Bodine Scholarship is awarded to a declared physics concentrator of proven academic ability with financial need and covers the cost of tuition up to \$10,000 for the junior year at the University of Michigan. This support continues for the senior year if the scholarship holder maintains a GPA of 3.2 during the junior year. It is awarded each year.

Wirt and Mary Cornwell Award. This \$5,000 cash prize is given to one graduating senior each year. The award recipient must plan to attend graduate school, have a high GPA, and have made contributions to the intellectual life of the Physics department.

The Addison-Wesley Book Award. The Addison-Wesley Book Award is given to a graduating senior for outstanding physics achievement. The award is presented at the Undergraduate Awards Ceremony the day before graduation.

The Wiley Book Award. Established in 1996, the Wiley Book Award is presented for outstanding achievement by an undergraduate physicist. The award is presented at the Undergraduate Awards Ceremony the day before graduation.

The William L. Williams Award for a senior thesis. All graduating seniors writing a thesis are eligible for the Williams Award. This is a cash award established in memory of Professor William L. Williams. It is presented for the best thesis submitted by a graduating senior, to recognize students who "exhibit excellence in posing a question, conducting independent investigation, and determining an answer." The cash award, of at least \$2,000, is presented at the Undergraduate Awards Ceremony the day before graduation.

Programs. The Department of Physics offers: (1) a *Concentration Program in Physics (Honors);* (2) a *Concentration Program in Inter-disciplinary Physics (Honors);* (3) an academic minor in Physics.

A total of 60 credits of *mathematics and natural science* must be elected to receive the Bachelor of Science degree.

Physics (BS)

May be elected as a departmental concentration program

The undergraduate curriculum in Physics is designed to provide a thorough introduction to our current understanding of the physical world. It prepares students for quantitative analysis of the world. The Physics BS degree provides strong preparation for graduate study in Physics and related fields. It also prepares students for direct entry into the job market in a wide variety of technical, analytic, and education settings.

Prerequisites to Concentration.

- Mathematics through MATH 216 (or the equivalent);
- PHYSICS 135/136 and 235/236 or PHYSICS 140/141 and 240/241 (or PHYSICS 160/161 and 260/261); and
- PHYSICS 340/341.

Concentration Program. At least 30 credits in PHYSICS numbered 390 and above. A concentration plan must include:

- Core: PHYSICS 390, 401, 405, 406, and 453. PHYSICS 390, 401, 405, 406, and 453 must be completed with a minimum grade of a C- in each course and a cumulative average of C or higher. PHYSICS 401 and 405 should precede PHYSICS 453; PHYSICS 453 is a prerequisite to most courses numbered above.
- 2. Advanced Laboratory: Any two of PHYSICS 441, 442, or 450.
- 3. *Electives:* Two courses from among PHYSICS 402, 411, 413, 417, 430, 433, 435, 438, 452, 457, 460, and 463.
- PHYSICS 451 or the equivalent; should precede PHYSICS 405 and 453.

PHYSICS 419, 420, 481, and 489 may not be used to satisfy the B.S. degree requirements.

Honors Concentration. Students who have a cumulative grade point average of at least 3.4 are encouraged to elect an Honors concentration in Physics. In addition to the regular departmental requirements for concentration, candidates for an Honors concentration must elect six credits of PHYSICS from courses numbered 401 and above which are not otherwise required and must also complete a senior Honors thesis based on research (PHYSICS 498/499) done under the supervision of a faculty member.

Interdisciplinary Physics (AB or BS)

May be elected as a departmental concentration program

Modern science is increasingly interdisciplinary. The Interdisciplinary Physics concentration allows students the flexibility to supplement their core study of physics with courses in complementary fields. This concentration can be effective preparation for graduate study in the sciences, for medical, law, and business schools, or for direct entry into the job market. Because students pursuing the Interdisciplinary Physics degree have a wide variety of career goals, advising from a Physics concentration advisor is especially important.

It is intended that the flexibility allowed by this program should be used in a well thought out and effective way. To declare a concentration in Interdisciplinary Physics a student must develop an individual plan with a concentration advisor. The courses selected should form a coherent program of study.

Examples of possible programs of study include Statistics, Astrophysics, Philosophy, Cosmology, Economics and Finance, Quantum Computing, Biology, Chemical Physics, Nanotechnology, Medical Physics, Environmental Physics, Global Change, Geophysics, Mathematical Physics, Science Writing, Science Policy, Physics of Technology, Applied Physics, Computational Physics, Physics Education, or Industrial Physics. Possible course selections in each of these areas can be viewed at: www.lsa.umich.edu/physics/undergraduate/resources

Prerequisites to Concentration.

- Mathematics through MATH 216 (or the equivalent);
- PHYSICS 140/141 and 240/241 (or PHYSICS 125/136 and 126/236, or PHYSICS 135/136 and 235/236, or PHYSICS 160/161 and 260/261); and
- PHYSICS 340/341.

Concentration Program. At least 27 credits, including at least 12 in PHYSICS courses numbered 390 and above. A concentration plan must include:

- 1. PHYSICS 390.
- Three additional Physics courses at the 400 level and beyond. PHYSICS 390 and these 400-level Physics course must be completed with a minimum grade of a C- in each course and a cumulative average of C or higher.
- Fifteen credits of cognate courses as part of an interdisciplinary plan designed with the approval of a Physics concentration advisor. Nine of these credits should be at the 200 level or above.

Honors Concentration. Students who have a cumulative grade point average of at least 3.4 are encouraged to elect an Honors concentration in Interdisciplinary Physics. In addition to the regular departmental requirements for the concentration, candidates for Honors must elect an additional three credits of PHYSICS from courses numbered 401 and above which are not otherwise required and elect an additional 3 credit course as part of the cognate program. They must also complete a senior Honors thesis based on research (PHYSICS 498/499) done under the supervision of a faculty member. Some students in this degree line are pursuing interdisciplinary or dual degrees. Students wishing to complete an Honors senior thesis with a faculty member outside the Physics Department must meet with a concentration advisor for prior approval.

Physics Academic Minor

An academic minor in Physics is not open to students with any concentration in the Department of Physics.

The academic minor is designed to allow students from a wide range of academic backgrounds to learn more about the physical universe. Students who elect to minor in Physics will gain an understanding of basic physical principles.

Students wishing to pursue an academic minor in Physics must develop a specific plan for its completion in consultation with the department's designated advisor. Appointments are scheduled through the department's Office of Student Services in 2464 Randall Lab [(734) 764-5539] or via the online advising calendar www.lsa.umich.edu/physics/undergraduate/advising

www.isa.umich.edu/physics/undergraduate/advising

Prerequisites to the Academic Minor: Mathematics through differential equations: MATH 216 or its equivalent. The prerequisites may be met by Advanced Placement credits.

Academic Minor Program: 18 credits of courses as follows:

1. A two-term introductory sequence: either

- PHYSICS 140/141 and 240/241, or
- PHYSICS 125/136 and 126/236, or

- PHYSICS 135/136 and 235/236
- PHYSICS 160/161 and 260/261;
- 2. PHYSICS 340, 341, and 390.

Advanced Placement Credit and the Physics academic minor

Although course credit for PHYSICS 125/126/127/128 or PHYSICS 140/141/240/241 may be awarded on Advanced Placement (AP) Physics exams B or C, LSA policy does not allow those AP credits to be counted toward the minimum credits required for an academic minor. To qualify for the academic minor, students with AP exam credit must complete additional eligible courses within the Physics department for a total of at least 15 PHYSICS course credits. Eligible courses include PHYSICS 333 and 334 (Tutoring of PHYSICS 140 and 240), and PHYSICS 401. Other 400-level PHYSICS courses may also be used, subject to approval by a concentration advisor.

COURSES IN PHYSICS (PHYSICS)

PHYSICS 105. Origin, and Fate of Life, Stars, Galaxies, and the Universe

(1). (NS). (BS). May not be repeated for credit. W.

PHYSICS 106. Everyday Physics

(3). (NS). (BS). May not be repeated for credit. It is recommended that School of Education students take PHYSICS 420.

PHYSICS 107. 20th-Century Concepts of Space, Time, and Matter

High school algebra and geometry. (3). (NS). (BS). (QR/1). May not be repeated for credit. F.

PHYSICS 109 / CHEM 109. Natural Science: Bridging the Gaps (3). (NS). (BS). May not be repeated for credit.

(3). (NS). (BS). Way not be repeated for crea

PHYSICS 112. Cosmology: The Science of the Universe

Although no science courses are required, high school physics would be helpful. Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit. F.

PHYSICS 118. Inward Bound: The Search for Elementarity (3). (NS). (BS). May not be repeated for credit.

(3). (NS). (BS). Why not be repeated for creat.

PHYSICS 119 / CHEM 108 / GEOSCI 130. The Physical World High-school algebra. (4). (NS). (BS). (QR/2). May not be repeated for credit.

PHYSICS 125. General Physics: Mechanics and Sound

Two and one-half years of high school mathematics, including trigonometry. Students should elect PHYSICS 141 concurrently. (4). (NS). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 135, 140 or 160.

PHYSICS 126. General Physics: Electricity and Light

PHYSICS 125. Students should elect PHYSICS 236 concurrently. (4). (NS). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 235, 240 or 260.

PHYSICS 128. Electricity and Light Lab

Concurrent election with PHYSICS 126 is strongly recommended. (1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 236, 241 or 261. F, W, Sp.

PHYSICS 135. Physics for the Life Sciences I

MATH 115, 120, 185, or 295. Students should elect PHYSICS 136 concurrently. (4). (NS). (BS). (QR/1). May not be repeated for credit. No credit granted for those who have completed or are enrolled in PHYSICS 125, 140 or 160.

PHYSICS 136. Physics for the Life Sciences Laboratory I

Concurrent election with PHYSICS 135 is strongly recommended. (1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 127, 141 or 161.

PHYSICS 140. General Physics I

MATH 115, 120, 185 or 295. Students should elect PHYSICS 141 concurrently. (4). (NS). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 125, 135 or 160.

PHYSICS 141. Elementary Laboratory I

Concurrent election with PHYSICS 140 or 160 is strongly recommended. (1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 127.

PHYSICS 145. General Physics

MATH 115 or MATH 175 or MATH 185 or MATH 295 with a C- or better. (Prerequisites enforced at registration.) PHYSICS 145 and 141 are normally elected concurrently. (3). (NS). (BS). (QR/1). May not be repeated for credit. No credit to those who have completed for are enrolled in PHYSICS 125, 140, or 160.

PHYSICS 160. Honors Physics I

MATH 115, 120, 185 or 295. Students should elect PHYSICS 161 or 141 concurrently. (4). (NS). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 125, 135 or 140.

PHYSICS 161. Honors Introductory Mechanics Lab

Concurrent election with PHYSICS 160 strongly recommended. (1). (NS). (BS). May not

be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 127, 136 or 141.

PHYSICS 204 / GTBOOKS 204. Great Books in Physics

(4). (NS). (BS). May not be repeated for credit.

PHYSICS 235. Physics for the Life Sciences II

PHYSICS 135; and MATH 116, 121, 156, 186 or 296. Students should elect PHYSICS 236 concurrently. (4). (NS). (BS). May not be repeated for credit. No credit granted for those who have completed or are enrolled in Physics 126, 240 or 260.

PHYSICS 236. Physics for the Life Sciences Laboratory II

Concurrent election with PHYSICS 235 is strongly recommended. (1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 128, 241 or 261.

PHYSICS 240. General Physics II

PHYSICS 140 or 160; and MATH 116, 121, 156, 186, or 296. Students should elect PHYSICS 241 concurrently. (4). (NS). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 126, 235 or 260.

PHYSICS 241. Elementary Laboratory II

Concurrent election with PHYSICS 240 or 260 is strongly recommended. (1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 128. F, W, Sp.

PHYSICS 260. Honors Physics II

PHYSICS 140 or 160; and MATH 116, 121, 156, 186 or 296. Students should elect PHYS-ICS 261 or 241 concurrently. (4). (NS). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 126, 235 or 240.

PHYSICS 261. Honors Electricity and Magnetism Lab

Concurrent election with Physics 260 strongly recommended. (1). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 128 or 241.

PHYSICS 288. Physics of Music

(3). (NS). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 489. No previous expertise in either physics or music is required.

PHYSICS 290 / BIOPHYS 290. Physics of the Body and Mind

[no change]. (Prerequisites enforced at registration.) MATH 115 or equivalent AP credits. (3). (NS). (BS). (QR/2). May not be repeated for credit.

PHYSICS 333. PHYSICS 140 Tutor

Consent of instructor required. Permission of instructor. (1 - 3). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

PHYSICS 334. PHYSICS 240 Tutor

Consent of instructor required. Permission of instructor. (1 - 3). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

PHYSICS 340. Waves, Heat, and Light

[PHYSICS 235 or 240 or 260] and [MATH 215 or 255 or 285 or 295]. (Prerequisites enforced at registration.) Concurrent election of PHYSICS 341 is strongly recommended. (3). (BS). May not be repeated for credit.

PHYSICS 341. Waves, Heat, and Light Lab

PHYSICS 235, 240 or 260. (Prerequisites enforced at registration.) Concurrent election of PHYSICS 340 is strongly recommended. (2). (BS). May not be repeated for credit.

PHYSICS 370 / BIOPHYS 370 / CHEM 370. Physical and Chemical Principles Behind Biology and Medicine

MATH 215 and PHYSICS 235 or 240. (Prerequisites enforced at registration.) CHEM 130 or placement in 210. (3). (NS). (BS). May not be repeated for credit. F, W.

PHYSICS 390. Introduction to Modern Physics

MATH 216 or 256 or 286 or 296 or 316. (Prerequisites enforced at registration.) PHYS-ICS 340. (3). (BS). May not be repeated for credit.

PHYSICS 401. Intermediate Mechanics

PHYSICS 340 and [MATH 216 or 256 or 286 or 296 or 316] or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). (QR/1). May not be repeated for credit.

PHYSICS 402. Optics

PHYSICS 340 and [MATH 216 or 256 or 286 or 296 or 316] or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. A student can receive credit for only one of EECS 334 or PHYSICS 402.

PHYSICS 405. Intermediate Electricity and Magnetism

PHYSICS 340 and [MATH 216 or 256 or 286 or 296 or 316] or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PHYSICS 406. Statistical and Thermal Physics

PHYSICS 390 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PHYSICS 411. Introduction to Computational Physics

PHYSICS 401 and [MATH 216 or 256 or 286 or 296 or 316]. Some familiarity with a computer language. (3). (BS). May not be repeated for credit.

PHYSICS 413 / CMPLXSYS 541. Introduction to Nonlinear Dynamics and the Physics of Complexity

PHYSICS 401 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

PHYSICS 415. Special Problems for Undergraduates

Consent of instructor required. Permission of instructor. (1 - 6). (INDEPENDENT). May be repeated for a maximum of 6 credits.

PHYSICS 417 / BIOPHYS 417 / CHEM 417. Dynamical Processes in Biophysics

MATH 216 or 256 or 286 or 316, and PHYSICS 340 or CHEM 463. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PHYSICS 420. Physics for the Elementary Classroom

Elementary education concentrators. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSICS 106. W.

PHYSICS 424. Physics in Action

[PHYSICS 125, 135, 140, or 160] or graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PHYSICS 430 / BIOPHYS 430. Medical Physics

BIOPHYS 370 or PHYSICS 390. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PHYSICS 433 / BIOPHYS 433. Biocomplexity

CHEM 417, or PHYSICS 417 or 406; or graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

PHYSICS 435. Gravitational Physics

PHYSICS 390 and 401 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

PHYSICS 438. Electromagnetic Radiation

PHYSICS 405. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PHYSICS 441. Advanced Laboratory I

PHYSICS 390 and any 400-level Physics course. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

PHYSICS 442. Advanced Laboratory II

PHYSICS 441. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. W.

PHYSICS 450 / BIOPHYS 450. Biophysics Laboratory

BIOPHYS 370 or CHEM 370 or PHYSICS 370; or PHYSICS 390; or CHEM 452 or BIOL-CHEM 452; or graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

PHYSICS 451. Methods of Theoretical Physics I

[MATH 215 or 255 or 285 or 295] and [MATH 216 or 256 or 286 or 296 or 316] or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. F.

PHYSICS 452. Methods of Theoretical Physics II

PHYSICS 451 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PHYSICS 453. Quantum Mechanics

PHYSICS 390 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PHYSICS 457. Particle Physics and Cosmology

PHYSICS 453 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. W.

PHYSICS 460. Quantum Mechanics II

PHYSICS 453 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. W.

PHYSICS 463. Introduction to Solid State Physics

PHYSICS 453 or Graduate Standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. W.

PHYSICS 465. Senior Seminar

Junior and Senior Physics concentrators. (Prerequisites enforced at registration.) (2). (BS). May not be repeated for credit.

PHYSICS 470 / CMPLXSYS 470. Experiments in Nonlinear Dynamics

[PHYSICS 125 or 135 or 140] and [MATH 115 or 185] each with a minimum grade of C. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PHYSICS 481 / PUBPOL 481. Science, Technology and Public Policy

Junior standing; introductory physics courses preferred. (3). May not be repeated for credit. May not be included in a concentration plan in Physics.

PHYSICS 496. Senior Thesis, I

Consent of instructor required. Permission of departmental concentration advisor. (2 - 3). (BS). (INDEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of PHYSICS 497, the final grade is posted for both term's elections. F, W, Sp/Su, Sp, Su.

PHYSICS 497. Senior Thesis II

Consent of instructor required. Permission of departmental concentration advisor. (2 - 3). (BS). (INDEPENDENT). May not be repeated for credit. F, W, Sp/Su, Sp, Su.

PHYSICS 498. Introduction to Research for Honors Students

Consent of instructor required. Permission of departmental concentration advisor. (2 - 3). (BS). (INDEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of PHYSICS 499, the final grade is posted for both term's elections. F, W, So/Su, Sp, Su.

PHYSICS 499. Introduction to Research for Honors Students

Consent of instructor required. Permission of Physics concentration advisor. (2 - 3). (BS). (INDEPENDENT). May not be repeated for credit. F, W, Sp/Su, Sp, Su.

Physiology

Molecular and Integrative Physiology U-M Medical School 7744 Medical Science II 1301 East Catherine Street (734) 763-5727 (phone) www.physiology.med.umich.edu

Not a concentration program

The essential concern of physiology is how living things work and, as physiology relates to man, it is the study of the normal functioning of the human body. The methods and tools of physiology are those used in the experimental sciences, and its range cuts across many different scientific disciplines. Physiology emphasizes the basic functions of organs, the interactions and coordination of these diverse functions, and attempts to analyze these functions in terms of physical and chemical processes. A knowledge and understanding of the functioning of the body and its component parts is an essential part of a general education. PHYSIOL 201 is intended to meet the needs and expectations of many types of students: those preparing for careers as doctors, nurses, medical technicians, and biology teachers; those who are interested in a systematic investigation of the biological sciences; and those who desire a general knowledge of physiology as part of a liberal arts education. *Students must have at least sophomore standing or permission of instructor.*

PHYSIOL 502, like PHYSIOL 201, is a basic survey course covering all areas of human physiology. It has the same objectives as PHYSIOL 201, and advanced undergraduates who have the stated prerequisites are advised to elect it rather than PHYSIOL 201.

Chemistry Background for Introductory Physiology Courses. Although college chemistry is not a course prerequisite, approximate-

ly 80% of the students electing PHYSIOL 201 have had some college or high school chemistry. A background in chemistry is helpful for a basic understanding of physiology since physiology represents an attempt to explain how the body functions in terms of physical and chemical processes. Students who have had no chemistry or whose

high school chemistry background is weak should not be discouraged from electing PHYSIOL 201. However, such students are encouraged to obtain the textbook prior to the start of the course and study the review chapter covering basic chemistry. While it is not necessary to master all the material contained in the review chapter, a general review of basic chemistry prior to the beginning of the term usually proves helpful.

COURSES IN MOLECULAR & INTEGRATIVE PHYSIOLOGY (PHYSIOL)

All courses in Physiology are listed in the *Schedule of Classes* under the Medical School. The following count as LSA courses for LSA degree credit.

PHYSIOL 201. Introduction to Human Physiology

Students must have at least sophomore standing. Prior exposure to introductory chemistry is helpful. (4). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PHYSIOL 502. F.

PHYSIOL 306. Problems

Consent of instructor required. PHYSIOL 201. (1 - 4). (BS). (INDEPENDENT). May be repeated for a maximum of 8 credits. F, W, Sp/Su, Sp, Su.

PHYSIOL 405. Research Problems

Consent of instructor required. Permission of instructor. (1 - 4; 1 - 2 in the half-term). (INDEPENDENT). May be repeated for a maximum of 8 credits. F, W, Sp/Su, Sp, Su. PHYSIOL 502. Human Physiology

Introduction to biology and biochemistry. (4). (BS). May not be repeated for credit. PHYSIOL 541 / ANAT 541 / BIOLOGY 541 / PSYCH 532. Mammalian Reproductive Endocrinology

MCDB 310 or 311, or BIOLCHEM 415. (4). (BS). May not be repeated for credit. W.

Political Science

5700 Haven Hall (734) 764-6313 (phone) (734) 764-3522 (fax) polisci.lsa.umich.edu

e-mail: polisci@umich.edu

Professor Charles Shipan, Chair

Professor Robert J. Franzese, Jr., Associate Chair

Professor Ronald F. Inglehart, Director of Undergraduate Studies

Associate Professor Mika Lavaque-Manty, Director of Undergraduate Honors Program

Professors

- Robert Axelrod (Arthur W. Bromage Distinguished University Professor of Political Science and Public Policy; Mary Ann and Charles R. Walgreen, Jr. Professor for the Study of Human Understanding), *Mathematical Models of Politics, Decision-making, Game Theory, National Security Policy*
- Pamela Brandwein, *Public Law, Race, Ethnicity and Politics, Gender and Politics, Methods*
- Nancy E. Burns (Warren E. Miller Collegiate Professor of Political Science), *American Local Politics and Institutions, Methodology, Gender and Politics, and Political Participation*
- John R. Chamberlin, *Ethics and Public Policy, American Political Thought, Formal Political Theory, Mathematical Models of Social Science*
- William Clark, International and Comparative Political Economy, Comparative Institutions, Open-Market Macroeconomic Policy, Political Economy of Religion
- Mary E. Corcoran, American Government and Politics, Public Policy and Administration, Research Methods, Poverty and Inequality
- Lisa Disch, Political Theory, History of Political Thought, Feminist Theory, Electoral Process, Democratic Theory, Contemporary Continental Theory, Third Party Politics, Voter Participation
- Robert J. Franzese, Jr., Comparative and International Political Economy; Comparative Politics and Developed Democracies; Quantitative Methodology and Formal Models
- Zvi Y. Gitelman (Preston R. Tisch Professor of Judaic Studies), Former Soviet Union, East European and Israeli Politics
- Edie N. Goldenberg, *Politics and the Mass Media, Bureaucracy and Public Policy*
- Anna Grzymala-Busse, Comparative Politics and Post-Communism, Institutional Development, Qualitative Methods
- Richard L. Hall, American National Institutions, Legislative Behavior, Elite Socialization and Psychology, Public Policy
- Don Herzog (Edson R. Sunderland Professor of Law), *History of Political Thought, Contemporary Political Thought, Moral and Social Theory, Jurisprudence and Constitutional Law*
- Vincent Hutchings, *Public Opinion; African American Politics;* Legislative Politics; Voting Behavior
- Ronald F. Inglehart (Amy and Alan Lowenstein Professor of Democracy, Democratization, and Human Rights), Comparative Political

Behavior, Mass Participation and Communication, Advanced Industrial Societies

- John E. Jackson (M Kent Jennings Professor in Political Science), American Politics, Political Economy
- Donald R. Kinder (Philip E. Converse Collegiate Professor of Political Science, James Orin Murfin Professor of Political Science), *Public Opinion and Political Action, Psychological Perspectives, Research Methods*
- Kenneth Kollman, American Government, Formal Modeling, Political Parties and Elections, Interest Groups
- Daniel H. Levine (James Orin Murfin Professor of Political Science), Comparative Politics, Religion and Politics, Urbanization, Cultural Change, Latin America, Contemporary Social Theory
- Arthur Lupia (Hal R. Varian Collegiate Professor of Political Science), Cognition and Communication in Political Decision Making; Institutional Design; Game Theory; Public Policy
- Andrei S. Markovits (Carl W. Deutsch Collegiate Professor of German and Comparative Politics, Arthur F. Thurnau Professor), German and European Politics, Comparative Political Sociology, Sociology of Culture and Sports
- Gregory B. Markus, *Mathematical and Statistical Modeling, American Mass Politics*
- Walter R. Mebane, American Government and Political Methodology
- James D. Morrow, World Politics, Formal Models, Statistical Methods
- Scott E. Page (Leonard Hurwicz Collegiate Professor of Political Science, Complex Systems, and Economics), *Institutional Design, Complexity, Formal Modeling, Public Policy*
- Arlene W. Saxonhouse (Caroline Robbins Collegiate Professor of Political Science & Women's Studies), *Ancient and Modern Political Theory, Women in Political Thought*
- Charles R. Shipan (J. Ira and Nicki Harris Professor of Social Sciences), American Government and Politics, Comparative Government and Politics, Formal Modeling, Political Economy, Public Policy and Administration
- Allan Stam, World Politics/International Relations, Comparative Governments and Politics, Public Law
- Mark Tessler (Samuel Eldersveld Professor of Political Science), Comparative Politics, Political Development, Middle Eastern Politics and International Relations
- George Tsebelis, Comparative Government and Politics, Political Economy, Formal Modeling
- Hanes Walton, Jr., American Government and Politics, Black Americans in the Political System.

Associate Professors

- Ted Brader, American Politics, Political Psychology, Elections and Campaigns, Mass Media, Public Opinion and Political Behavior
- Jenna Bednar, Institutional Design, Federalism, Formal Political Theory, Comparative Political Institutions (U.S., Canada, Western Europe), Political History

- Mary Gallagher, *Chinese Politics, Comparative Politics, Transitions* from Socialism, Political Economy of Development
- Allen Hicken, Comparative Government and Politics; World Government and Politics; Political Economy; Southeast Asia
- Barbara Koremenos, International Politics, International Organization, International Law, Institutional and Agreement Design, Law and Economics
- Mika Lavaque-Manty, Modern Political Theory, Especially 18th Century; Contemporary Political Theory, Especially Liberal Theory; Philosophy of Social Science; Environmental Politics; Social Movements
- Ann Lin, American Government and Politics, Public Policy and Administration, Gender and Politics/Feminist and Theory, Organizational Theory, Race, Ethnicity and Politics
- Robert W. Mickey, American Political Development, Political Parties, Politics of Race and Ethnicity, Public Policy
- Nicholas A. Valentino, American Government and Politics, Political Psychology, Race, Ethnicity, and Politics, Methods
- Elizabeth R. Wingrove, Gender and Politics/Feminist Theory, Race, Ethnicity and Politics

Assistant Professors

- Jowei Chen, American Government and Politics, Political Economy, Methods, Formal Modeling
- Andrew Kerner, *Political Economy, Comparative Government and Politics, World Politics/International Relations*
- Anna Kirkland, Law And Society (U.S.); Contemporary Political and Legal Theory; Identity and Civil Rights (Gender, Race, Sexuality, Disability)
- Kenneth McElwain, Comparative Study of Political Parties and Institutions, Primarily in Japan and Europe
- Robert Salmond, Comparative Governments and Politics, Research Methods, Political Economy, Political Psychology
- Jana von Stein, International Cooperation, Law, and Institutions; Human Rights; Quantitative Methods
- Mariah Zeisberg, *American Constitutional Theory; Law and Politics;* Liberal and Democratic Political Theory; Philosophy of Law

Adjunct Faculty

Constance Cook, Educational Policy

- Barry Rabe, State and Local, Environmental Politics and Policy
- Michael W. Traugott, American Government, Politics and the Mass Media

Professors Emeriti John C. Campbell, M. Kent Jennings, John W. Kingdon, Kenneth Langton, Kenneth Lieberthal, Lawrence B. Mohr, Raymond Tanter, William Zimmerman IV

Political science is the systematic study of governmental and political structures, processes, and policies. This study uses institutional, quantitative, and philosophical approaches. The field is highly diverse, ranging across political theory, comparative government, international relations, American government, public policy, and research methods. Political scientists concentrate on public opinion and voting, organized political behavior, governmental institutions, studies of single countries, comparisons across countries and relations among countries. The field addresses both normative and empirical concerns.

Student Associations. *The Undergraduate Political Science Association* provides undergraduates with both a valuable resource and a voice within the department. Students are elected from the association membership to represent undergraduates on departmental committees concerned with such matters as educational policy, proposed course changes, and the quality of undergraduate education. The department co-sponsors with UPSA a series of seminars and lectures of particular relevance to undergraduates. The counseling service also provides current information about graduate schools, law schools, and summer internships. Undergraduates are encouraged to join and to utilize the resources the association provides.

The Michigan Journal of Political Science was founded to create a forum in which undergraduate and graduate students could publish superior academic papers. The *Journal* is edited by undergraduates, and publishes politically related papers from various disciplines. For information, contact the editors c/o student services assistant at 5700 Haven Hall.

Pi Sigma Alpha is the national honorary fraternity in Political Science. For membership information, contact the student services assistant.

Sigma Iota Rho is the international relations honorary society. For more information on joining, see the student services assistant.

Department Awards. *The Edwin F. Conely Scholarship in Government* is awarded to a graduate student in political science who has received an A.B. degree in Political Science from the University of Michigan.

William Jennings Bryan Prize in Political Science is awarded to that member of the graduating class who has shown the greatest promise in the field of political science. This prize consists of a gift certificate for books to be chosen by the recipient.

Preparation for United States Foreign Service. Students interested in pursuing a career in the foreign service should obtain a copy of the booklet "Careers in the Foreign Service" by writing to the Department of State, Washington, DC. Qualified students should consult with concentration advisors in the field of world politics.

Preparation for Public Service. Students may acquire the basic preparation required of candidates for public service in local, state, and national governments by electing appropriate course work in political science, economics, and especially in public policy administration.

Political Science

May be elected as a departmental concentration program

Prerequisites to Concentration. Two courses chosen from different subfields of political science. First- and second-year students choose from among POLSCI 101 (political theory), 111 (American government), 140 (comparative politics), 160 (world politics); juniors and seniors from POLSCI 301 and 302 (political theory), 310 (public policy and administration), 311 (American government), 336 or 349 (comparative politics), and 360 or 370 (world politics).

Concentration Program. At least 24 credits in POLSCI (in addition to required prerequisites) and 6 credits elected through a cognate department.

Core courses must be elected from the 300-level or higher, including at least two at the 400-level. Twelve credits (including the two at the 400-level) must be taken *in the department.*

Only 9 hours of foreign credit from a one-term accredited program and 12 hours of foreign credit from a year-long program may be counted toward the concentration core.

No more than 4 credits of internship and 4 credits of directed study may be included in a concentration plan. *Directed reading may not be counted as advanced unless approved beforehand by a concentration advisor.*

Credit for STATS 250 (or 350) can count toward methods concentration requirements.

Seniors are encouraged to elect an undergraduate seminar (POLSCI 495, 496, 497, or 498). Law courses, with the exception of POLSCI 345 are counted in the American politics subfield. Political science concentrators are expected to acquire an appreciation of the diverse styles of political inquiry by electing at least one course in four of the following subfields: political theory, American government, comparative politics, world politics, and methodology. Normally, this requirement is satisfied by the prerequisites to concentration and different additional upper-level courses in two subfields. Cognate courses,

which are upper-level courses in another discipline, are an integral part of the concentration plan and should be selected with a view toward building a coherent program of study. As a general rule, cognate courses should be in the same discipline with exceptions approved in advance by a concentration advisor.

Roster of POLSCI subfields and courses:

- American 111, 300, 310, 311, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 326, 327, 329, 330, 331, 332, 333, 334, 335, 380, 385, 410, 432, 482, 484, 486, 496
- Comparative 140, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 382, 387, 395, 396, 397, 451, 497

Methods 381, 391, 488, 490, 499

- *Theory* 101, 301, 302, 306, 308, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 495
- World 160, 360, 361, 363, 364, 365, 368, 369, 370, 371, 372, 379, 462, 463, 498

Honors Concentration. Especially well-qualified students are encouraged to undertake an Honors concentration. Such students elect the Honors proseminar (POLSCI 381) during the winter term of the junior year and prepare a senior thesis under the direction of a faculty member in the department. Senior Seminars (POLSCI 493, 494) provide thesis credit. Students may count only two Honors courses toward the concentration core, one if a previous directed reading has been taken.

Normally, candidates for an Honors concentration must maintain a grade point average of at least 3.5 in political science courses. Interested students apply for the Honors program during their junior year. Applications and information are available in the student office.

Teaching Certificate. Students interested in obtaining a secondary teaching certificate with a teaching major or minor in Political Science should consult the "Teacher Certification Program" section in this *Bulletin* and the School of Education Teacher Education office, 1228 School of Education Building, (734) 615-1528.

Advising. Normally, the decision to concentrate is made late in the sophomore year or early in the junior year. Advising appointments are scheduled by going to the Political Science website:

polisci.lsa.umich.edu or by contacting the department office. Appointments for the Honors advisor are scheduled at 1330 Mason Hall.

Political Science Academic Minor

An academic minor in Political Science is not open to students with a concentration in the Department of Political Science.

Students wishing to pursue an academic minor in Political Science must develop a specific plan for its completion in consultation with the department's designated advisor. Advising appointments are scheduled by going to the Political Science website:

polisci.lsa.umich.edu or by contacting the department office.

The academic minor in political science gives students training in a rigorous discipline and way of thinking and understanding problems. This is an indispensable part of any liberal arts major. Political Science gives students a better understanding of the way public affairs are conducted and a more practical knowledge of how citizens, elected representatives, judges, and administrators approach the decisions they are called upon to make. An academic minor in political science prepares students to become more active citizens by training them to become astute and informed observers of political behavior in their own country and around the world.

Prerequisites to the Academic Minor: Two introductory courses in two different sub-fields. First- and second-year students choose from among POLSCI 101 (political theory), 111 (American government), 140 (comparative politics), 160 (world politics); juniors and seniors from POLSCI 301 and 302 (political theory), 310 (public policy and administration), 311 (American government), 336 or 349 (comparative politics), and 360 or 370 (world politics).

Academic Minor Program: Five 3- or 4-credit, upper-level courses taken in two of the five political science fields for a total of 15 credits.

Students should ideally take their upper-level courses in the same two fields as their prerequisites. Advisor approval must be obtained in order to switch areas.

The academic minor is a structured course of study in itself. Students concentrating in Political Science should consult an advisor before considering dropping the concentration in order to pursue an academic minor in political science.

The academic minor assumes that the student will take 300-level course work in the fields of the introductory work. A sustained focus on two fields makes it possible for students to acquire an in-depth knowledge of two complex areas such as comparative politics and government and world politics for the student interested in world affairs, American and methods, for students interested in electoral politics and polling, or American and comparative to focus on political institutions.

Other constraints: The academic minor does not allow a student to use a cognate from another department.

Michigan in Washington Program (MIW)

www.lsa.umich.edu/michinwash Professor Edie Goldenberg (Political Science), Director

The Michigan in Washington Program offers an opportunity for 20-25 University of Michigan undergraduates from all majors to spend a semester (Fall or Winter) in Washington, D.C. The program provides a chance for students to combine coursework with an internship that reflects each student's particular area of interest. Our students have worked in Congressional offices, federal agencies, mass media and non-profit organizations. Classes might involve a field trip to a Smithsonian museum or a visit with a White House staff member.

The areas of interest include (but are not limited to) American politics, international relations, history, the arts, public health, economics, the media, the environment, and science and technology policy. While classes are taught by University of Michigan faculty, students also gain access to local Washington experts in their research area.

Application. The Michigan in Washington (MIW) program accepts students from all schools and majors at the University of Michigan. Applicants must have reached at least sophomore-status by the time they apply and should have completed at least three courses in their majors. Applicants should have a strong interest in public service. Students who participate in the MIW program will usually have a cumulative grade point of at least 3.0.

Applications are due in late September for students going to D.C. in the winter term and in late January for students heading to D.C. in the fall.

The following documents must be submitted to MIW by the application deadline

- A completed application
- An unofficial transcript
- Two letters of reference from professors or graduate student instructors. Please collect these from your references in sealed envelopes and submit with the application.
- A 500-600 word essay. Describe (1) how you hope the MIW program will enrich your college experience, (2) how your previous experiences make you well-suited for this program and (3) how an internship in Washington would fit with your career aspirations. For what types of internships *(e.g.,* human rights, environmental, education) would you be interested in applying? Please be specific.
- Optional résumé

Requirements. Students are expected to participate in a preparatory class prior to leaving for Washington. This will require several sessions in the semester prior to departure, a paper, and a poster presentation the semester following their term in D.C. Upon completion of all parts of the preparatory class, students will receive two university credits (Credit/No Credit).

Students must also register for the Research Seminar (4 credits). This is the core course of the program, in which students are expected to produce a substantial research paper of 20-30 pages on a topic of their interest. Students will use their internship experience in developing their research paper.

Students are required to take a one credit Washington Experience Course, which features speakers and response papers. Students will also receive two credits for their internships.

Students will then have a choice to take 1 or 2 electives, which will bring them to a total of 12-15 credits. Examples of such electives might be a course on regulatory aspects of the policy-making process or a course on the art and architecture of Washington, DC.

Housing. All students reside in housing owned and operated by the University of California. The UCDC building has fully furnished apartments with high-speed Internet access, a library, classrooms, a computer lab and a study lounge. The UCDC building is located at 1608 Rhode Island Ave., NW, a mile north of the White House. The housing is within walking distance of the hotels, restaurants and shops of Dupont Circle, a vibrant residential and commercial area.

COURSES IN POLITICAL SCIENCE (POLSCI)

POLSCI 101. Introduction to Political Theory

Primarily for first and second year students. (4). (SS). May not be repeated for credit. F, W, Sp.

POLSCI 111. Introduction to American Politics

Primarily for fist and second year students. (4). (SS). May not be repeated for credit. POLSCI 140. Introduction to Comparative Politics

Primarily for first- and second-year students. (4). (SS). May not be repeated for credit. F. W.

POLSCI 160. Introduction to World Politics

(4). (SS). May not be repeated for credit. F, W, Su.

POLSCI 190. First-Year Seminar in Political Science

Enrollment restricted to first-year students, including those with sophomore standing. (3). (SS). May not be repeated for credit.

POLSCI 281 / CMPLXSYS 281. Applied Complex Systems: Emergent Challenges (4). May not be repeated for credit.

POLSCI 299. Directed Undergraduate Internship in Political Science

Consent of department required. Declared political science concentrator. (1). (EXPE-RIENTIAL). May be elected twice for credit. Offered mandatory credit/no credit.

POLSCI 300. Contemporary Political Issues (4). (SS). May not be repeated for credit.

POLSCI 301. Development of Political Thought: To Modern Period (3). (SS). May not be repeated for credit.

POLSCI 302. Development of Political Thought: Modern and Recent POLSCI 101. (3). May not be repeated for credit.

POLSCI 306. American Political Thought

POLSCI 101 or upperclass standing. (3). May not be repeated for credit.

POLSCI 310. American Policy Processes

POLSCI 111 or upperclass standing. (3). (SS). May not be repeated for credit. POLSCI 311. American Political Processes

POLSCI 111 or upperclass standing. (3). (SS). May not be repeated for credit.

POLSCI 313. Political Mobilization and Policy Change POLSCI 111 or upperclass standing. (3). (SS). May not be repeated for credit.

POLSCI 314. American Political Parties and Electoral Problems

POLSCI 111. (4; 3 in the half-term). May not be repeated for credit.

POLSCI 315. Media and Public Opinion

POLSCI 111 or upperclass standing. (3). (SS). May not be repeated for credit.

POLSCI 317. Courts, Politics and Society *One course in Political Science. (3). May not be repeated for credit.*

POLSCI 318. American Constitutional Politics

POLSCI 111. (3). May not be repeated for credit.

POLSCI 319. The Politics of Civil Liberties and Civil Rights POLSCI 111. (4; 3 in the half-term). May not be repeated for credit.

POLSCI 320. The American Chief Executive

POLSCI 111 or upperclass standing. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

POLSCI 322. Legislative Process

POLSCI 111 or upperclass standing. (Prerequisites enforced at registration.) (3). (SS). May not be repeated for credit.

POLSCI 324 / CAAS 418. Black Americans and the Political System One course in Political Science and CAAS 201. (3). May not be repeated for credit.

POLSCI 325. Informal Politics

(3). May not be repeated for credit.

POLSCI 326. American State Government POLSCI 111 or upperclass standing. (Prerequisites enforced at registration.) (3). (SS).

May not be repeated for credit.

POLSCI 327. Politics of the Metropolis

POLSCI 111 or upperclass standing. (Prerequisites enforced at registration.) (3). (SS). May not be repeated for credit.

POLSCI 330. Psychological Perspectives on Politics

POLSCI 111 or upperclass standing. (Prerequisites enforced at registration.) (3). (SS). May not be repeated for credit.

POLSCI 331 / ENVIRON 345 / SOC 380. Environmental Public Opinion Analysis (3). (SS). May not be repeated for credit.

POLSCI 332 / ECON 325. Inequality in the United States ECON 101 and 102, and POLSCI 111. (3). May not be repeated for credit. POLSCI 337. Comparative Constitutional Design

One course in Political Science. (3). May not be repeated for credit.

POLSCI 339 / ASIAN 428. China's Evolution Under Communism Upperclass standing. (4; 3 in the half-term). May not be repeated for credit.

POLSCI 340. Governments and Politics in Western Europe POLSCI 140 or upperclass standing. (4). (SS). May not be repeated for credit.

POLSCI 341. Comparative Politics of Developed Democracies *POLSCI 140 or upperclass standing. (Prerequisites enforced at registration.) (3). (SS). May not be repeated for credit.*

POLSCI 342. Eastern Europe: Revolution, Reaction, and Reform POLSCI 140 or upperclass standing. (3). (SS). May not be repeated for credit.

POLSCI 343. Political Economy of Developed Democracies (3). May not be repeated for credit.

POLSCI 345 / HISTORY 342 / SOC 342. History of European Integration (3). (SS). May not be repeated for credit.

POLSCI 346. Comparative Studies in Religion and Politics (3). May not be repeated for credit.

POLSCI 347. Politics and Society in Latin America POLSCI 140 or upperclass standing. (3). (SS). May not be repeated for credit.

POLSCI 348. Political Economy of Development (3). May not be repeated for credit.

POLSCI 350 / JUDAIC 451. The Politics and Culture of Modern East European Jewry *A course in East European and/or Jewish history, and Comparative Politics is recommended. (3). May not be repeated for credit. Sp/Su in Poland.*

POLSCI 351. Israeli Society and Politics One course in Political Science or upperclass standing. (3). (SS). May not be repeated for credit.

POLSCI 353. The Arab-Israeli Conflict (4). May not be repeated for credit.

POLSCI 354. Governments and Politics of Southeast Asia

One course in Political Science or upperclass standing. (3). (SS). May not be repeated for credit.

POLSCI 356. Government and Politics of Japan POLSCI 140 or upperclass standing. (3), (SS), May not be repeated for credit.

POLSCI 357. Governments and Politics of India and South Asia One course in Political Science or upperclass standing. (3). (SS). May not be repeated for credit.

POLSCI 358. Politics of the European Union One course in Political Science. (3). May not be repeated for credit.

POLSCI 359 / CAAS 359. African Politics *CAAS 200. (4; 3 in the half-term). May not be repeated for credit.*

POLSCI 360. Problems in World Politics

POLSCI 160 or upperclass standing. (Prerequisites enforced at registration.) (3). (SS). May be elected twice for credit.

POLSCI 363. International Organization and Integration *POLSCI 160 or upperclass standing. (3). (SS). May not be repeated for credit.*

POLSCI 364. Public International Law

One course in Political Science. (3). May not be repeated for credit.

POLSCI 368. Cooperation and Conflict in the International System POLSCI 160. (3). May not be repeated for credit.

POLSCI 369. Politics of International Economic Relations

POLSCI 160. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

POLSCI 370. Comparative Foreign Policy

Any 100-level course in POLSCI. (3). May not be repeated for credit.

POLSCI 380 / ENVIRON 312. Environmental Politics and Policy ENVIRON 210 or POLSCI 111. (3). May not be repeated for credit.

POLSCI 381. Political Science Research Design

Political Science concentrators. (Prerequisites enforced at registration.) Political Science concentrators. (3). May not be repeated for credit.

POLSCI 387. Comparative Analysis of Government Institutions

Two courses in political science or junior standing. (4; 3 - 4 in the half-term). (QR/2). May not be repeated for credit.

POLSCI 389. Topics in Contemporary Political Science

One course in Political Science. (3 - 4). May be repeated for a maximum of 10 credits. May be elected more than once in the same term.

POLSCI 390. Practicum for the "Michigan Journal of Political Science

Consent of instructor required. Permission of instructor. (1). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

POLSCI 391. Introduction to Modeling Political Processes

One course in Political Science. (4). (SS). (QR/1). May not be repeated for credit.

POLSCI 392. Michigan in Washington: Preparatory Seminar

Consent of department required. Admission to Michigan in Washington Program. (2). May be elected twice for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. Offered mandatory credit/no credit.

POLSCI 393. Inside Washington, D.C.

Consent of instructor required. (1). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

POLSCI 394 / ENVIRON 313. Environment and Development: Dilemmas of Power and Place in a Global World

(3). May not be repeated for credit.

POLSCI 395 / HISTORY 332 / REES 395 / SLAVIC 395 / SOC 392. Survey of Russia: The Russian Empire, the Soviet Union, and the Successor States

(4; 3 in the half-term). (SS). May not be repeated for credit. May not be counted in a Slavic Department academic minor. F.

POLSCI 396 / HISTORY 333 / REES 396 / SLAVIC 396 / SOC 393. Survey of Central and Eastern Europe and the Enlarged European Union

(4; 3 in the half-term). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in REES 397. May not be counted in a Slavic Department academic minor.

POLSCI 397 / HISTORY 341. Nations and Nationalism

(4). May not be repeated for credit.

POLSCI 398. Michigan In Washington: Internship

Consent of department required. (2). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

POLSCI 399. Advanced Internship in Political Science

Consent of instructor required. Political Science concentrators who have completed at least two-upper-level POLSCI courses. (3). (EXPERIENTIAL). May not be repeated for credit.

POLSCI 400. Selected Topics in Political Theory

POLSCI 101 or 301 or 302. (3). May not be repeated for credit.

POLSCI 401 / WOMENSTD 422. Feminist Political Theory Junior standing. (3). May not be repeated for credit. POLSCI 403 / CLCIV 403. Greek Political Thought POLSCI 101 or 302. (3). May not be repeated for credit.

POLSCI 409. Twentieth Century Political Thought

POLSCI 101 or 302. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

POLSCI 410. Washington Experience Seminar

Consent of instructor required. (2). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

POLSCI 411. Michigan In Washington: National Capital Research Project Consent of department required. (4). May not be repeated for credit.

POLSCI 432. Law and Public Policy

Two courses in Political Science, including POLSCI 111 or its equivalent. (4; 3 in the half-term). May not be repeated for credit.

POLSCI 451 / JUDAIC 480. Religion, Ethnicity, and Politics: The Jewish Case

JUDAIC 205 or HJCS 276, POLSCI 350 or JUDAIC 451, or any course in modern Jewish history. (3). May not be repeated for credit.

POLSCI 462. Strategic Interaction in World Politics

POLSCI 160 and an additional course in Political Science. (3). May not be repeated for credit.

POLSCI 463 / ENVIRON 490. War and the Environment: A Lethal Reciprocity Coursework in environment or political science. (3). May not be repeated for credit.

POLSCI 475. Understanding China's International Impact Senior Political Science concentrator. (3). May not be repeated for credit.

POLSCI 481. Junior Honors Proseminar

Open only to Honors concentrators with junior standing. (3). May not be repeated for credit.

POLSCI 484 / COMM 484. Mass Media and Political Behavior COMM 361 or 381 strongly recommended. (4). May not be repeated for credit.

POLSCI 486. Public Opinion, Political Participation, and Pressure Groups

One course in Political Science. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

POLSCI 489. Advanced Topics in Contemporary Political Science

Seniors only. (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

POLSCI 490. Game Theory and Formal Models

(4). May not be repeated for credit.

POLSCI 491. Directed Studies

Consent of instructor required. Two courses in Political Science and permission of instructor and the Director of Undergraduate Studies. (1 - 6). (INDEPENDENT). May be repeated for a maximum of 8 credits. POLSCI 491 and 492 may be elected for a combined maximum of eight credits. No more than four credits of directed study credit may be elected as part of a concentration program in Political Science. F.

POLSCI 492. Directed Studies

Consent of instructor required. Two courses in Political Science and permission of instructor and the Director of Undergraduate Studies. (1 - 6). (INDEPENDENT). May be repeated for a maximum of 8 credits. POLSCI 491 and 492 may be elected for a combined maximum of eight credits. No more than four credits of directed study credit may be elected as part of a concentration program in Political Science. W.

POLSCI 493. Senior Honors Proseminar

Open only to senior Honors concentrators. (4). May not be repeated for credit. No more than four Honors credits may be elected as part of a concentration plan in Political Science. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term (POLSCI 494), the final grade is posted for both term's elections. F.

POLSCI 494. Senior Honors Proseminar

Open only to senior Honors concentrators. (4). May not be repeated for credit. No more than four Honors credits may be elected as part of a concentration plan in Political Science. W.

POLSCI 495. Undergraduate Seminar in Political Theory

Senior standing and concentration in Political Science. (Prerequisites enforced at registration.) (3). May be elected twice for credit. May be elected more than once in the same term.

POLSCI 496. Undergraduate Seminar in American Government and Politics

Senior standing; primarily for seniors concentrating in Political Science. (3). May be elected twice for credit. May be elected more than once in the same term.

POLSCI 497. Undergraduate Seminar in Comparative and Foreign Government

Senior standing; primarily for seniors concentrating in Political Science. (3). May be elected twice for credit. May be elected more than once in the same term.

POLSCI 498. Undergraduate Seminar in International Politics

Senior standing; primarily for seniors concentrating in Political Science. (3). May be elected twice for credit. May be elected more than once in the same term.

POLSCI 499. Quantitative Methods of Political Analysis

(3). May not be repeated for credit.

POLSCI 514. The Use of Social Science Computer Programs

Consent of instructor required. POLSCI 599/equivalent or permission of instructor. (1). May not be repeated for credit.

Psychology

1343 East Hall 530 Church Street (734) 764-2580 (phone) (734) 764-3520 (fax) www.lsa.umich.edu/psych e-mail: psych.saa@umich.edu Professor Theresa Lee, Chair Professor Robert Sellers, Associate Chair Professor John Hagen, Psychology Student Academic Affairs Chair

Professors

Kenneth Adams, (Clinical) Clinical neuropsychology, medical psychology, professional education, statistics/measurement

- Toni Antonucci (Elizabeth M. Douvan Collegiate Professor of Psychology), (Developmental) Developmental Psychology, Aging and Socialization. Social relations and health over the Lifespan and across cultures.
- Jill Becker (Patricia Y. Gurin Collegiate Professor of Psychology), (*Biopsychology*) Brain tissue transplantation, plasticity and development of neural activity; sex differences in brain and behavior
- Stanley Berent, (Clinical / Biopsychology) Clinical and research neuropsychology; PET imaging; professional issues, accreditation, and credentialing
- Kent Berridge (James Olds Collegiate Professor of Psychology and Neuroscience), (*Biopsychology*) Affective neuroscience; emotion and motivation
- Julie E. Boland (Linguistics/Psychology), (Cognition & Cognitive Neuroscience) Psycholinguistics, sentence comprehension and parsing, lexical representation
- Brad J. Bushman, (Social) Causes and consequences of violence and aggression; violent media; narcissism; meta-analysis

Albert C. Cain, (Clinical) Psychopathology of childhood, bereavement

Jennifer Crocker (Claude M. Steel Collegiate Professor of Psychology) (Social) Self-esteem, contingent self-worth, and their effects on learning, relationships, autonomy, and self-regulation

- Jane Dutton (William Russell Kelly Professor of Business Administration, Jack D. Sparks-Whirlpool Corporation Research Professor of Business Administration, Robert L. Kahn Distinguished University Professor of Business Administration and Psychology), (Organizational) Processes of being valued and devalued at work, invisible relational work in organizations; corrosive relationships at work; processes of strategic agenda building in organizations
- Jacquelynne Eccles (Wilbert J. McKeachie Collegiate Professor of Psychology), (*Developmental*) Family, schools and high-risk settings' effects on development; identity formation; gender role development
- Nick Ellis, (Cognition and Perception) Second and foreign language acquisition; applied psycholinguistics
- Phoebe Ellsworth (Robert B. Zajonc Professor of Psychology), (Social) Psychology of emotion, psychology and law; cross-cultural psychology

David L. Featherman, (Social) Life course human developing; cognitive and behavioral aging; social science and public policy

George W. Furnas, (Cognition & Cognitive Neuroscience) Human Computer Interaction, Visualization, Graphical Reasoning

Susan Gelman (Frederick G.L. Huetwell Professor of Psychology), (Cognition & Cognitive Neuroscience / Developmental) Cognitive development, language acquisition

- Luis O. Gómez (Charles O. Hucker Professor of Buddhist Studies, Arthur F. Thurnau Professor), (*Clinical*) *Psychology and religion, history of the interaction between psychology and religion; obsessionality, compulsivity; obsessive-compulsive disorder and related disorders; affect and cognition; culture and affect*
- Richard Gonzalez, (Social / Cognition & Cognitive Neuroscience) Research methodology; mathematical psychology; statistics; judgment and decision making; psychology and law; group dynamics; social cognition

- Sandra Graham-Bermann, (Clinical) Family resilience; dysfunctional sibling relationships; adaptation of children exposed to violence
- Lorraine M. Gutierrez (Arthur F. Thurnau Professor), (Social Work / Psychology) Community mental health; diversity/multiculturalism; gender identity/roles; minority issues; poverty; health
- John W. Hagen, (Developmental / Education & Psychology) Cognitive development, selective attention, memory; social policy, children and families; adjustment, children in foster care
- John Holland, (Cognition & Cognitive Neuroscience) Cognitive processes using mathematical models and computer simulation
- James S. Jackson (Daniel Katz Distinguished University Professor of Psychology), (Social / Cognition & Cognitive Neuroscience) Survey methodology; mental health, cultural influences
- John Jonides (Daniel J. Weintraub Collegiate Professor of Psychology and Neuroscience), (Cognition & Cognitive Neuroscience) Perception and cognition, memory, selective attention, higher cognitive processing
- Rachel Kaplan (Samuel T. Dana Professor of Environment and Behavior), (General) Environmental psychology, participation, research methods, natural environments and mental well-being
- Stephen Kaplan, (General / Cognition & Cognitive Neuroscience) Environmental preference, cognitive mapping, evolutionary psychology
- Daniel Keating, (Developmental) Adolescent cognitive and brain development; population developmental health; impact of early developmental history on cognitive and socioemotional trajectories; societal factors influencing successful development
- David E. Kieras, (Cognition & Cognitive Neuroscience) Cognitive psychology, human-computer interaction, artificial intelligence
- Donald R. Kinder (Philip E. Converse Collegiate Professor of Political Science, James Orin Murfin Professor of Political Science), *(Social) American government, methods, public policy and administration*
- Cheryl King, (Clinical) Youth depression and suicide prevention, Development of clinical interventions; treatment adherence.
- Shinobu Kitayama, (Social) Cultural variations in psychological processes such as self, cognition, emotion, and motivation; nature of happiness and wellbeing across different cultures; specific historical processes that influence contemporary cultures
- Fiona Lee, (*P&SC*) Breakdowns in interpersonal communication within organizations; group dynamics and effectiveness, attributions and social inference processes; learning
- Theresa Lee, (Biopsychology) Biological rhythms
- Robert K. Lindsay, (Cognition & Cognitive Neuroscience) Cognitive psychology, artificial intelligence
- Richard Lewis, (Cognition & Cognitive Neuroscience) Computational modeling; psycholinguistics; sentence processing; cognitive architectures; unified theories of cognition
- Catherine Lord, (Clinical / Developmental) Autism and related complex developmental disorders of social and communicative functioning, particularly longitudinal studies, the intersections among social, language and cognitive development, diagnostic methods and frameworks, and gene-behavior relationships affecting social and language development
- Stephen Maren, (Biopsychology) Neural mechanisms of learning and memory; biochemical, electrophysiological, and behavioral correlates of synaptic plasticity in the hippocampus and amygdala; glutamatergic systems in learning and synaptic plasticity; sex difference in brain and behavior; neurobehavioral systems mediating fear and emotional learning
- David E. Meyer (Clyde H. Coombs and J.E. Smith Collegiate Professor of Mathematical and Cognitive Psychology), *(Cognition & Cognitive Neuroscience) Human memory, cognition, perception, psycholinguistics*
- Kevin Miller, (CPEP) The nature and sources of early mathematical and literacy development; cross-cultural similarities and differences in academic learning and performance; utilizing video records to engage teachers with issues of instructional practice

- Frederick Morrison, (Developmental) Literacy acquisition, children; impact of child, family, and schooling factors contributing to early problems in school
- Donna Nagata, (Clinical) Ethnic and cultural issues in mental health; Japanese-Americans and the psychosocial consequences of the WWII internment
- Randolph Nesse, (Social / Biopsychology) Evolutionary psychology and Darwinian medicine with emphasis on the evolutionary origins and functions of emotions that mediate goal pursuit and relationships and their pathology, including depression.
- Richard E. Nisbett (Theodore M. Newcomb Distinguished University Professor), (Social / Cognition & Cognitive Neuroscience / Personality) Inference, judgment and reasoning, diversity and multiculturalism
- Sheryl Olson, (*Clinical*) Child and family psychopathology; aggression and impulsivity in early childhood; psychosocial factors influencing resiliency
- Daphna Oyserman (Edwin J. Thomas Collegiate Professor of Social Work), (Social) The influence of sociocultural context on the way people think, act, and feel; ethnic and racial-identity, content, impact, antecedents and correlates
- Robert G. Pachella, (Cognition & Cognitive Neuroscience) Cognitive psychology, information processing, perception
- Marion Perlmutter, (Developmental) Life span development; social, attitudinal, and health influences on cognition
- Christopher Peterson (Arthur F. Thurnau Professor), (*Clinical*) Positive psychology, character strengths, happiness, and youth development
- Richard H. Price, (Organizational) Assessment of social environments
- Patricia Reuter-Lorenz, (Cognition & Cognitive Neuroscience) Neuropsychology and imaging of working memory, attention, affective and executive functions as they change with age or brain damage.
- Terry E. Robinson (Elliot S. Valenstein Collegiate Professor of Behavioral Neuroscience), (*Biopsychology*) Neurobiology of addiction; brain dopamine systems; neural adaptations to brain damage
- Arnold Sameroff, (Developmental) Development of infants and adolescents in high risk environments
- Lance Sandelands, (Organizational) Emotions, attitudes, social forms and processes of organizing
- Martin Sarter (Charles M. Butter Collegiate Professor of Psychology), (*Biopsychology*) regulation and function of the cortical cholinergic input system
- John Schulenberg, (Developmental) Adolescence and emerging adulthood; how developmental transitions relate to trajectories of mental health across the lifespan; substance use etiology and prevention.
- Norbert Schwarz (Charles Horton Cooley Collegiate Professor), (Social) Social Cognition, in particular the interplay of affect and cognition in social judgment; conversational influences on judgment and reasoning; aging and social cognition; applications of cognitive psychology on methodological issues of survey research
- Colleen Seifert, (Cognition & Cognitive Neuroscience) The cognitive science of higher-level thought processes; including knowledge representation, learning, memory, explanation, planning, problem solving, decision making, and other aspects of complex cognition.
- Robert Sellers, (*P&SC*) Ethnicity, racial and ethnic identity, personality and health, athletic participation and personality
- Marilyn Shatz, (Developmental / Cognition & Cognitive Neuroscience) Relations between language and cognitive development; Possible influences of bilingualism on cognitive development and brain organization
- Barbara Smuts, (*Biopsychology*) Evolution of social behavior; animal behavior; behavior of nonhuman primates and domestic dogs; affiliation, cooperation, play, and nonverbal communication
- Abigail Stewart (Agnes Inglis Collegiate Professor of Psychology and Women's Studies; Sandra Schwartz Tangri Distinguished University Professor of Psychology and Women's Studies), (*Personality*) Adult personality development; psychology of women; psychological responses to individual and social change; motivation

- Twila Tardif, (Developmental) Cross-language comparison in Chinese and English speaking children; caregiving in Chinese families; beliefs in preschool children
- Brenda Volling, (Developmental) Socioemotional development; infant-parent attachment; family relationships in infancy, especially fathering; sibling relationships
- Karl E. Weick (Rensis Likert Distinguished University Professor of Organizational Behavior and Psychology), (Organizational) Effects of stress on thinking and imagination; management of professionals; narrative rationality
- Henry M. Wellman (Harold W. Stevenson Collegiate Professor of Psychology), (Developmental) Cognitive development; knowledge acquisition; theory of mind
- David Williams (Psychiatry-Internal Medicine), *physiological pain mechanisms, clinical management of stress-related disorders; Cognitive behavioral therapy, Fibromyalgia, Chronic pain syndromes, Gulf war illnesses*
- David Winter, (P&SC) Motivation, power, effects of higher education, political psychology, economic change
- James H. Woods, (Biopsychology) Behavioral pharmacology, drug dependence
- J. Frank Yates (Arthur F. Thurnau Professor), (Cognition & Cognitive Neuroscience) Decision processes; evaluation, decision models
- Oscar Ybarra, (Social) Social cognition, culture and cognition, intergroup perception/relations
- Jun Zhang, (Cognition & Cognitive Neuroscience) Mathematical psychology and computational neuroscience; computational vision, choice-reaction time model; Bayesian decision theory and game theory
- Marc Zimmerman, (Developmental / Education & Psychology) Adolescent health and resiliency; prosocial and antisocial behavior in adolescence; family process and structure effects on adolescent development; empowerment theory; program development and evaluation
- Robert Zucker, (Clinical) Developmental psychopathology, with a special interest in substance abuse; biopsychosocial models of life span development; primary prevention; behavior change

Associate Professors

- J. Wayne Aldridge, (*Biopsychology*) Neuronal mechanisms of motor and reward behavior
- Linas Bieliauskas, (*Clinical*) *Clinical neuropsychology; cognitive and personality changes in normal and abnormal aging; effects of pharmacological interventions on cognitive processes*
- Rosario Ceballo, (*Clinical*) The psychological impact of poverty and exposure to community violence; infertility and adoption; resiliency to stressful life experiences
- Edward Chang, (Clinical) Optimism and pessimism; perfectionism; social problem solving; stress and coping; cognitive-behavioral models of assessment and intervention; cultural influences; subjective well-being
- Elizabeth Cole, (P&SC) Class, race and gender as social identities; women's political attitudes; qualitative methods
- Kai Cortina, (Developmental / Education & Psychology) Research in teaching and learning; motivation in adolescence; political socialization; empirical methods of social research
- Lilia Cortina, (*P&SC*) Sexual harassment in organizations; incivility, bias, and discrimination in the workplace; gender bias in the courts; violence against women across cultures
- Patricia Deldin, (*Clinical*) relationship between the brain and behavior in psychopathology; emotional information processing studies designed to distinguish memory, attention, and expectancy dysfunction in major depressives, dysthymics and controls; cognitive and emotional processing associated with depression
- William Gehring (Arthur F. Thurnau Professor), (Cognition & Cognitive Neuroscience) Cognitive neuroscience; human brain electrophysiology, executive control of thought and action; frontal lobe function; mental chronometry; error detection; inhibitory processes; motor control; studies of brain-injured and psychiatric populations

- Bruno Giordani, (Clinical) Neuropsychology; interaction of cognitive and mobility performance across the lifespan; cross-cultural issues in assessment; movement disorders and movement disorders in children and adults
- Ram Mahalingham, (*P&SC*) Cultural psychology, social cognition, cognitive development, learning and mathematics education; power and social hierarchy's influence on folk theories about social groups (race, class and gender) and knowledge representation in different cultural contexts such as USA and India
- Nansook Park, (P&SC) Positive psychology, character strengths, happiness, and youth development
- Thad Polk, (Arthur F. Thurnau Professor), (Cognition & Cognitive Neuroscience) Cognitive neuroscience; functional neuroimaging, computational modeling, and behavioral studies of higher cognition
- Stephanie Rowley, (Developmental) Exploring the development of African-American children and families; including issues of race (racial identity, perceptions of stereotypes, parental racial socialization, and racial coping) influence the development of academic self- concept in African-American students as well as how sex differences develop over time
- Rachael Seidler, (Cognition & Cognitive Neuroscience) Research interests include neural bases of skill acquisition, changes in neural recruitment patterns and interhemispheric communication with age
- Denise Sekaquaptewa, (Social) Stereotyping and prejudice from an information processing perspective; investigating the effects of solo status on performance
- Priti Shah, (Cognition & Cognitive Neuroscience / Education & Psychology) Visuospatial cognition; comprehension of visual displays such as graphs and diagrams; integration of visual and verbal information; statistical and scientific reasoning; working memory; attention
- L. Monique Ward, (Developmental) Children's and adolescents' developing conceptions of both gender and sexuality, and on the contribution of those notions to their social and sexual decisionmaking; how children interpret and use messages they receive about male-female relations from their parents and from the media; adolescents' interpretations of sexual content on television and its relation to their expectations about dating and sexual relationships; and children's understanding of society's gender hierarchy and the impact of this knowledge on their social interests and gender stereotyping

Assistant Professors

- Brandon Aragona (*Biopsychology*) Neural regulation of a highly adaptive social behavior, monogamous pair bonding; neural regulation of a maladaptive behavior, taking addictive drugs
- Jacinta Beehner, (Biopsychology) Physiological causes and consequences of social behavior in social primates, particularly baboons
- Joshua Berke, (*Biopsychology*) the role of basal ganglia circuits in the learning, selection and performance of actions; how populations of neurons encode information and interact; how neural representations are changed by learning experiences and by dopaminergic manipulations
- Thore Bergman, (Biopsychology) Social evolution, hybridization, social behavior, vocalizations, and cognition
- Terri Conley, (P&SC) Sexuality, gender, and close relationships
- Robin Edelstein (*P&SC*) How people differ in their responses to emotional experiences and information, and the implications of these differences for cognition, behavior, and well-being
- Joseph Gone, (Clinical) Mental health service delivery for American-Indian communities; cross-cultural psychopathology; alternative clinical and community interventions; innovative mental health program development, and the ethnopsychological investigation of self, identity, personhood, and social relations in American-Indian cultural contexts
- Ethan Kross, (Social) Exploring the factors that enable people to adaptively regulate automatically triggered impulses and emotions that undermine their goals and compromise their health

- Cindy Lustig, (Cognition & Cognitive Neuroscience) age-related changes in brain structure and attentional control
- Stephanie Preston, (Cognition & Cognitive Neuroscience) Interdisciplinary approach to the interface between emotion and decision making
- Sari van Anders, (Biopsychology) Human social neuroendocrinology, sexuality, gender/sex, and evolution
- Daniel Weissman, (Cognition & Cognitive Neuroscience) Attention, the development of attentional systems across the lifespan, disruptions of attention associated with various clinical disorders

Lecturers

- Mark Creekmore, (General) Research and assessment of programs relating to youth, courts, and community engagement
- E. Margaret Evans, (Developmental) Cognitive and cultural factors in the emergence of scientific and metaphysical explanations, with a focus on evolutionist and creationist beliefs
- Carla Grayson, (Social) Emotion regulation and expression; relationship between language and social interactions; and health
- James Hansell, (Clinical) Psychotherapy research; emotion and motivation; psychoanalysis, sport psychology, and organizational consulting
- James Hoeffner, (Cognition & Cognitive Neuroscience) Language acquisition, language processing and impairments; focus is to help develop computational models and mechanistic theories of the process of language acquisition and causes of language disorders
- Brian Malley, (General) The interaction of cognition and culture, religion, literacy.
- Jennifer Myers, (Developmental) Research interests are on the impact of chronic illness on development (mainly psychosocial) through the life course; other areas include young children's memory and knowledge about health and illness
- Ellen Quart, (Developmental) Interface between pediatric neuropsychology and education; Effects of acquired brain injury on children, including head injury and neuralgic diseases; Learning disabilities, emotional sequela and compensatory strategies; Mentoring experiences for adolescents and student self assessments
- Joshua Rabinowitz, (Social) Social structures and people's attitudes and beliefs
- Shelly Schreier, (*Clinical*) Child and Adolescent Development, Divorce and Sibling Relationships
- Elizabeth Wierba, (P&SC) Organizational Psychology, Power; leadership, Peer Advising

Clinical Instructors

- Alice Brunner, (*Clinical*) Adult children of dysfunctional families; trauma and dissociation; social pathology; professional education models and processes
- Margaret Buttenheim, (Clinical) Individual and group treatment of incest survivors; psychology of women; psychology of sexual orientation

Michael Casher, (Clinical) Depression, suicide

- Jerry Dowis, (Clinical) Cognitive-behavioral therapy; anxiety disorders
- Kristine Freeark-Zucker, (*Clinical*) Challenges to parent-child relationships, coping and primary prevention efforts: preschool years, adoptive families, and temperamentally-challenging children: the early parent-child dialogue about the meaning of adoption; and parental attunement to the needs of a temperamentallychallenging child
- Daniel Greenberg, (Clinical) Cognitive-developmental precursors to separation anxiety; rational concepts of object vulnerability and their role in the development of attachment; early conceptions of loss; clinical interventions with parentally bereaved children; parental alienation syndrome; high-conflict divorce.
- Michelle Kees, (Clinical) Resilience in high risk child and adolescent populations; community dissemination of evidence-based assessments and interventions; child abuse, domestic violence, and child trauma

- Deborah Kraus, (Clinical) Treatment outcome alcohol and other drug problems; assessment of alcohol and other drug problems
- Roger Lauer, (Clinical) Child (development, disabilities, psychopathology, assessment); developmental neuropsychology, developmental and chronic disabilities and disorders; memory, attention, mental health, family relations, and loss. Depression; development, psychopathology; illness; memory; and neuropsychology
- Pamela Ludolph, (Clinical) Child abuse and neglect, high conflict divorce, and the lot of children within the legal system
- Carol Persad, *(Clinical) Relationship between cognition and mobility in aging, Depression and Dementia, Neuroendocrine factors and cognition*
- Todd Sevig, (*Clinical*) Integrating spirituality in multicultural counseling/psychotherapy; identity development; issues for white people in embracing multiculturalism
- Jeffrey Urist, (Clinical) Self-care in adolescents; development of affect and affect tolerance; thought disorder and the continuum between primary and secondary process thinking
- Michelle Van Etten-Lee, (Clinical) Behavior Therapy for Obsessive Compulsive Disorder, Cognitive Behavioral Therapy for Panic In Primary Care Settings, Non-Cardiac Chest Pain and Panic-Spectrum Disorders
- Seth Warschausky, (Clinical) Social development of children with congenital and acquired brain dysfunction; neuropsychology of pediatric brain injury; quality of life outcomes for persons with congenital and acquired disabilities

James P. Whiteside, (Clinical) Clinical Psychology

Mark E. Ziegler, (*Clinical*) *Psychotherapy supervision, conjoint psychotherapy, psychoanalysis, contemporary theories of dreaming in psychotherapy and psychoanalysis*

Adjunct Professors

- Roseanne Armitage, (*Psychobiology*) Sleep regulation across the life cycle in humans, biological risk factors for psychiatric illness, depression, gender differences, biological rhythms; computer analysis of EEG
- Scott Atran, (Social) Cross-cultural cognition (comparative studies of Lowland Maya, Native Americans, Majority Culture Europeans): environment, categorization, inductive reasoning, decision making
- Leonard Eron, (Developmental) Development of aggression and violence in children; longitudinal studies of personality; effects of media on behavior; violence prevention
- Melvin Guyer, (Clinical) Law and psychology; mathematical game theory; judicial decision theory; juvenile and family law; the role of psychological expertise in courtrooms; children as witnesses; decision-making, memory processes in forensic contexts
- Israel Liberzon, (Clinical) Posttraumatic Stress Disorder, Comorbidity of Depression and Anxiety; Neurobiology of trauma and stress related disorder, Neuroanatomy and neuroimaging of emotions, Comorbidity of Depression and Anxiety, Animal models of anxiety and trauma
- Josef M. Miller, (*Biopsychology*) Studies of "tissue engineering of the inner ear" and the cochlear prosthesis with focus on the investigation of changes in the auditory pathway that follow deprivation and the reversibility of changes by artificial electrical stimulation of the auditory nerve and administration of survival (growth) factors to inner ear tissues
- Bryan E. Pfingst, (*Biopsychology*) Human and animal psychophysics; Psychophysics of electrical stimulation of the auditory nervous system via auditory prostheses (the bionic ear)

Adjunct Associate Professors

- Frederic Blow, (Clinical) Serious Mental Illness, Alcohol Abuse, Older Adults, Mental health services research
- William (Nick) Collins, (General) Cognition, college student academic achievement, medical education, thanatology
- Geoffrey Gerstner, (Biopsychology) Criminal forensic psychology, especially female and juvenile offenders; MMPI-2 in forensic settings; gender identity and socialization; racial/cultural issues in clinical assessment

- Robert Hatcher, (Clinical) Psychotherapy process and outcome, assessment of patient, therapist and dyadic features of therapy
- Marita Inglehart, (Social) Health psychology, stress and coping; health-related quality of life; health care disparities; educational research
- Jerry Miller, (*Clinical*) Childhood psychopathology; community-based treatment of children and adults; gifted children; community service learning
- Randy Scott Roth, (*Clinical*) *Psychological factors and treatment outcome of chronic pain; musculoskeletal pain; health psychology; patient education*
- Peter Ubel (George Dock Collegiate Professor of Internal Medicine), (General) Decision psychology; cost-effectiveness analysis; bioethics

Adjunct Assistant Professors

- Thomas Finholt, (Organizational) Information technology and organizational behavior, organizational communication
- Heather Flynn, (*Clinical*) Depression in women; psychotherapeutic interventions for depression in medical settings; treatment adherence
- Dara Greenwood, (Social) Mass media processes; mass media effects on individuals
- Carol Holden, (*Clinical*) Criminal forensic psychology, especially female and juvenile offenders; MMPI-2 in forensic settings; gender identity and socialization; racial/cultural issues in clinical assessment
- Ned Kirsch, (Clinical) Assessment; personal and family accommodations to neuropsychological impairment; coping with chronic disabilities
- James Sayer, (Cognition & Cognitive Neuroscience) Human factors and cognitive ergonomics; models of driver behavior; driver visual perception; development of advanced vehicle control systems and driver safety; user-interface development
- Carolyn Yoon, (Cognition & Cognitive Neuroscience) Cognitive aging in consumer contexts, Implicit memory for consumer information, cross-cultural differences in memory performance

Professors Emeriti Joseph B. Adelson, Oscar Barbarin, Eric A. Bermann, Donald R. Brown, Henry A. (Gus) Buchtel, Eugene Burnstein, Charles M. Butter, Nathan S. Caplan, William L. Cash, Jr., S. Thomas Cummings, Irene Fast, Martin G. Gold, Daniel G. Green, Barbara Gutek, Patricia Y. Gurin, Lois W. Hoffman, Warren Holmes, L. Rowell Huesmann, Martin Maehr, Melvin Manis, Richard Mann, Wilbert J. McKeachie, Vonnie McLoyd, Charles (Tony) Morris, Lorraine Nadelman, Gary M. Olson, Irving Pollack, George C. Rosenwald, Howard Shevrin, Edward E. Smith, William C. Stebbins, Elliot S. Valenstein

Research Scientist Emeritus Ernest Harberg

Undergraduate courses in psychology give students an opportunity to learn what research has shown about:

- how behavior is motivated;
- how we perceive, learn, and think;
- how individuals differ from one another;
- how the personality develops from infancy to maturity and is expressed by behavior; and
- how interpersonal factors affect human relationships in the home, on the job, and in the community.

The curriculum in psychology is intended to enhance one's understanding of behavioral science and of oneself and others in terms of concepts developed by study. The undergraduate concentration program is not intended to prepare students for any specific vocational objective; to become a professional psychologist requires from two to four years (or more) of graduate study.

The overall goal of the Psychology concentration is to provide students with a broad background in the various levels of analysis and methodological approaches used in the study of behavior, particularly human behavior, and to prepare students for graduate study in a number of fields. Students can gain research training, experience in a wide variety of community settings, and tailor course selections to meet their long-term post-graduate goals. A Psychology degree, in conjunction with courses chosen from other disciplines, can prepare students for careers interacting with people of all ages and backgrounds in a wide range of fields.

The overall goal of Brain, Behavior and Cognitive Science concentration is to provide a course of study that integrates the natural science components of the study of behavior and prepares students for graduate study in a number of related fields. The program integrates neuroscience, cognitive science, and evolutionary approaches to the study of behavior. This concentration is particularly appropriate for students interested in graduate study of human cognition, biopsychology, behavioral neuroscience, comparative animal behavior, and evolutionary psychology. A variety of research course options are available to provide the research training needed for postgraduate study. A variety of other career opportunities are also available when additional appropriate courses are chosen from other departments.

Advising. Students choosing psychology as a field of concentration develop an approved concentration plan with a concentration advisor. Students then assume responsibility for completing their program of study or for making revisions which will not jeopardize their graduation. Students are, however, encouraged to consult a concentration advisor at any time. A concentration advisor must approve the original concentration plan and any exceptions to the stated concentration requirements. Students should also consult a concentration advisor when planning the final term's elections to ensure that all concentration requirements have been met and to secure an advisor's approval on a *Concentration Release* form. Appointments for students are scheduled at 1343 East Hall or online through the departmental website.

Peer Advising. Advising by *Undergraduate Psychology Academic Peer Advising Program* students is available at 1343 East Hall during fall and winter terms.

Awards. Psychology concentrators with senior standing are eligible for the *Walter B. Pillsbury Prize* in psychological empirical research. This prize is awarded annually in recognition of outstanding research performance. The *Tanner Memorial Award* is an annual award for project expenses for a particularly innovative, meritorious research project proposed by an undergraduate Psychology concentrator. The *Anne Rudo Memorial Award* is designated for a student with dual interests in the disciplines of biology and psychology, and superior academic achievement. The *Muenzer Memorial Award* in Psychology was established by the parents of Martha Muenzer, who died while she was a student in LSA. The award is given annually to an outstanding women in the Psychology Honors Program. The *Albert Cain Honors Travel Award* is given to a Psychology Honors student who is presenting their thesis at a national conference. Information concerning all awards is available on the web at:

www.lsa.umich.edu/psych/undergrad/awards

Teaching Certificate. Students interested in obtaining a secondary teaching certificate with a teaching major or minor in Psychology should consult the "Teacher Education Program" section in this *Bulle-tin* and the School of Education Teacher Education office, 1228 School of Education Building, (734) 615-1528.

Course Prerequisites. Even where it is not specifically stated, an instructor may waive a course prerequisite and grant qualified students permission to elect a course. When such permission is granted, students should secure a note from the instructor and have it placed in their academic advising file.

Prerequisites to Concentration. Before declaring a concentration in Psychology or Brain, Behavior, and Cognitive Sciences, students must complete:

 an introductory course (PSYCH 111, 112, or 114) with a minimum letter grade of "C";

- two gateway courses (PSYCH 230, 240, 250, 260, 270, 280, 290) from different breadth groups;
- STATS 250 (or 350); and
- A concentration orientation.

Curriculum Guides. Curriculum Guides are available for both Psychology and Brain, Behavior, and Cognitive Sciences concentrators. Guides are groupings of courses (both within the Department of Psychology and throughout other programs at the University of Michigan) that focus on a more specific area related to psychology. Students are encouraged to refer to these guides when making academic and career goals.

The following guides are currently available:

- Behavioral and Cognitive Neuroscience
- Business, Systems, and Organizations
- Culture, Context, and Communities
- Development, Psychopathology, and Mental Health
- Evolution, Biology, and Behavior
- Gender, Psychology, and Society
- Health, Development, and Aging
- Intergroup Relations
- Language, Thought, and Culture
- Law, Criminal Justice, and Forensics

Brain, Behavior, and Cognitive Science (BBCS)

May be elected as a departmental concentration program

Exclusions: Students who elect a concentration in Brain, Behavior, and Cognitive Sciences may not elect the Neuroscience or Psychology concentrations.

A minimum of 24 credits is required for the concentration. Of the overall 40 credits (prerequisites and concentration courses), 24 must be completed directly through the University of Michigan's Department of Psychology at the Ann Arbor campus. Of these 24 credits, 12 credits must be upper-division (300 or above). 100-level courses may not be used to meet the concentration requirements or the credit requirement. Although some courses that are graded credit/no credit may be used to meet the lab requirement, 24 credits must be letter graded.

1. Gateway requirement:

At least one course from each of the groups below. Only one course from each group may be used toward either the prerequisite or concentration credits.

Group	Course
Group I	PSYCH 230 or 335
Group II	PSYCH 240 or 345
Group III	PSYCH 250, 260, 270, 280, or 290

- Lab requirement. Students must elect two different courses for a minimum of five credits total. To meet the lab requirement, students may complete either:
 - two (at least 2 credits each) courses from the list of Methods-based Lab courses;
 - one (at least 2 credits) course from the list of Methods-based Lab courses and one (at least 2 credits) course from the list of Research Lab courses; or
 - the Psychology Honors Research sequence (6 credits total) and one course (at least 2 credits) from the list of Methodsbased Lab courses.

Methods-Based Lab Courses :

- PSYCH 231, 303, 331/332, 341, 342.
- BIOLOGY 226
- EEB 381 or 493
- MCDB 306, 308, or 423
- **Note:* Only one non-departmental course may be elected to satisfy the lab requirement. Each course must be taken for a minimum of two credits each and be completed in a single academic term.

Research Lab Courses (2 credits minimum to satisfy requirement):

- Research-based Lab Courses: PSYCH 322, 326, 422, 428
- Honors Research Sequence: PSYCH 424 and 426.

Note: Credit/No-credit courses may be used toward the Lab requirement, but will not count toward the total number of psychology credits required for concentration. Students wishing to pursue the Brain, Behavior, and Cognitive Science Honors Research program should acquire research and statistical skills early in their concentration before applying.

- 3. Four additional courses, for a minimum of 12 credits selected from the following: PSYCH 230, 240, 335, 338, 344, 345, 346, 347, 348, 349, 400, 420, 432, 433, 434, 435, 436, 437, 438, 439, 445, 446, 447, 448, 449, 530, 531, 532, 533, 541.
- Additional credits. In order to meet the minimum requirement of 24 credits, students may elect additional courses from the advanced courses in biopsychology and cognitive psychology, approved lab courses, or cognate courses.
- 5. *Cognate course requirement.* One course selected from the following list:
 - ANTHRBIO 467, 478
 - BIOLCHEM 415
 - BIOLOGY 208, 222, 225, 305, 390
 - CHEM 351
 - EEB 381, 440, 442, 444, 450, 451, 481, 492
 - EECS 281, 492
 - LING 315, 514
 - MCDB 307, 310 (or 311 or 412), 418, 422
 - PHIL 345, 450, 482
 - STATS 401, 406

Psychology (General Social Science)

May be elected as a departmental concentration program

A minimum of 24 credits is required for the concentration. Of the 40 overall credits (prerequisites and concentration courses), 24 must be completed directly through the University of Michigan's Department of Psychology at the Ann Arbor campus. Of these 24 credits, 12 credits must be upper-division (300 or above). 100-level courses may not be used to meet the concentration requirements or the credit requirement. Only one course from the breadth groups may be used toward the concentration. Although some courses that are graded credit/no credit may be used to meet the lab requirement, 24 credits must be letter graded

1. **Breadth Requirement:** At least one course from each of the groups below. Only one course from each group may be used toward either the prerequisite or concentration credits.

Group	Course
Biopsychology/Cognitive	PSYCH 230 or 240
Developmental/Psychopathology	PSYCH 250 or 270
Organizational/Social/Personality	PSYCH 260, 280, or 290

- 2. *Lab Requirement:* To meet the lab requirement, students may complete either:
 - a. two (at least 3 credits each) courses from the list of Methods-based Lab courses;
 - b. one (at least 3 credits) course from the list of Methodsbased Lab courses and one (at least 3 credits) course from the list of Experiential Lab courses *(i.e.,* Community-based or Research-based); or
 - c. the Psychology Honors Research sequence (6 credits total) and one course (at least 3 credits) from the list of Methodsbased Lab courses.

Methods-Based Lab Courses:

PSYCH 303, 331/332, 341, 351, 361, 371, 381, 383, 391.

Experiential Lab Courses (3 credits minimum to satisfy requirement):

- Community-based Lab Courses: PSYCH 211, 304, 305, 306, 307, 308, 310, 311, 317, 319, 324, 325, 404, 405, 485;
- Research-based Lab Courses: PSYCH 322, 323, 326, 327, 422, 423; 428, 429
- Honors Research Sequence: PSYCH 424 & 426, or 425 & 427.

Note: Credit/No-credit courses may be used toward the Lab requirement, but will not count toward the total number of psychology credits required for concentration. A total of six credits of Psychology letter-graded Experiential lab (community or research-based courses) may be counted towards the Psychology concentration. A minimum of three credits of Research-based courses must be taken in a single academic term to satisfy the Psychology Lab requirement. Students wishing to pursue the Psychology Honors Research program should acquire research and statistical skills early in their concentration before applying.

3. Additional 300- and 400-level Concentration Courses.

The remainder of the concentration is filled by upper-level (300- and 400-level) psychology courses, which must include at least 9 credits of lecture or seminar courses. It is strongly recommended that concentrators elect at least one 400-level course.

Courses which may not be used as part of a concentration in Psychology are identified in the course listings.

Concentrators who are planning to earn graduate degrees in psychology may find a supplementary background in the biological sciences or in the social and behavioral sciences (*i.e.*, anthropology, sociology, *etc.*) helpful in their later studies. Concentrators are also advised that additional courses in mathematics, communication sciences, and logic are likely to facilitate advanced study in psychology. A student's personal interests should determine the shape of the concentration plan.

Honors Program

Psychology and Brain, Behavior, and Cognitive Sciences concentrators with strong academic records and an interest in research are encouraged to consider participating in the Honors Program. The program is designed to enable advanced students to gain experience in design, conduct, and analysis of research studies. Students experience an intensive collaboration with a faculty member, and complete a major effort to create new scientific knowledge. The Honors Program can serve as a capstone for their undergraduate studies, and as important preparation for graduate training or employment in a variety of fields.

The Honors Program in Psychology and in Brain, Behavior, and Cognitive Sciences:

- 1. **Requirements.** In addition to completing all the requirements for the concentration, an Honors degree designation requires having and maintaining a cumulative GPA of at least 3.4, participation in two terms of independent study Honors courses, present in the Annual Research Forum, and the completion and acceptance of a written thesis describing an original research project conducted in collaboration with a faculty mentor.
- 2. Faculty Partnership. Students wishing to pursue Honors should explore their interests in research and statistics early in their concentration. The student must then identify a faculty research mentor to work in partnership on an Honors project. The research mentor can be any faculty member or research scientist holding a faculty appointment in the University. With the mentor as a collaborator, the student will prepare a project plan and timeline for completion.
- 3. Admission to the Honors Program. A student and their faculty research mentor must apply together for admission to the program; this includes an application and research proposal. Students are encouraged to apply the semester before their final year at the university (*i.e.*, the end of their junior year) to begin the Fall term of their Senior year. Students will need to have completed their Statistics requirement and have completed or planned completion of their Methods-based lab requirement before applying to the program.
- 4. Courses. Once accepted into the Honors Program, Psychology concentrators will elect both PSYCH 425 and 427; Brain, Behavior, and Cognitive Science concentrators will elect both PSYCH 424 and 426. The Honors courses are graded, may be used towards the required experiential lab concentration hours (Psychology concentration: for a maximum of 6 experiential lab credits and BBCS concentration: maximum of 3 credits) and 426 or

427 may satisfy the college upper-level writing requirement. Students are required to take a Methods-based lab in addition to these courses.

- 5. **The Honors Thesis.** The required senior Honors thesis is a written report describing the design and execution of the research project conducted in collaboration with the faculty mentor. The thesis will be due one calendar month before the anticipated graduation date. All Honors theses must be prepared in American Psychological Association (APA) format, and typically run fifty double-spaced pages in length. One electronic and hard copy of the thesis and a submission form must be submitted.
- 6. Evaluation of Thesis. The thesis will be evaluated by three readers: the mentor, an outside reader (a faculty member not involved in the research project), and a representative of the Honors Program. Students and mentors may suggest possible readers, but the program office will be responsible for contacting evaluators. The reports of all readers will address the quality of the science reported in the thesis, as well as the quality of the written presentation. The report of the mentor will also address the role the student played in the design, execution, and interpretation of the experiments reported in the thesis, and should point out the role played by others on the project. The Honors Committee will then meet to review the recommendations of the readers and decide on the appropriate level of Honors. The Honors Committee will attempt to maintain uniform standards, and is not constrained by the recommendations of the readers. Based on LSA guidelines, a determination of "No Honors," "Honors," "High Honors," or "Highest Honors" is made. This determination of an Honors designation must be completed prior to the actual awarding of the degree.

Students interested in the Psychology Department Honors Program may obtain further information from the program website and at the Psychology Student Academic Affairs Office, 1343 East Hall.

COURSES IN PSYCHOLOGY (PSYCH)

PSYCH 111. Introduction to Psychology

(4). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PSYCH 112, 114, or 115. PSYCH 111 may not be included in a concentration plan in Psychology. Students in PSYCH 111 are required to spend five hours outside of class participating as subjects in research projects. F, W, Sp, Su.

PSYCH 114. Honors Introduction to Psychology

LSA Honors Students. (Prerequisites enforced at registration.) Non-honors students must obtain permission of instructor. (4). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PSYCH 111, 112, or 115. May not be included in a concentration plan in Psychology. Students in PSYCH 114 are required to spend three hours outside of class participating as subjects in research projects.

PSYCH 120. First-Year Seminar in Psychology as a Social Science

Enrollment restricted to first-year students, including those with sophomore standing. (3). (SS). May not be repeated for credit. May not be included in a concentration plan in Psychology.

PSYCH 121. First-Year Seminar in Psychology as a Natural Science

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit. May not be included in a concentration plan in Psychology.

PSYCH 122 / SOC 122 / UC 122. Intergroup Dialogues

(2). May be repeated for a maximum of 4 credits. May not be used as a prerequisite for, or included in a concentration plan in Psychology.

PSYCH 200. Independent Study in Psychological Issues

Consent of instructor required. One of the following: PSYCH 111, 112, 114, 115, 120, or 121. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 4 credits.

PSYCH 203. Psychology Honors Seminar: Topics in Social Science

LSA Honors students and one of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) One of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290. (3 - 4). (SS). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

PSYCH 208 / AMCULT 200 / COMM 200 / SOC 200 / UC 200. The Academic Paradox (3). (ID). May not be repeated for credit. Does not count toward concentrations in American Culture, Communication Studies, or Psychology.

PSYCH 211. Project Outreach

Prior or concurrent enrollment in an introductory Psychology course. (3). (EXPERIEN-TIAL). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. Credits may not be included in a concentration plan in Psychology. This course may only be repeated if a different section is selected. All sections of Outreach count as an experiential lab for the Psychology concentration; they do not count as a lab for the Biopsychology and Cognitive Sciences concentration. Offered mandatory credit/no credit.

PSYCH 218. Sophomore Seminar in Psychology as a Social Science

An introductory course in psychology or similar social science. (3 - 4). (SS). May not be repeated for credit.

PSYCH 225 / WOMENSTD 225. Psychology of Human Sexuality

(3). May not be repeated for credit.

PSYCH 230. Introduction to Biopsychology

(PSYCH 111 or 112 or 114 or 115) or (BIOLOGY 162 or 163 or 171 or 172 or 195) AND STATS 350. (Prerequisites enforced at registration.) Basic familiarity with biology and chemistry. (4). (NS). (BS). May not be repeated for credit.

PSYCH 231 / UC 261. Brain, Learning, and Memory

Enrollment is restricted to first- and second year students. (4). (NS). (BS). May not be repeated for credit. May not be included in a concentration plan in Psychology (as a social science), but may be included in a concentration plan in Brain, Behavior, and Cognitive Sciences.

PSYCH 240. Introduction to Cognitive Psychology

PSYCH 111 or 112 or 114 or 115 or 116, and STATS 350. (Prerequisites enforced at registration.) (4). (NS). (BS). May not be repeated for credit.

PSYCH 242 / LING 209. Language and Human Mind

(4; 3 in the half-term). (ID). May not be repeated for credit.

PSYCH 250. Introduction to Developmental Psychology

One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) (4). (SS). May not be repeated for credit. No credit granted to those who have completed PSYCH 255.

PSYCH 260. Introduction to Organizational Psychology

[PSYCH 111 or 112 or 114 or 115 or 116] and STATS 350. (Prerequisites enforced at registration.) (4). (SS). May not be repeated for credit.

PSYCH 270. Introduction to Psychopathology

One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) (4). (SS). May not be repeated for credit.

PSYCH 280. Introduction to Social Psychology

[PSYCH 111 or 112 or 114 or 115 or 116] and STATS 350. (Prerequisites enforced at registration.) (4). (SS). May not be repeated for credit.

PSYCH 290. Introduction to the Psychology of Personality

[PSYCH 111 or 112 or 114 or 115 or 116] AND STATS 350. (Prerequisites enforced at registration.) (4). (SS). May not be repeated for credit.

PSYCH 303. Research Methods in Psychology

STATS 350 or 425/MATH 425, and one of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PSYCH 304. Practicum in Teaching and Leading Groups

Consent of instructor required. One of the following: PSYCH 111, 112, 114, or 115 and permission of instructor. (2 - 4). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. A total of 12 credits may be elected through PSYCH 304, 305, 306, 307, and 308. A total of six credits of Psychology letter-graded experiential courses may be counted for the Psychology concentration.

PSYCH 305. Practicum in Psychology

One of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290. (1 - 4). (EXPERIEN-TIAL). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. A total of 12 credits may be elected through PSYCH 304, 305, 306, 307, and 308. A total of six credits of PSYCH letter-graded experiential courses may be counted for the Psychology concentration. PSYCH 305 must be taken for at least three credits to count as an experiential lab in the Psychology concentration.

PSYCH 306. Project Outreach Group Leading

Consent of instructor required. PSYCH 211 and one of the following: PSYCH 111, 112, 114, or 115 and permission of instructor. (3). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. A total of 12 credits may be elected through PSYCH 304, 305, 306, 307, and 308. A total of six credits of Psychology letter-graded experiential courses may be counted for the Psychology concentration.

PSYCH 307. Directed Experiences with Children

Consent of instructor required. One of the following: PSYCH 111, 112, 114, or 115 and permission of instructor. (3 - 4). (EXPERIENTIAL). May be repeated for a maximum of 7 credits. A total of 12 credits may be elected through PSYCH 304, 305, 306, 307, and 308. A total of six credits of Psychology letter-graded experiential courses may be counted for the Psychology concentration. F, W, Sp/Su, Sp, Su.

PSYCH 308. Peer Advising Practicum in Psychology

Consent of instructor required. Admission by application. At least junior standing in the Psychology or Brain, Behavior and Cognitive Sciences concentration. (2 - 3). [EXPE-RIENTIAL]. May be repeated for a maximum of 6 credits. A total of 12 credits may be elected through PSYCH 304, 305, 306, 307, and 308. A total of six credits of Psychology letter-graded experiential courses may be counted for the Psychology concentration.

PSYCH 310 / SOC 320 / UC 320. Processes of Intergroup Dialogues Facilitation

Admission by application. At least junior standing and PSYCH 122 or SOC 122. (3). (R&E). May not be repeated for credit. May be used as an experiential lab in the Psychology concentration. A total of six credits of Psychology letter-graded experiential courses may be counted for the Psychology concentration.

PSYCH 311 / SOC 321 / UC 321. Practicum in Facilitating Intergroup Dialogues

PSYCH 310/SOC 320 and permission of instructor. (3). (EXPERIENTIAL). May not be repeated for credit. A total of six credits of Psychology letter-graded experiential courses may be counted for the Psychology concentration.

PSYCH 313 / RELIGION 369. Psychology and Religion

One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

PSYCH 316 / CAAS 331. The World of the Black Child

One course in Psychology or Afro-American and African Studies. (3). May not be repeated for credit.

PSYCH 317 / AMCULT 306. Community Research

One of the following: PSYCH 111, 112, 114, or 115. (4). May not be repeated for credit. PSYCH 317 and 318 may be used as an experiential lab in the Psychology concentration. A total of six credits of Psychology letter-graded Community-based courses may be counted towards the psychology concentration.

PSYCH 319 / AMCULT 319. Empowering Families and Communities

One of the following: PSYCH 111, 112, 114, or 115. (4). May not be repeated for credit. A total of six credits of Psychology letter-graded Community-based courses may be counted towards the psychology concentration. F.

PSYCH 322. Field Practicum in Research Techniques for Psychology as a Natural Science

Consent of instructor required. One of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290, and permission of instructor. (1 - 4). (BS). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. Credit is granted for a combined total of six credits of PSYCH 322, 323, 326, 327. Credits may not be counted in a concentration plan in Psychology or BBCS. Offered mandatory credit/no credit.

PSYCH 323. Field Practicum in Research Techniques for Psychology as a Social Science

Consent of instructor required. One of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290, and permission of instructor. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. Credit is granted for a combined total of six credits of PSYCH 322, 323, 326, 327. Credits may not be counted in a concentration plan in Psychology. Offered mandatory credit/no credit.

PSYCH 324 / SOC 324 / UC 324. Advanced Practicum in Intergroup Relations Consent of instructor required. UC 320/PSYCH 310/SOC 320. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. A total of six credits of Psychology lettergraded Research-based courses may be counted towards the Psychology concentration.

PSYCH 325 / AMCULT 321. Practicum in the Multicultural Community

One of the following: PSYCH 111, 112, 114, or 115. (1 - 4). (EXPERIENTIAL). May not be repeated for credit. A total of six credits of PSYCH letter-graded experiential courses may be counted for the Psychology concentration. PSYCH 325 must be taken for at least three credits to count as an experiential lab in the Psychology concentration.

PSYCH 326. Faculty Directed Early Research for Psychology as a Natural Science

Consent of instructor required. One of: PSYCH 230, 240, 250, 260, 270, 280, or 290 with at least a grade of C. (1 - 4). (BS). (INDEPENDENT). May be repeated for a maximum of 6 credits. May be repeated for a maximum of 6 credits. A student may elect a combined maximum of 6 credits of PSYCH 322, 323, 326 and 327. A total of six credits of Psychology letter-graded Research-based courses may be counted towards the Psychology concentration.

PSYCH 327. Faculty Directed Early Research for Psychology as a Social Science

Consent of instructor required. One of: PSYCH 230, 240, 250, 260, 270, 280, or 290 with at least a grade of C. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 6 credits. May be repeated for a maximum of 6 credits. A student may elect a combined maximum of 6 credits of PSYCH 322, 323, 326 and 327. A total of six credits of Psychology letter-graded Research-based courses may be counted towards the Psychology concentration.

PSYCH 328. Research Lab for Psychology as a Natural Science

Consent of instructor required. Concurrent research participation in a Psychology lab and one of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290, and permission of instructor. (1). (BS). (EXPERIENTIAL). May be elected four times for credit.

PSYCH 329. Research Lab for Psychology as a Social Science

Consent of instructor required. Concurrent research participation in a Psychology lab and one of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290, and permission of instructor. (1). (EXPERIENTIAL). May be elected four times for credit.

PSYCH 331. Research Methods in Brain, Behavior, and Cognitive Science

Consent of instructor required. Admission by application. Completion of STATS 350 or 425 and PSYCH 230, 240, 335, or 345. Requires concurrent enrollment in PSYCH 332. (2). (BS). May not be repeated for credit. Satisfies a Psychology research-based laboratory requirement.

PSYCH 332. Laboratory Practice in Brain, Behavior, and Cognitive Science

Consent of instructor required. Admission by application. Completion of STATS 350 or 425 and PSYCH 230, 240, 335, or 345. (3). (BS). May not be repeated for credit.

PSYCH 335. Introduction to Animal Behavior

One of the following: PSYCH 111, 112, 114, 115, BIOLOGY 162, 163, 171, 172, 195 or ANTHRBIO 161. (Prerequisites enforced at registration.) (4). (NS). (BS). May not be repeated for credit.

PSYCH 338 / ANTHRBIO 368. Primate Social Behavior I

(4). (NS). (BS). May not be repeated for credit. F.

PSYCH 341. Advanced Laboratory in Cognitive Psychology

PSYCH 240 or 345; and STATS 350 or 425 or MATH 425. (Prerequisites enforced at registration.) (4). (NS). (BS). May not be repeated for credit. Satisfies a Psychology research-based laboratory requirement.

PSYCH 344 / ELI 351 / LING 351. Second Language Acquisition

LING 111 or 210. (3). (BS). May not be repeated for credit. PSYCH 345. Introduction to Human Neuropsychology

One of the following: PSYCH 111, 112, 114, 115, or 116. (Prerequisites enforced at registration.) (4). (NS). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PSYCH 634.

PSYCH 346. Learning and Memory

PSYCH 240 or 345. (Prerequisites enforced at registration.) (3). (NS). (BS). May not be repeated for credit.

PSYCH 347. Perception

PSYCH 230, 240 or 345. (Prerequisites enforced at registration.) (3). (NS). (BS). May not be repeated for credit.

PSYCH 348. Psychology of Thinking

PSYCH 240. (Prerequisites enforced at registration.) (3). (NS). (BS). May not be repeated for credit.

PSYCH 349 / LING 347. Talking Minds

At least one of: LING 111 or 210, or PSYCH 111, 112, 114, or 115. (3). (BS). May not be repeated for credit.

PSYCH 351. Advanced Laboratory in Developmental Psychology

STATS 350 or 425 or MATH 425; and PSYCH 250. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Satisfies a Psychology research-based laboratory requirement. F, W, Sp.

PSYCH 352 / LING 352. Development of Language and Thought

PSYCH 250. (3). (SS). May not be repeated for credit.

PSYCH 353. Social Development

PSYCH 250. (3). (SS). May not be repeated for credit.

PSYCH 355. Cognitive Development

PSYCH 250. (3). (SS). May not be repeated for credit.

PSYCH 356. Educational Psychology

PSYCH 250. (4). (SS). May not be repeated for credit.

PSYCH 359. Psychology of Aging *PSYCH 250. (3). (SS). May not be repeated for credit.*

PSYCH 361. Advanced Laboratory in Organizational Psychology

STATS 350 or 425/MATH 425 and one of the following: PSYCH 111, 112, 114, or 115.

(Prerequisites enforced at registration.) PSYCH 260. (4). May not be repeated for credit. Satisfies a Psychology research-based laboratory requirement. F, W, Sp.

PSYCH 371. Advanced Laboratory in Psychopathology

STATS 350 or 425 or MATH 425; and one of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) PSYCH 270. (3). May not be repeated for credit.

PSYCH 381 / SOC 472. Advanced Laboratory in Social Psychology

STATS 350 or 425 or MATH 425; and one of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) PSYCH 280. (3). May not be repeated for credit. Satisfies a Psychology research-based laboratory requirement. F, W, Su.

PSYCH 384 / ENVIRON 360. Behavior and Environment

(3). May not be repeated for credit.

PSYCH 385 / ENVIRON 361. The Psychology of Environmental Stewardship (3). May not be repeated for credit.

PSYCH 391. Advanced Laboratory in Personality

STATS 350 or 425 or MATH 425; and one of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) PSYCH 280. (3). May not be repeated for credit. Satisfies a Psychology research-based laboratory requirement.

PSYCH 393. Political Psychology

Introductory Psychology. A prior course or interest in History or Political Science is useful, though not required. (3). (SS). May not be repeated for credit.

PSYCH 400. Special Problems in Psychology as a Natural Science

One of the following: PSYCH 111, 112, 114, or 115; and 230, or 240. (Prerequisites enforced at registration.) (1 - 4). (BS). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

PSYCH 401. Special Problems in Psychology as a Social Science

One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) (1 - 4). May be repeated for a maximum of 12 credits. May be elected more than once in the same term. Only 6 credits of PSYCH 400, 401, 402 combined may be counted toward a concentration plan in Psychology, and a maximum of 12 credits may be counted toward graduation.

PSYCH 402. Special Problems in Psychology

One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) One of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290. (2 - 4). May be repeated for a maximum of 12 credits. Only 6 credits of PSYCH 400, 401, 402 combined may be counted toward a concentration plan in Psychology, and a maximum of 12 credits may be counted toward graduation.

PSYCH 404. Field Practicum

Consent of instructor required. One of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290, and permission of instructor. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 8 credits. Credit is granted for a combined total of fifteen credits elected from Experiential lab courses. May be used as an experiential lab in the Psychology concentration but not the Biopsychology and Cognitive Science concentration. Credits may not be used toward either Psychology concentration. F, W, Sp/Su, Sp, Su. Offered mandatory credit/no credit.

PSYCH 405. Field Practicum in a University Setting

Consent of instructor required. One of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290, and permission of instructor. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 4 credits. Credit is granted for a combined total of fifteen credits elected from Experiential lab courses. May be used as an experiential lab in the Psychology concentration but not the Biopsychology and Cognitive Science concentration. Credits may not be used toward either Psychology concentration. F, W, Sp/Su, Sp, Su. Offered mandatory credit/no credit.

PSYCH 411 / WOMENSTD 419. Gender and Group Process in a Multicultural Context One course in Women's Studies or Psychology. WOMENSTD 240 is recommended. (3).

PSYCH 413. A History of Modern Psychology

May not be repeated for credit.

Psych or BBCS or Neuroscience concentrator. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

PSYCH 416 / AMCULT 416. Psychology of Asian Americans

One introduction to psychology course. (3). May not be repeated for credit.

PSYCH 418 / RELIGION 448. Psychology and Spiritual Development One of the following: PSYCH 111, 112, 114, or 115, and permission of instructor. (3).

May not be repeated for credit. PSYCH 420. Faculty Directed Advanced Tutorial Reading for Psychology as a Natural

Science

Consent of instructor required. Proposal required. Approval of the instructor and Psychology Committee on undergraduate Studies and PSYCH 230, 240, 335, or 345. (1 -4). (INDEPENDENT). May be repeated for a maximum of 6 credits.

PSYCH 421. Faculty Directed Advanced Tutorial Reading for Psychology as a Social Science

Consent of instructor required. Proposal required. Approval of the instructor and Psychology Committee on Undergraduate Studies and one of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 6 credits.

PSYCH 422. Faculty Directed Advanced Research for Psychology as a Natural Science

Consent of instructor required. Proposal required. Approval of the instructor and Psychology Committee on undergraduate Studies. STATS 350 or 425 and one of the following: PSYCH 302, 331, 341, or 342. (1 - 4). (BS). (INDEPENDENT). May be repeated for a maximum of 6 credits. A total of six credits of Psychology letter-graded Researchbased courses may be counted towards the Psychology concentration. PSYCH 423. Faculty Directed Advanced Research for Psychology as a Social Science

Consent of instructor required. Proposal required. Approval of the instructor and Psychology Committee on Undergraduate Studies. STATS 350 or 425 and one of the following: PSYCH 302, 303, 331, 341, 342, 351, 361, 371, 381, 383, or 391. (1 - 4). (INDE-PENDENT). May be repeated for a maximum of 6 credits. A total of six credits of Psychology letter-graded Research-based courses may be counted towards the Psychology concentration.

PSYCH 424. Senior Honors Research I for Psychology as a Natural Science

Consent of instructor required. Acceptance into the Psychology Honors Program, STATS 350 or 425, and prior research experience. (2 - 4). (BS). May not be repeated for credit.

PSYCH 425. Senior Honors Research I for Psychology as a Social Science

Consent of instructor required. Acceptance into the Psychology Honors Program, STATS 350 or 425, and prior research experience. (2 - 4). May not be repeated for credit.

PSYCH 426. Senior Honors Research II for Psychology as a Natural Science

Consent of instructor required. Permission of the Psychology Honors Program Director, PSYCH 424 and good standing in the Psychology Honors Program. (2 - 4). (BS). May not be repeated for credit.

PSYCH 427. Senior Honors Research II for Psychology as a Social Science

Consent of instructor required. Permission of the Psychology Honors Program Director, PSYCH 425 and good standing in the Psychology Honors Program. (2 - 4). May not be repeated for credit.

PSYCH 428. Senior Thesis: Research in Psychology as a Natural Science

Consent of department required. Senior standing. STATS 350 and prior research experience. (2 - 4). (BS). (INDEPENDENT). May be repeated for a maximum of 8 credits. No credit for students who have completed or are enrolled in PSYCH 424, 425, 426, or 427.

PSYCH 429. Senior Thesis: Research in Psychology as a Social Science

Consent of department required. Senior standing. STATS 350 and prior research experience. (2 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. No credit for students who have completed or are enrolled in PSYCH 424, 425, 426, or 427.

PSYCH 433. Biopsychology of Motivation

PSYCH 230, 240, or 345. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PSYCH 434. Biopsychology of Learning and Memory

PSYCH 230 or 240. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

PSYCH 435. Biological Rhythms and Behavior

One of the following: PSYCH 230, 240, 335, or 345. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit. Rackham credit requires additional work.

PSYCH 436. Drugs of Abuse, Brain and Behavior

PSYCH 230. (Prerequisites enforced at registration.) (BIOLOGY 162 or 163 or 172 or 195) and a CHEM course. (3). (BS). May not be repeated for credit.

PSYCH 437. Current Topics in Biopsychology

PSYCH 230, 240, or 345. (Prerequisites enforced at registration.) (3). (BS). May be elected twice for credit.

PSYCH 438. Hormones and Behavior

PSYCH 230 or 240. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PSYCH 442. Perception, Science, and Reality

One of the following: PSYCH 111, 112, 114, or 115. (3). (BS). May not be repeated for credit. F, W, Su.

PSYCH 445 / LING 447. Psychology of Language

PSYCH 240. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

PSYCH 447. Current Topics in Cognition and Perception

PSYCH 230, 240, or 345. (Prerequisites enforced at registration.) (3). (BS). May be elected twice for credit.

PSYCH 449. Decision Processes

STATS 350 or 425. (3). (BS). May not be repeated for credit.

PSYCH 456. Human Infancy

PSYCH 250. (3). May not be repeated for credit.

PSYCH 457. Current Topics in Developmental Psychology

One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) PSYCH 250. (3). May be elected twice for credit.

PSYCH 458. Psychology of Adolescence

PSYCH 250. (3; 2 - 3 in the half-term). May not be repeated for credit.

PSYCH 473. Developmental Disturbances of Childhood

PSYCH 270. (Prerequisites enforced at registration.) PSYCH 250. (3). May not be repeated for credit.

PSYCH 474. Introduction to Behavior Therapy

PSYCH 270. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

PSYCH 476. Positive Psychology

Junior or Senior standing and one of the following: PSYCH 230, 240, 250, 260, 270, 280, or 290. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

PSYCH 477. Current Topics in Clinical Psychology

One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) PSYCH 270. (3). May be elected twice for credit.

PSYCH 478. Clinical Psychology

PSYCH 111 or 112 or 114 or 115. (Prerequisites enforced at registration.) PSYCH 270. (3). May not be repeated for credit.

PSYCH 481 / COMM 481. Media and Violence

COMM 361 or 381 strongly recommended. (4). May not be repeated for credit.

PSYCH 487. Current Topics in Social Psychology

One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) PSYCH 280. (3). May be elected twice for credit.

PSYCH 488 / SOC 465. Sociological Analysis of Deviance

Introductory Sociology or introductory Psychology as a social science. (3). May not be repeated for credit.

PSYCH 493. Psychological Perspectives on Culture and Ethnicity

One of the following: PSYCH 111, 112, 114, or 115 and one of: PSYCH 250, 260, 270, 280, or 290. (Prerequisites enforced at registration.) (3). (R&E). May not be repeated for credit.

PSYCH 497. Current Topics in Personality Psychology

One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) PSYCH 290. (3). May be elected twice for credit.

PSYCH 498 / WOMENSTD 498. Gender and the Individual

One of the following: PSYCH 111, 112, 114, or 115; or a WOMENSTD course. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

PSYCH 499 / WOMENSTD 499. Psychology of Women

One of the following: PSYCH 111, 112, 114, or 115; or a WOMENSTD course. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

PSYCH 530. Advanced Topics in Comparative and Evolutionary Psychology

PSYCH 335, 338/438. (3). (BS). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

PSYCH 532 / ANAT 541 / BIOLOGY 541 / PHYSIOL 541. Mammalian Reproductive Endocrinology

MCDB 310 or 311, or BIOLCHEM 415. (4). (BS). May not be repeated for credit. W. PSYCH 533 / NEUROSCI 520. Sleep: Neurobiology, Medicine, and Society

BIOLOGY 222, MCDB 422, or PSYCH 230; and permission of instructor. (3). (BS). May not be repeated for credit.

PSYCH 541. Advanced Topics in Cognition and Perception

PSYCH 240. (3). (BS). May be repeated for credit. May be elected more than once in the same term.

PSYCH 571. Advanced Topics in Clinical Psychology

Consent of instructor required. PSYCH 270 and permission of instructor. (3). May be repeated for credit. May be elected more than once in the same term.

PSYCH 581. Advanced Topics in Social Psychology

PSYCH 280. (3). May be repeated for credit. May be elected more than once in the same term.

Public Health

School of Public Health 1700 School of Public Health I 1415 Washington Heights (734) 764-5425 (phone) (734) 763-5455 (fax) www.sph.umich.edu e-mail: sph.inquiries@umich.edu Professor Ken Warner (Health Management and Policy), Dean

Not a concentration program

The School of Public Health offers LSA students an accelerated degree program through the departments of Environmental Health Sciences, Epidemiology, or Health Behavior and Health Education that leads to a bachelor's degree from LSA and a Master of Public Health (MPH) degree from the School of Public Health. The program is described in *Chapter V* in the section *Public Health*. Undergraduates wishing further information about course offerings and degree requirements should contact the School of Public Health.

COURSES IN THE SCHOOL OF PUBLIC HEALTH

Courses in the School of Public Health are listed in the *Schedule of Classes* under the School of Public Health. The following courses count as LSA courses for LSA degree credit.

BIOSTATISTICS (BIOSTAT)

BIOSTAT 449 / STATS 449. Topics in Biostatistics STATS 401 or permission of instructor. (3). (BS). May not be repeated for credit.

ENVIRONMENTAL HEALTH SCIENCES (EHS)

EHS 588 / ENVIRON 475 / NRE 475. Environmental Law (3). May not be repeated for credit.

HEALTH BEHAVIOR AND HEALTH EDUCATION (HBEHED)

HBEHED 516 / ANTHRCUL 416. Global Health: Anthropological Perspectives (3). May not be repeated for credit.

HEALTH MANAGEMENT AND POLICY (HMP)

HMP 200 / PUBHLTH 200 / PUBPOL 210. Health and Society: Introduction to Public Health

(4). (SS). May not be repeated for credit.

PUBLIC HEALTH (PUBHLTH)

PUBHLTH 200 / HMP 200 / PUBPOL 210. Health and Society: Introduction to Public Health

(4). (SS). May not be repeated for credit.

Public Policy

Gerald R. Ford School of Public Policy 2245 Weill Hall 735 South State Street (734) 764-0453 (phone) (734) 647-7486 (fax) www.fordschool.umich.edu e-mail: fordschoolinfo@umich.edu Professor Susan M. Collins, Dean

Not a concentration program

The Gerald R. Ford School of Public Policy offers a Bachelor of Arts (BA) program in public policy. Students apply to the program during their sophomore year and are admitted to the Ford School for their final two years. Program size is limited to approximately 50 students per year. This program is briefly described in *Chapter V*, "Liberal Arts Study for Professional Undergraduate Programs."

Undergraduates wishing further information about course offerings and degree requirements should contact the Gerald R. Ford School of Public Policy.

COURSES IN PUBLIC POLICY (PUBPOL)

Courses in the Ford School of Public Policy are listed in the *Schedule of Classes* under the School of Public Policy. The following courses count as LSA courses for LSA degree credit.

PUBPOL 201. Systematic Thinking About the Problems of the Day

ECON 101. (Prerequisites enforced at registration.) One additional introductory social science course. (4). (SS). May not be repeated for credit.

PUBPOL 210 / HMP 200 / PUBHLTH 200. Health and Society: Introduction to Public Health

(4). (SS). May not be repeated for credit.

PUBPOL 224 / HISTORY 224. Global Nuclear Proliferation (4; 3 in the half-term). (SS). May not be repeated for credit.

PUBPOL 481 / PHYSICS 481. Science, Technology and Public Policy Junior standing; introductory physics courses preferred. (3). May not be repeated for

credit. May not be included in a concentration plan in Physics. PUBPOL 519 / NRE 574 / RCNSCI 419. Sustainable Energy Systems

Senior standing; college-level course in Math or Economics or physical science. (3). May not be repeated for credit.

Studies in Religion

The College does not currently offer a concentration program, although a student may emphasize Studies in Religion in the LSA Individual Concentration Program (ICP). Students interested in pursuing an Individual Concentration in Studies in Religion should contact the ICP advisor in 1255 Angell Hall.

COURSES IN RELIGION (RELIGION)

RELIGION 121 / ACABS 121. Introduction to the Tanakh/Old Testament (3). (HU). May not be repeated for credit.

RELIGION 122 / ACABS 122. Introduction to the New Testament

(4; 3 in the half-term). (HU). May not be repeated for credit.

RELIGION 201 / AAPTIS 200 / ACABS 200 / HJCS 200. Introduction to World Religions: Near Eastern

(4; 3 in the half-term). (HU). May not be repeated for credit. F.

RELIGION 202 / ASIAN 220. Introduction to the Study of Asian Religions (4). (HU). May not be repeated for credit.

RELIGION 204 / AAPTIS 262. Introduction to Islam

(4; 3 in the half-term). (HU). May not be repeated for credit. W.

RELIGION 223 / ASIAN 223. Bhagavad-Gita: The Activist View of Hinduism (3). (HU). May not be repeated for credit.

RELIGION 225 / ASIAN 225. Introduction to Hinduism

(3). (HU). May not be repeated for credit. RELIGION 230 / ASIAN 230 / PHIL 230. Introduction to Buddhism (4). (HU). May not be repeated for credit.

RELIGION 231 / ASIAN 231. Introduction to Tibetan Buddhism (4). (HU). May not be repeated for credit.

RELIGION 246 / ANTHRCUL 246. Anthropology of Religion (4). May not be repeated for credit.

RELIGION 258 / ENGLISH 258. The English Bible as Literature (3). May not be repeated for credit.

RELIGION 262 / PHIL 262. Introduction to the Philosophy of Religion (4; 3 in the half-term). (HU). May not be repeated for credit.

RELIGION 267 / AMCULT 262. Introductory Study of Native Religious Traditions (3). (HU). May not be repeated for credit.

RELIGION 270 / ACABS 270 / HJCS 270 / JUDAIC 270. Introduction to Rabbinic Literature

(3). (HU). May not be repeated. No credit granted to those who have completed or are enrolled in HJCS 470/JUDAIC 470 or HJCS 570/ACABS 570/JUDAIC 570.

RELIGION 271 / ANTHRCUL 221 / HISTORY 271. Religions of Latin America (3). (HU). May not be repeated for credit.

RELIGION 277 / AAPTIS 277 / ACABS 277 / HISTORY 277 / HJCS 277 / JUDAIC 277. The Land of Israel/Palestine through the Ages

(4; 3 in the half-term). (HU). May not be repeated for credit. Taught in English.

RELIGION 280 / ACABS 221. Jesus and the Gospels (4; 3 in the half-term). (HU). May not be repeated for credit.

RELIGION 286 / HISTORY 286. A History of Eastern Christianity from the 4th to the 18th Century

(3). (HU). May not be repeated for credit.

RELIGION 303 / ASIAN 303. Warrior Saints: Introduction to Sikh Religion, Culture, and Ethnicity

(3). (HU). May not be repeated for credit.

RELIGION 305 / ASIAN 305. Religion and Violence in the Secular World (3). May not be repeated for credit.

RELIGION 310 / AAPTIS 335 / CAAS 335. African-American Religion Between Christianity and Islam

(4). (HU). May not be repeated for credit.

RELIGION 323 / ASIAN 325. Zen: History, Culture, and Critique (4). (HU). May not be repeated for credit.

RELIGION 325 / AAPTIS 325 / ASIAN 324 / HISTORY 325. The History of Islam in South Asia

(4). (HU). (R&E). May not be repeated for credit.

RELIGION 350 / ACABS 323. Christianity after the New Testament: The First Six Centuries

(4; 3 in the half-term). May not be repeated for credit.

RELIGION 358 / ACABS 321 / HISTORY 306. Israel Before the Exile (587 BCE): Its History & Religion

(3). (HU). May not be repeated for credit.

RELIGION 359 / ACABS 322 / HISTORY 307. History and Religion of Ancient Judaism *May be elected independently of ACABS 321/HISTORY 306/RELIGION 358. (4; 3 in the half-term). (HU). May not be repeated for credit.*

RELIGION 365 / PHIL 365. Problems of Religion (4; 2 in the half-term). (HU). May not be repeated for credit.

RELIGION 369 / PSYCH 313. Psychology and Religion One of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

RELIGION 387. Independent Study

Consent of instructor required. PER. INSTR. (1 - 3). (INDEPENDENT). May be repeated for credit. Only one course from RELIGION 380, 387 and 487 may be elected in the same term. F, W, Sp/Su.

RELIGION 400 / ASIAN 400 / HISTORY 422. Indian Religions and Western Thought Junior and above. (3). May not be repeated. Rackham credit requires additional work.

RELIGION 421/CAAS 421/HISTORY 421/LACS 421. Religions of the African Diaspora (3). May not be repeated for credit. Rackham credit requires additional work.

RELIGION 448 / PSYCH 418. Psychology and Spiritual Development One of the following: PSYCH 111, 112, 114, or 115, and permission of instructor. (3). May not be repeated for credit.

RELIGION 455 / SOC 455. Religion and Society (3). May not be repeated for credit.

RELIGION 465 / AAPTIS 465. Islamic Mysticism

(3). May not be repeated for credit. Taught in English.

RELIGION 467 / AAPTIS 467 / HISTORY 487. Shi'ism: The History of Messianism and the Pursuit of Justice in Islamdom

Junior standing or permission of instructor. (3). May not be repeated for credit.

RELIGION 469 / HJCS 478 / JUDAIC 468. Jewish Mysticism (3). May not be repeated for credit. Taught in English.

RELIGION 471 / HJCS 577 / JUDAIC 467. Seminar: Topics in the Study of Judaism (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

RELIGION 476 / CLCIV 476 / HISTORY 405. Pagans and Christians in the Roman World

(4; 3 in the half-term). May not be repeated for credit.

RELIGION 478 / HJCS 477 / JUDAIC 478. Modern Jewish Thought

(3). May not be repeated for credit. Taught in English.

RELIGION 487. Independent Study

Consent of instructor required. (1 - 3). (INDEPENDENT). May be repeated for credit. Only one course from RELIGION 380, 387 and 487 may be elected in the same term. F, W, Sp/Su.

RELIGION 496 / AAPTIS 495 / HISTORY 429 / WOMENSTD 471. Gender and Sexuality in Pre-Modern Islam

Students should preferably have had one course in Islamic Studies. (3). May not be repeated for credit. Taught in English.

RELIGION 497. Senior Honors Thesis

Consent of instructor required. Open only to seniors admitted to the Honors concentration program. (1 - 6). (INDEPENDENT). May be repeated for a maximum of 6 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. F, W, Sp.

Residential College

133 Tyler, East Quadrangle 701 East University Avenue (734) 763-0176 (phone) (734) 763-7712 (fax) www.rc.lsa.umich.edu Professor Charles Bright (History), Director

Professors

Charles Bright (Arthur F. Thurnau Professor), *Social Theory & Practice: Twentieth-century world history, American political history, Detroit history*

Carl Cohen, *Political philosophy, moral philosophy, bioethics, logic* Hubert Cohen, *Film studies and film criticism, narrative literature*

Angela Dillard, Social Theory & Practice: American and African-American intellectual history and political thought; religious studies; critical race theory; and conservatism

Beth Genné, Art history, interdisciplinary humanities

Thomas Weisskopf, Social Theory & Practice: political economy

Associate Professors

Naomi André, Music, Women's Studies

Sueann Caulfield, Social Theory & Practice: History

Santiago Colás, *Comparative Literature; Arts and Ideas in the Hu*manities

Larry Cressman, Printmaking, drawing

Susan Crowell, *Ceramics, ceramics history and criticism, design* Herbert Eagle, *Russian literature, Slavic and East European film, lite-*

rary theory Michael Gould, *Music* Laura Kasischke, *Creative Writing*

Assistant Professors

Catherine Badgley, Natural Science, Paleontology, Ecology

Elizabeth F.S. Roberts (Anthropology, Residential College), (Sociocultural Anthropology/Medical Anthropology), Critical study of medicine, science and biotechnology, modernity, exchange, kinship, race, religion, Latin America, Ecuador

Stephen Ward, *Urban studies, Black politics, Detroit history* Thomas Willette, *History of Art*

Lecturers

Carolyn Anderson-Burack, French language Mireille Belloni, French Language David Burkam, Mathematics, Social Theory & Practice Dominique Butler-Borruat, French Language Lawrence Davis, Literature, Arts & Ideas Katri Ervamaa, Music Christhian Espinoza-Pino, Spanish Language Jeffrey Evans, Social Theory & Practice Helen Fox, Social Theory & Practice Karein Goertz, Germanic Language and Literature Elizabeth Goodenough, Comparative Literature: American and English literature Henry Greenspan, Social Theory & Practice: Clinical psychology, Adult development Michael Hannum, Photography, Holography Warren Hecht, Creative writing Lolita Hernandez, Creative Writing Mark Kirschenmann, Music Olga Lopez-Cotin, Spanish Language Alina Makin, Russian Language Kate Mendeloff, Drama, Directing Kenneth Mikolowski, Poetry Writing, contemporary American Poetry Virginia Murphy, Creative Writing; Science, Technology + Society Jennifer Myers, Social Theory & Practice

Erica Paslick, German language Fred Peters, Comparative Literature, German Studies, Interdisciplinary Humanities Ian Robinson, Political Sociology, Social Theory & Practice Maria Rodriguez, Spanish Language Susan Rosegrant, Creative Writing Tetsuya Sato, Japanese Language Janet Hegman Shier, German language, foreign language theatre Gina Soter, Latin Cynthia Sowers, Arts and Ideas in the Humanities, literature and the visual arts Wendy Tashian, Spanish Language Laura Thomas, Creative Writing Frank Thompson, Economics Martin Walsh, Drama Susan Walton, Ethnomusicology

Professors Emeriti Yi-tsi Feuerwerker, Max Heirich, Ann Larimore, James Robertson, Barbara Sloat, Susan Wright

Lecturers Emeritae Sylvie Carduner, Eliana Moya-Raggio

The Residential College is a four year program within the College of Literature, Science, and the Arts devoted exclusively to undergraduate education. The RC offers courses and concentrations of its own. Students in the RC elect a substantial number of courses within LSA and often complete LSA concentrations. Honors students are eligible to join the RC.

The College opened in 1967 and presently has over 900 students. The faculty consists of over fifty full or part-time lecturers and professors, most of the latter on joint appointment with LSA departments or other schools and colleges of the University. The curriculum includes multidisciplinary approaches to the humanities, natural sciences, and social sciences. Courses are also offered in fine arts, music, and languages. *Concentrations open exclusively to RC students include: Drama, Creative Writing, Arts and Ideas in the Humanities, Social Theory and Practice, and RC Individualized Concentration.* RC faculty advisors assist students with academic planning and personal concerns.

Residential College students are required to live in East Quadrangle for the first two years of the undergraduate program. East Quadrangle houses administrative and faculty offices, classrooms, a library, art and music studios, a theatre, a computer room, a snack shop, and other facilities supportive of the academic and community life of the Residential College.

Graduation from the Residential College requires:

- 1. A First-Year Seminar (RCCORE 100).
- 2. Foreign language study through a comprehensive proficiency examination and an upper-level seminar in the language (or the equivalent credits in a language not taught in the Residential College).
- 3. An LSA area distribution plan (both RC and LSA courses may be included).
- 4. An approved course in Race and Ethnicity (R&E).
- 5. One to two courses in Quantitative Reasoning.
- 6. A concentration chosen from among regular LSA or Residential College concentration programs, or an individualized concentration program elected through the Residential College.
- 7. An upper-level writing course.
- 8. An arts practicum.
- 9. At least four RC courses beyond completion of the First-Year Seminar and the RC language requirement, if not electing an RC concentration.
- 10. A minimum of 120 credits.

11. At least 60 credits outside the area of concentration.

Candidates for graduation from the Residential College must be in good academic standing and fulfill all Residential College and LSA requirements for graduation. Residential College students admitted prior to Fall, 2001, were graded by written evaluations instead of letter grades in their RC courses, but had the option of electing letter grades in upper-level RC courses and in RC courses in which they enrolled once they attained junior standing. A passing evaluation in an RC course is the equivalent of *at least* a letter grade of "C." RC students receive letter grades in LSA courses. Students admitted to the Residential College beginning in Fall, 2001, are graded by letter grade AND written evaluation in all RC courses with the exception of pre-proficiency language courses which are graded by written evaluation only. The degrees available to Residential College students are the A.B. and B.S. degrees; the LSA BGS degree is not open to RC students.

University of Michigan students interested in Residential College programs and courses should contact the RC Academic Services Office (134 Tyler, East Quadrangle), (734) 763-0032, or visit in person. Others should contact the RC Admissions Office, 133 Tyler, East Quadrangle, (734) 763-0176.

Residential College Concentrations

Arts and Ideas in the Humanities

www.rc.lsa.umich.edu/artsAndIdeas.htm

Cynthia Sowers, Head

May be elected as a departmental concentration program by students enrolled in the Residential College

Students wishing to pursue a concentration program in Arts and Ideas in the Humanities must develop a specific plan for its completion in consultation with the program's designated advisor. Appointments may be scheduled at the RC Advising Office, 134 Tyler, East Quad, or by calling (734) 763-0032.

The Arts and Ideas Concentration offers students the ability to construct an interdisciplinary major in the arts and humanities. Concentrators can combine either two humanities disciplines or a humanities discipline with an artistic practice. Many courses focus on a specific historical moment or context, encouraging students to examine a particular culture through a broad range of different media. In these courses, students are asked to develop interpretive and analytical skills appropriate to the arts. Courses in visual studies, performance, and studio art provide training in the comparative analysis or practice of different art forms. By combining practice with the academic study of art, the Arts and Ideas curriculum encourages students to reflect on the origins of art, and to engage in its contexts, whether productive or historical.

Concentration Program: a minimum of five courses to be elected from (1) History and Theory and (2) Visual Studies, Performance and Studio Arts, completed by seven courses of Specialized Study. (Total: minimum of 12 courses)

 History and Theory: There are two areas: (A) Historical Perspectives and (B) Issues of Modernity. Students take two courses in one area and one in the remaining area:

A. Historical Perspectives

	CHUMS 265	Arts and Letters of China
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- RCHUMS 309 Classical Sources of Modern Culture: The Heritage of Greece
- RCHUMS 315 Representations of History in the Literature and Visual Arts of Rome
- RCHUMS 310 Medieval Sources of Modern Culture

- RCHUMS 314 The Figure of Rome in Shakespeare and 16th-Century Painting
- RCHUMS 344 Reason and Passion in the 18th Century
- RCHUMS 373 The Performing Arts in South and Southeast Asia

B. Issues of Modernity

RCHUMS 291	Arts and Ideas of the 19 th Century
RCHUMS 290	Arts and Ideas of the 20 th Century
RCHUMS 305	Cultural Confrontations in the Arts
RCHUMS 308	Art and Culture: Arts and Ideas of South and
	Southeast Asia
RCHUMS 318	Critical Approaches to Literature
RCHUMS 342	Holocaust Literature and Film
RCHUMS 372	The Subject in the Aftermath of Revolution

2. Visual Studies, Performance, and Studio Arts: Two courses selected from four areas.

A. Film/Video

RCHUMS 236	Art of the Film
RCHUMS 255	Film Experience
RCHUMS 312	Central European Cinema
RCHUMS 313	Russian Cinema

B. Dance

RCHUMS 235Topics in World DanceRCHUMS 260The Art of Dance: An Introduction to American and European Dance HistoryRCHUMS 449Balanchine

C. Studio Arts

RCARTS 268	Introduction to Visual Thinking and Creativity
RCARTS 269	Elements of Design
RCARTS 285	Photography
RCARTS 286	Sculpture
RCARTS 287	Printmaking
RCARTS 288	Introduction to Drawing
RCARTS 289	Ceramics

D. Music

RCHUMS 256 Studying and Playing Southeast Asian Music

3. Specialized Study: Seven upper-level courses (300 and above) distributed among two areas of focus. These areas and the specific courses considered appropriate for inclusion are determined by the student in consultation with the Arts and Ideas designated advisor. Possible areas of specialization include, for example: drama and anthropology; photography and history of art; literature and history; creative writing and African-American studies.

Creative Writing and Literature

May be elected as a departmental concentration program by students enrolled in the Residential College

The Residential College's Creative Writing and Literature Concentration combines the sustained, disciplined practice of writing with the serious study of literature. The main goal of the program is to help students develop their creative abilities through a continuous, interrelated cycle of writing, rewriting, and literary analysis. Creative writing courses are taught as workshops and tutorials in which students work individually with faculty members. Students are required to take courses in literature in order to understand better the art of writing.

Students wishing to pursue a sustained practice in creative writing take a combination of writing courses in a selected genre and literature courses, distributed as follows:

- 1. A minimum of four creative writing classes, three at the upper level (300 and above), mixing seminars (RCHUMS 220, 221, 222, 242, 320, 321, 322) and tutorials (RCHUMS 325, 326, 425, 426)
- A minimum of five upper level (300 and above) literature courses at least one of which must be ancient (RCHUMS 309, CLCIV 390, ENGLISH 401) or medieval (RCHUMS 310, ENGLISH 370) literature.

Drama

May be elected as a departmental concentration program by students enrolled in the Residential College

The RC Drama program offers a unique course of study at U–M: the understanding of drama both as art form and literature. Students learn to understand all the stages of the dramatic process – from circumstances of a work's composition, to the history of theater methods and presentation, and myriad forms of expression. Students also attune their sense of theater aesthetic through practice and experimentation – they learn costuming, lighting, scenery, all of the factors that help create true perform – and of course, they act.

Students wishing to pursue a sustained exploration of dramatic literature and its performance must complete a minimum of 34 credits of course work, distributed as follows:

- 1. Prerequisite: RCHUMS 280.
- The Middle Sequence: RCHUMS 282, THTREMUS 321 and 322, and four courses chosen from RCHUMS 380, 381, 385, 386, 387, 389, 390 or approved substitutes), and RCHUMS 482 for students proposing a senior project.
- 3. *The Senior Sequence:* RCHUMS 480 and 481 or an approved senior project.

Social Theory and Practice

May be elected as a departmental concentration program by students enrolled in the Residential College

The RC Social Theory and Practice Concentration (formerly the RC Social Science Concentration) supports students in developing the analytical and practical skills necessary for active engagement in the world and for building careers that promote equality and responsible citizenship. Students learn theories, methods, and strategies that enable them to understand and critique social structures and processes and to become effective actors in struggles for justice.

Students wishing to pursue a problem-centered interdisciplinary program in the social sciences must develop a concentration plan in consultation with concentration advisors and complete the following requirements:

- 1. Prerequisites:
 - A. One RCSSCI introductory course at the 200 or 300 level.
 - *B.* RCSSCI 260 plus one additional credit to develop a concentration prospectus.
- 2. Required courses:
 - *A.* Two courses in social theory. RCSSCI 301 is required; a second may be RCSSCI 302 or an approved substitute in LSA.
 - *B.* One course in quantitative methods. RCSSCI 295, or an approved substitute (STATS 250 [or 350], SOC 210, ECON 404)
 - *C.* A research seminar, RCSSCI 460, in which the student completes a Senior Project or Senior Thesis.
- 3. *Specialization:* A minimum of five courses (20 credits) at the upper level (300 and above), chosen as part of the approved concentration plan.

RC Individual Concentration Program

May be elected as a special concentration program by students enrolled in the Residential College

The Residential College offers the opportunity to formulate an individualized concentration to RC students unable to find an existing degree program within the Residential College, or in the College of Literature, Science and the Arts, that meets their specific academic needs and interests. Students wishing to pursue this option must have a good idea of what they want to achieve, consult with RC faculty and (where appropriate) other U-M faculty, and develop a carefully thought out academic plan of study.

Students interested in this option should start by discussing the matter with the head of the RC Individualized Concentration Program (ICP), whose name may be obtained at the RC Academic Services Office in 134 Tyler. With the assistance of the ICP coordinator, the student will need to identify one or two faculty members – at least one of whom is on the RC faculty – willing to serve as her/his concentration advisor(s). The concentration advisor(s) will help the student formulate an appropriate academic plan of study, and that plan must be approved by the advisor(s) and by the ICP coordinator before the student can formally declare the individualized concentration. After the concentration is declared, the student must continue to consult with her/his advisor(s) at least once a term before registering for courses in the following term; and completion of the concentration must be certified by an advisor who is a member of the RC faculty.

Note: Students who wish to declare an individualized concentration are strongly advised to do so before the end of their sophomore year. Under exceptional circumstances an individualized concentration may be approved as late as during the junior year, but in no cases during the senior year.

Academic Minors in the Residential College

RC academic minors are open to all LSA students.

Crime and Justice

Not a concentration program

An academic minor in Crime and Justice is not open to students pursuing a concentration in the Department of Sociology nor to students concentrating in Social Sciences in the RC.

The past thirty years have seen a dramatic increase in prison populations — fueled by the centrality of crime and fear of crime to American politics. This academic minor melds concepts from the history of crime and criminal law, theories of crime and punishment, and societal circumstances that propel unequal demographics of criminality.

Students wishing to pursue an academic minor in Crime and Justice must develop a specific plan for its completion in consultation with the program's designated advisor. Appointments may be scheduled at the RC Academic Services Office, 134 Tyler, East Quad, or by calling (734) 763-0032.

Prerequisites to the Academic Minor: None for the Academic minor *per se,* although individual courses elected to meet the requirements of the academic minor may have course prerequisites.

Academic Minor Program: A minimum of five courses (at least 15 credits), to be elected from categories as stated:

1. Core Courses

- A. SOC 368. Criminology
- B. RCSSCI 357/HISTORY 345. The History and Theory of Punishment.

- 2. **Electives.** One course from each of the following three areas (at least two of which must be at the 300-level and above).
 - A. Contexts and Social Perspectives on the Problems of Crime and Punishment
 - CAAS 303, 426, 434, 450, 451
 - AMCULT 102 (section subtitled "Politics and Culture of Race in Post-1945 U.S."), 421, 464
 - COMM 481
 - ECON 325
 - HISTORY 196 (section subtitled "Politics and Culture of Race in Post-1945 U.S."), 344, 375, 396 (section subtitled "Gender and Justice in the U.S."), 464
 - POLSCI 332
 - RCSSCI 280, 344
 - SOC 231, 303, 423, 434, 435
 - WOMENSTD 375.
 - B. Disciplinary Studies of the Problems of Crime and Punishment
 - ANTHRCUL 333
 - ECON 327
 - HISTORY 475, 477, 582
 - PHIL 359, 355
 - POLSCI 317, 432
 - PSYCH 488
 - RCSSCI 356, 360 (section subtitled "Sex Panics"), 460 (section subtitled "The Ideal of Universal Law")
 - SOC 452, 454, 465
 - WOMENSTD 270, 333.
 - C. Direct Encounters with the Problems of Crime and Punishment
 - ENGLISH 310 and 319 (sections taught by Prof. Alexander), 411 (section subtitled "Prison and the Artist")
 - PSYCH 211* (appropriate sections)
 - SOC 389* (appropriate sections).

* Only sections that place students in juvenile facilities, adult prisons, or community supervision programs will be allowed to count in the academic minor

Peace and Social Justice (PSJ)

Not a concentration program

An academic minor in Peace and Social Justice is not open to students concentrating in Social Theory & Practice in the Residential College

Students wishing to pursue an academic minor in Peace and Social Justice must develop a specific plan for its completion in consultation with one of the program's designated advisors (currently, Helen Fox or Frank Thompson).

The goal of the Peace and Social Justice (PSJ) academic minor is to integrate the study of social inequity with the peaceful resolution of conflict. In a world threatened by ethnic and religious strife, a widening gap between rich and poor, and violent confrontations over dwindling resources, the need to solve conflicts fairly and nonviolently has never been more pressing. The PSJ academic minor takes an interdisciplinary approach to these problems, combining insights from political science, history, psychology, human physiology, environmental science, anthropology, and cultural studies, among others. Students may explore the roots of violence in human behavior, including the violence of racism and economic inequality, the origins and perpetuation of war and terrorism, approaches to nonviolent conflict resolution, and various paths to social and economic justice.

Peace and social justice are natural companions. Peace cannot last without the just resolution of conflict, and justice pursued through violent means all too often results in the same pattern that caused the original injustice: lack of respect and understanding between peoples, social and economic inequalities, and control of restive populations through violence or the threat of violence. Thus, students who pursue social justice should also study insights from peace studies, while those who are attracted to nonviolence should explore some of the political, social, and economic roots of conflict. The core courses and electives in the PSJ academic minor provide this breadth while allowing students to focus on either or both of these areas. The two core course alternatives, *Nonviolence in Action* (RCSSCI 354) and *Global Justice* (PHIL 224/RCSSCI 224), provide overviews of the fields of peace studies and social justice, respectively.

Area A Electives address the psychology, sociology, and biology of interpersonal and organized violence, exploring questions that underlie the abuse of social and interpersonal power: Is physical violence innate to humans (or human males)? How is violence defined differently by perpetrators and victims? In what ways do religious, political, and cultural institutions glorify, perpetuate, and/or alleviate violence? Area B Electives give students background and historical facts about specific wars, intractable conflicts, and attempts at global or state control of the social order. These detailed examples from different historical periods and cultural contexts help students understand and apply the more general theories of power. Area C and Area D Electives give students an understanding of how these conflicts, inequalities, and injustices have been dealt with in different cultures and contexts, and in some cases, provide opportunities for experiential learning and activism. Area C comprises courses that address nonviolent responses to conflict: social justice movements, dialogues across differences, interpersonal conflict resolution, and legal means of addressing injustice. Courses in Area D center on the reasons for specific social and economic disparities, analyses of social and political movements that address injustice, and the ways that communities can be organized to pursue nonviolent social change.

Prerequisites to the Academic Minor: There are no prerequisites for the Academic Minor *per se*, although individual courses elected to meet the requirements of the Academic Minor may have course pre-requisites.

Academic Minor Program: Students are required to complete at least 18 hours of course work. Twelve or more credits must be at the 300 level or above. These courses must include:

- Core Course: RCSSCI 354 Nonviolence in Action or PHIL 224/RCSSCI 224 Global Justice
- One course from Area A or Area B
- At least two courses from Area C
 or two courses from Area D
 or one course from Area C AND one from Area D

Area A: Understanding Violence – Courses that address the psychology, sociology, and biology of interpersonal and organized violence.

- AMCULT 235/WOMENSTD 235. Representing the Middle East in Hollywood Cinema
- AMCULT 378/WOMENSTD 378. Violence Against Women of Color
- AMCULT 498. Humanities Approaches to American Culture: *Why* Do They Hate Us? Perspectives on 9/11
- ANTHRCUL 326/WOMENSTD 326. Politics of Health and Social Suffering
- ASIAN 253. Religion, Violence, and Media
- ASIAN 480. Dialogue of Violence: Cinema in WWII's Pacific Theater
- HISTORY 345/RCSSCI 357. History and Theories of Punishment
- ORGSTUDY 495. Exploring the Psychological Underground of Power (limited enrollment)
- POLSCI 330. Political Psychology
- PSYCH 393. Psychological Perspectives on Politics
- RCHUMS 312/SLAVIC 312. Race, Ethnicity, and Gender in Central European Cinema
- RCSSCI 280/SOC 330. Moral Choice in Context
- RCSSCI 356. Mind, Brain & Violence

- SLAVIC 225. Central European Culture
- WOMENSTD 390/CAAS 390. Homophobia in the Black World: The U.S., Africa and the Caribbean

Area B: Conflict And Control – Courses that explain 20th and 21st century wars, intractable conflicts, globalization, and attempts at world order.

- AAPTIS 361. Jihad in History
- AAPTIS 491. Islamic Movements in Comparative Perspective (some background in Middle East, South Asian, and/or Islam intro courses required)
- ANTHRCUL 309. Anthropology of Europe: Nationalisms, Post-Socialisms, Multiculturalisms, & Refugees
- CAAS 413. Theories of Cultural Nationalisms
- HISTORY 241. America and Middle Eastern Wars
- HISTORY 302. U.S. Interventions in Latin America and the World
- MENAS 491. Islamic Movements in Comparative Perspective (some background in Middle East, South Asian, and/or Islam introductory courses required)
- POLSCI 353. Arab Israeli Conflict
- REES 405. Islamic Movements in Comparative Perspective (some background in Middle East, South Asian, and/or Islam intro courses required)
- RCSSCI 360 & RCCORE 409. Struggles for Democracy in Mexico: Seminar and Field Study
- WOMENSTD 368/AMCULT 368. Women and War in the Middle East
- NAVSCI 310/UC 310. Evolution of Warfare

Area C: Conflict Resolution – Courses that address nonviolent responses to conflict: social justice movements, race relations, interpersonal conflict resolution, and legal paths to a just *society*.

- CAAS 385/ENGLISH 385. African Literature: South Africa: Apartheid and After
- CICS 101/UC 145/GEOG 145. Introduction to International Studies
- HISTORY 255. Gandhi's India
- POLSCI 364. Public International Law
- PSYCH 310/SOC 320/UC 320. Intergroup Dialogue Training and PSYCH 311/SOC 321/UC 311 Intergroup Dialogue Practicum (a two term commitment)
- RCSSCI 461. *Maps, Timelines, and Internet: The Quest for Peace in the Middle East*

Area D: Social, Economic, and Environmental Justice – Courses that center on the reasons for social and economic disparities, social and political change, community empowerment, and human rights.

- AMCULT 210. Introduction to Ethnic Studies: Introduction to Arab American Studies
- ANTHRCUL 436/WOMENSTD 436. Human Rights, Gender, and Culture
- CAAS 458. The Algebra Project: Education, Citizenship, and Community Organizing for Social Justice in the 21st Century
- CAAS 458. Globalization and African Health
- ENGLISH 310. Discourse and Society: *The Henry Ford High* School Project
- ENGLISH 319. Theatre and Social Change
- ENGLISH 326. Community Writing and Public Culture
- POLSCI 489. Advanced Topics in Contemporary Political Science: *Law and Social Change*
- PSYCH 319/AMCULT 319. Empowering Families and Communities
- RCCORE 334. Community Empowerment Through the Arts
- RCHUMS 390. Postcolonial English-Language Drama
- RCIDIV 350 & RCIDIV 351. Pills, Profits, Politics, and the Public Good: Ethical Crossroads and the Pharmaceutical Industry
- RCSSCI 315. International Grassroots Development
- RCSSCI 330/CAAS 330. Urban and Community Studies

- RCSSCI 360 & RCCORE 409. Struggles for Democracy in Mexico: Seminar and Field Study
- RCSSCI 360. Social Science Junior Seminar: Theory and Practice of Community Organizing
- RCSSCI 461. The Algebra Project: Education, Citizenship, and Community Organizing for Social Justice in the 21st Century
- RCSSCI 463/SOC 453. Mexican Labor in North America
- SOC 389. Sociology Practicum (choice of sections to be discussed with the academic minor advisor)
- WOMENSTD/CAAS 443. Pedagogy of Empowerment: Activism in Race, Gender, and Health

Science, Technology & Society (STS)

Science, Technology, and Society Program www.umich.edu/~umsts e-mail: sts.minor.advisor@umich.edu

Not a concentration program

Not open to students concentrating in Social Theory & Practice in the Residential College

Technology often precipitates the most drastic, most revolutionary changes in how societies and cultures engage one another. The Science, Technology, and Society (STS) academic minor helps students see beyond the veneer of policy issues to learn about the raw changes in our tools and methods. STS studies the ethical, environmental, and social implications of new tools and methods – and how these affect the developing world.

Students wishing to pursue an academic minor in Science, Technology, and Society must develop a specific plan for its completion in consultation with the program's designated advisor. Appointments may be scheduled by sending e-mail to sts.minor.advisor@umich.edu.

Students may not declare the STS academic minor later than the first week of the first term of their senior year.

No course may be counted simultaneously toward both STS and any other academic minor.

Courses on science, technology, and society are offered by many different departments and programs in LSA as well as in other colleges of the university. Only courses specifically approved by the STS Program may be counted toward the academic minor. There are presently no provisions for exceptions to this rule. An up-to-date list of currently approved courses is available at the STS Program web site.

Prerequisites to the Academic Minor: None for the academic minor *per se,* although individual courses elected to meet the requirements of the academic minor may have course prerequisites.

Academic Minor Program: At least 5 courses for a minimum of 18 credits of courses, to be elected from the categories as stated below:

- 1. Core course: RCSSCI 275.
- Electives. A minimum of 3 courses for at least 11 credits, subject to the following conditions:
 - A maximum of one elective at the 100 level is permitted (up to 4 credits).
 - At least two electives must be at the 300 level or above.
 - Students may also count any research seminar (see below) as an elective.
 - At least two of the student's three electives must be drawn from one of the focus clusters: science and society, technology and society, or medicine and society.

A. Science and Society Focus Cluster

ANTHRBIO 360, 362, 467 ANTHRCUL 256 AOSS 172, 300 **BIOLOGY 101**

CHEM 120 (section subtitled "The History and Philosophy of Chemistry")

ECON 370

EEB 498

ENSCEN 172

ENVIRON 111, 201, 211, 256, 263, 270, 318, 350, 360, 361, 375, 280, 391, 414

GEOG 111

GEOSCI 140, 172, 380, 496 (section subtitled "Global Oil System and the Middle East")

HISTORY 301, 302 (section subtitled "Science, Technology, and Defining the Human"), 366, 397 (section subtitled "Human Nature and its Sciences"), 427

MENAS 491 (section subtitled "Global Oil System and the Middle East")

NURS 220

PHIL 420

PSYCH 384, 385

Residential College

- RCNSCI 232, 260, 263, 270, 350, 415, 461 (section subtitled "Global Oil System and the Middle East")
- RCIDIV 318, 351 (section subtitled "Evolution and Intelligent Design"), 391

SOC 111

UP 263

B. Technology and Society Focus Cluster

AOSS 172, 300 CEE 260 ENSCEN 172 ENVIRON 111, 263, 350, 380 ENGLISH 415 (section subtitled "Research and Technology in the Humanities")

GEOG 111

GEOSCI 172, 380, 496 (section subtitled "Global Oil System and the Middle East")

HISTORY 302 (section subtitled "Science, Technology, and Defining the Human"), 310, 396 (sections subtitled "Race, Gender, and Empire", "Global Nuclear Proliferation"), 498 (section subtitled "Steam Engines and Computers: From Proletariats to Information Workers")

MENAS 491 (section subtitled "Global Oil System and the Middle East")

PSYCH 485

Residential College:

- RCIDIV 330, 430, 450
- RCNSCI 263, 270,
- RCSSCI 310, 374, 461 (sections subtitled "Steam Engines and Computers: From Proletariats to Information Workers", "Global Oil System and the Middle East"), 462
 St 110, 513

SI 110, 513

 SOC 110, 111, 495 (section subtitled "Steam Engines and Computers: From Proletariats to Information Workers")
 UP 263
 WOMENSTD 485

C. Medicine and Society Focus Cluster

CAAS 355

ANTHRCUL 258 (section subtitled "Culture and Medicine"), 325, 344, 355, 416

BIOLOGY 118

HBEHED 516

HISTORY 284, 300, 310, 355, 396 (section subtitled "Human Experimentation")

NURS 220

PSYCH 211 (section subtitled "Health, Illness, Society"), 359, 401 (section subtitled "Health Psychology")

Residential College:

• RCNSCI 260 (section subtitled "From Shamans to Cyborgs: Socio-Cultural Studies of Health, Illness, and the Biomedical Sciences" and other topics as appropriate)

RCIDIV 351 (section subtitled "Law and Bioethics")

SOC 475

UC 210

WOMENSTD 220, 324, 400.

3. One research course or seminar, at the 300- or 400-level, in the student's chosen focus cluster, chosen in consultation with, and approved by, the advisor. The research course or seminar will normally be completed in the student's junior or senior year. To be approved for this requirement, a course must include a major research project (typically a long term paper) or a significant field study component.

Approved STS Research Courses and Seminars

ANTHRCUL 325

EEB 498

ENVIRON 318

- GEOSCI 496 (section subtitled "Global Oil System and the Middle East")
- HISTORY 396 (section subtitled "Human Experimentation", "Global Nuclear Proliferation", and other colloquia, if appropriate), 498 (section subtitled "Steam Engines and Computers: From Proletariats to Information Workers")
- MENAS 491 (section subtitled "Global Oil System and the Middle East")

PHYSICS 481

Residential College:

- RCIDIV 318
- RCNSCI 415
- RCSSCI 374, 461 (sections subtitled "Steam Engines and Computers: From Proletariats to Information Workers", "Global Oil System and the Middle East"), 462

SOC 495 (section subtitled "Steam Engines and Computers: From Proletariats to Information Workers")

WOMENSTD 324

4. Science/Technology/Medicine cognate (lab based). Students electing this academic minor must complete one cognate, consisting of a laboratory-based course in a natural science, computer science, or engineering. This cognate may count toward the LSA distribution requirement (if it is approved for that requirement). Ideally, this course should relate to the student's chosen focus cluster.

Drama: Text-to-Performance (T-t-P)

Not a concentration program

Not open to students with a concentration or academic minor in RC Humanities in the Residential College or in the department of Theatre and Drama

Students in this academic minor learn about the complete process from how a theater text evolves into a fleshed-out performance. The program teaches students a variety of different theatrical styles – both in textual expression and dramatic interpretation and exposes them to a breadth of original texts. Directorial methods, acting methods, scenery are all covered to help students create different and alternative connections between a piece's original message and the voice they would give it.

Students wishing to pursue an academic minor in Drama: Text-to-Performance must develop a specific plan for its completion in consultation with the program's designated advisor. Appointments may be scheduled at the RC Academic Services Office, 134 Tyler, East Quad, or by calling (734) 763-0032.

Prerequisites to the Academic Minor: None for the academic minor *per se,* although individual courses elected to meet the requirements of the academic minor may have course prerequisites.

Academic Minor Program: A minimum of 5 courses (at least 15-20 credits), to be elected from categories as stated:

- 1. **Core Courses** (both are required, and must be taken in sequence; ideally, the electives should be completed in the interval between taking RCHUMS 281 and 481):
 - A. RCHUMS 281.
 - B. RCHUMS 481. Play Production Seminar.
- 2. **Electives.** Each student will select three electives in consultation with the Drama: T-t-P advisor. One course must be from Group A and two courses from Group B.
 - A. Texts and Scenes
 - RCHUMS 380. Greek Theatre.
 - RCHUMS 381. Shakespeare on the Stage.
 - RCHUMS 382. Molière and His Theatre.
 - RCHUMS 383. Ibsen and Strindberg.
 - RCHUMS 385. The Theatre of Bertolt Brecht.
 - RCHUMS 389. The Modern Theatre.
 - RCHUMS 390. Special Period and Place Drama.

B. The Varieties of Literature for the Theatre

- RCHUMS 386 / MEMS 421. Medieval Drama.
- CAAS 341 / THTREMUS 222. Introduction to Black Theatre.
- CAAS 342 / THTREMUS 233. Acting and the Black Experience.
- ASIAN 310. The Theater of China and Japan.
- CLCIV 386. Greek Drama.
- ENGLISH 267. Introduction to Shakespeare.
- ENGLISH 349 / THTREMUS 323. American Theatre and Drama.
- ENGLISH 367 / MEMS 367. Shakespeare's Principal Plays.
- ENGLISH 368 / MEMS 368. Shakespeare and his Contemporaries.
- ENGLISH 445. Shakespeare's Rivals.
- ENGLISH 446. World Drama: Congreve to Ibsen.
- ENGLISH 447. Modern Drama.
- ENGLISH 448. Contemporary Drama.
- GERMAN 320. German Expressionism in English Translation.
- GERMAN 360. Art and Politics in the Weimar Republic.
- GERMAN 381. Eighteenth to Nineteenth-Century Drama.
- GERMAN 382. Nineteenth to Twentieth-Century Drama.
- MEMS 367 / ENGLISH 367. Shakespeare's Principal Plays.
- MEMS 368 / ENGLISH 368. Shakespeare and his Contemporaries.
- MEMS 421 / RCHUMS 386. Medieval Drama.
- ITALIAN 471. Italian Theater.
- SPANISH 425. Latin-American Theater.
- SPANISH 460. The Spanish Comedia.
- SPANISH 468. Modern Spanish Theater.
- RUSSIAN 463. Chekhov.
- THTREMUS 222 / CAAS 341. Introduction to Black Theatre.
- THTREMUS 233 / CAAS 342. Acting and the Black Experience.
- THTREMUS 323 / ENGLISH 349. American Theatre and Drama.
- THTREMUS 324. Contemporary Black Theatre.
- THTREMUS 332. Performing Gender: Drama from Oral Sources.
- THTREMUS 402. Ideas of Theatre: Dramatic Theory and Criticism.

Urban Studies

Not a concentration program

Not open to students concentrating in Social Theory & Practice in the Residential College. For students with concentrations in other LSA programs, only one of the courses taken to complete this academic minor may be counted toward the concentration. Courses used to meet the Urban Studies academic minor may not be counted simultaneously toward any other academic minor.

The goal of the Urban Studies academic minor is to facilitate students' active engagement with local communities while fostering the integration of their practical experience with classroom instruction. Urban Studies is an interdisciplinary academic minor that allows students to explore varied and multiple dimensions of urban and community life through differing theoretical approaches. In addition to coursework in the social sciences and humanities, the academic minor combines theoretical and analytical concepts from African American studies, social work, urban studies, and other fields to help students understand the challenges of urban life and to expand their capacity for civic engagement and community work.

Students wishing to pursue an academic minor in Urban Studies must develop a specific plan for its completion in consultation with the program's designated advisor. Appointments may be scheduled at the RC Academic Services Office, 134 Tyler, East Quad, or by calling (734) 763-0032.

Prerequisites to the Academic Minor: None for the academic minor *per se,* although individual courses elected to meet the requirements of the academic minor may have course prerequisites.

Academic Minor Program: A minimum of 5 courses (at least 16 credits), to be elected from categories as stated:

- 1. Core Course: One of the following:
 - RCSSCI 330, "Urban and Community Studies I: Historical and Theoretical Perspectives."
 - UP 424, "Introduction to Urban Systems"
- Electives. Each student will select four electives (no more than one course below the 300 level) from three Categories of courses: Group A (Theory / Perspectives), Group B (Policy / Technique) and Group C (Applications / Practice). No ore than two electives may be selected from any one group.
 - A. Theory / Perspectives Courses that present intellectual background for the study of urban communities. Drawn from history, sociology, political science, and other disciplines, these courses introduce students to disciplinary and theoretical perspectives on community formation and urban life, and they provide opportunities for students to think through differing and at times competing analytical approaches.

Potential Theory / Perspectives Courses

- AMCULT 301 section subtitled "Detroit Politics and Community Organizing
- AMCULT 305, section subtitled "Asians and Blacks in Detroit"
- AMCULT 399 Race, Racism, and Ethnicity
- ANTHRCUL 438 Urban Anthropology
- ANTHRCUL 446 / WOMENSTD 446 Sex and the City: Urban Geography and Sexual Locations
- ARCH 443 / UP 443 History of Urban Form
- ARCH 519 / UP 519 Theories of Urban Design
- CAAS 332 / ENVIRON 336 / NRE 336 Environment and Inequality
- CAAS 434 / SOC 434 Social Organization of Black Communities
- CAAS 358, section subtitled "Asians and Blacks in Detroit"
- CAAS 426 Urban Redevelopment and Social Justice
- CAAS 443 / WOMENSTD 443 The Pedagogy of Empowerment: Activism in Race, Gender, and Health

- CAAS 495, section subtitled "Race and the City in American Culture"
- ENVIRON 336 / CAAS 332 / NRE 336 Environment and Inequality
- HISTORY 344 / RCSSCI 344 History of Detroit in the 20th Century
- HISTORY 302 Topics in History, section subtitled "Mapping Black Detroit"
- HISTORY 364 History of Suburbia
- HISTORY 468, section subtitled "Asians and Blacks in Detroit"
- HISTORY 393 Topics in US History, section subtitled "Detroit Politics and Community Organizing
- NRE 336 / CAAS 332 / ENVIRON 336 Environment and Inequality
- NRE 573 / UP 573 Urban and Regional Theory
- POLSCI 327 The Politics of the Metropolis
- RCSSCI 344 / HISTORY 344 History of Detroit in the 20th Century
- RCSSCI 345 Community Strategies Against Poverty
- SOC 434 / CAAS 434 Social Organization of Black Communities
- SOC 435 Urban Inequality and Conflict
- UP 443 / ARCH 443 History of Urban Form
- UP 519 / ARCH 519 Theories of Urban Design
- UP 521 The Social Life of Public Spaces
- UP 568 Real Estate and Urban Development
- UP 573 / NRE 573 Urban and Regional Theory
- UP 655 Neighborhood Planning (requires instructor approval for undergraduates)
- WOMENSTD 443 / CAAS 443 The Pedagogy of Empowerment: Activism in Race, Gender, and Health
- ANTHRCUL 446 / WOMENSTD 446 Sex and the City: Urban Geography and Sexual Locations
- * *Note:* RCSSCI 330: Urban and Community Studies: Historical and Theoretical Perspectives may be included as an elective under Category A, provided a student has taken UP 424 Introduction to Urban Systems to meet the core course requirement
- B. Policy / Technique Courses that provide an introduction to urban planning and policy making as it bears upon urban communities, including issues of the environment, land management, economic development, transportation, and sustainability.
 - ARCH 423 / UP 423 / ENVIRON 370 Introduction to Urban and Environmental Planning
 - ENVIRON 370 / UP 423 / ARCH 423 Introduction to Urban and Environmental Planning
 - GEOG 406 / UP 406 Introduction to Geographic Information Systems
 - GEOG 472 / UP 572 Transportation and Land Use Planning
 - NRE 592 / UP 502 Environmental Planning: Issues and Concepts
 - PUBPOL 652 / UP 652 Strategic Thinking for Affordable Housing
 - SW 655 / UP 655 Neighborhood Planning
 - UP 406 / GEOG 406 Introduction to Geographic Information Systems
 - UP 423 / ARCH 423 / ENVIRON 370 Introduction to Urban and Environmental Planning
 - UP 502 / NRE 592 Environmental Planning: Issues and Concepts
 - UP 507 Geographic Information Systems
 - UP 510 Public Economics for Urban Planning
 - UP 520 Urban Land Use Planning
 - UP 522 State and Local Land Management
 - UP 523 Regional Planning

- UP 527 Infrastructure Planning in the US & Developing Countries
- UP 532 Sustainable Development: Resolving Economic and Environmental Conflicts
- UP 537 Housing Policy and Economics
- UP 538 Economic Development Planning
- UP 539 Methods for Economic Development Planning
- UP 572 / GEOG 472 Transportation and Land Use Planning
- UP 652 / PUBPOL 652 Strategic Thinking for Affordable Housing
- UP 655 / SW 655 Neighborhood Planning
- UP 656 Central-City Planning and Community Development UP 658 Urban and Regional Planning in Developing Countries
- UP 671 Public Policy and Transportation
- * *Note:* UP 424, Introduction to Urban Systems may be included as an elective under Category B, provided a student has taken RCSSCI 330: Urban and Community Studies: Historical and Theoretical Perspectives to meet the core course requirement.
- C. Applications / Practice Courses that give students direct exposure to community settings and foster the integration of theoretical and policy planning knowledge and practical experience. Through specific engagements with urban and community issues, students experience and examine how theoretical and academic frameworks get applied to in urban contexts. Prominent among these will be "field work" or "field study" courses – that is, courses in which students work in community settings.

Potential Applications / Practice Courses

- AMCULT 306 / PSYCH 317 Community-Based Research
- AMCULT 310, section subtitled "Race, Politics, and Activism in Detroit"
- AMCULT 319 / PSYCH 319 Empowering Families and Communities
- AMCULT 321 / PSYCH 325 Practicum in the Multicultural Community
- CAAS 358, section subtitled "Urban and Community Studies $\mathrm{II}^{\prime\prime}$

CAAS 634 / SOC 634 The Urban Ethnographic Tradition: Theory, Method, Standpoint

- (requires instructor approval for undergraduates)
- HISTORY 393, section subtitled "Race, Politics, and Activism in Detroit"
- POLSCI 496, section subtitled "Senior Seminar in Urban Research"
- PSYCH 317 / AMCULT 306 Community-Based Research
- PSYCH 319 / AMCULT 319 Empowering Families and Communities
- PSYCH 325 / AMCULT 321 Practicum in the Multicultural Community
- RCCORE 301: Internships with Semester in Detroit
- RCCORE 309, sec 006: Spanish Language Internship Placements
- RCHUMS 334: sections subtitled: "Writing in Detroit;" "Empowering our Communities through Creative Expression;" and "Telling it: Community-Based Arts and Literature"
- RCLANG 334: Tutoring Latinos in the Community
- * RCSSCI 360, section subtitled "Urban and Community Studies II"
- * RCSSCI 460, section subtitled "Social and Political Movements in Post-War Detroit"
- * SOC 389 Practicum in Sociology
 - SOC 634 / CAAS 634 The Urban Ethnographic Tradition: Theory, Method, Standpoint (*requires instructor approval for undergraduates*)

WOMENSTD 350 Women and the Community WOMENSTD 351 Women and the Community II

* SOC 389, RCSSCI 360, and RCSSCI 460 are *topics* courses, therefore not all offerings under these numbers will be approved. Students will be allowed to count toward

FINE ARTS (RCARTS)

RCARTS 267. Introduction to Holography (4). (CE). May not be repeated for credit.

RCARTS 269. Elements of Design (4). (CE). May not be repeated for credit.

RCARTS 285. Photography (4). (CE). May not be repeated for credit.

RCARTS 286. Sculpture (4). (CE). May not be repeated for credit.

RCARTS 287. Printmaking (4). (CE). May not be repeated for credit.

RCARTS 288. Beginning Drawing (4). (CE). May not be repeated for credit.

RCARTS 289. Ceramics (4). (CE). May not be repeated for credit.

RCARTS 385. Interdisciplinary Photographic Applications *RCARTS 285. (4). May not be repeated for credit.*

RCARTS 389. Ceramics Theory and Criticism RCARTS 289. (4). (CE). May not be repeated for credit.

CORE (RCCORE)

RCCORE 100. First Year Seminar

SWC Writing Assessment. Only first-year students, including those with sophomore standing, may pre-register for First-Year Seminars. All others need permission of instructor. (4). (FYWR). May not be repeated for credit.

RCCORE 101. Academic Writing

RC First Year Seminar. (1). May not be repeated for credit. Offered mandatory credit/no credit.

RCCORE 105. Logic and Language

(4). (MSA). (BS). May not be repeated for credit. F.

RCCORE 205. Independent Study

Consent of instructor required. Sophomore standing and permission of instructor. (1 - 8). (INDEPENDENT). May be repeated for credit. Offered mandatory credit/no credit.

RCCORE 206. Independent Study

Consent of instructor required. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits.

RCCORE 209. Study Off-Campus

Consent of instructor required. Sophomore standing and permission of instructor. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 8 credits. Offered mandatory credit/no credit.

RCCORE 301. Community-Based Internship - Semester in Detroit

Consent of department required. (4). (EXPERIENTIAL). (INDEPENDENT). May not be repeated for credit. Offered mandatory credit/no credit.

RCCORE 302. Community-Based Internship Reflection Seminar

Consent of department required. (3). May not be repeated for credit.

RCCORE 305. Independent Study

Consent of instructor required. Junior standing and permission of instructor. (1 - 8). May be repeated for credit. Offered mandatory credit/no credit.

RCCORE 306. Independent Study

Consent of instructor required. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits.

RCCORE 307. RC Practicum in College Team Teaching

Consent of instructor required. Upperclass standing and permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for credit.

RCCORE 308. Directed Peer Tutoring

Consent of instructor required. (1 - 2). (EXPERIENTIAL). May be repeated for a maximum of 4 credits. Offered mandatory credit/no credit.

RCCORE 309. Study Off-Campus

Consent of instructor required. Junior standing and permission of instructor. (1 - 16). (EXPERIENTIAL). May be repeated for credit. Offered mandatory credit/no credit.

RCCORE 334. Special Topics

(3 - 4). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

RCCORE 405. Independent Study

Consent of instructor required. Senior standing. (1 - 8). (INDEPENDENT). May be repeated for credit. Offered mandatory credit/no credit. the academic minor only the particular offerings with the subtitles listed above (or others that are relevant to urban and community studies).

RESIDENTIAL COLLEGE COURSES

RCCORE 406. Independent Study

Consent of instructor required. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits.

RCCORE 409. Study Off-Campus

Consent of instructor required. Senior standing. (1 - 16). (EXPERIENTIAL). May be repeated for credit. Offered mandatory credit/no credit.

RCCORE 410. Senior Project

Consent of instructor required. Permission of concentration advisor. (1 - 8). (INDEPEN-DENT). May be repeated for credit.

RCCORE 489. Honors Independent Research

Permission of instructor. (1 - 4). (INDEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of RCCORE 490, the final grade is posted for both term's elections.

RCCORE 490. Honors Thesis

Consent of instructor required. Permission of concentration advisor. (1 - 4). (INDEPEN-DENT). May be repeated for a maximum of 8 credits.

HUMANITIES (RCHUMS)

RCHUMS 217. Fathers and Sons

(3). (HU). May not be repeated for credit.

RCHUMS 218. The Hero as Outsider, Outcast or Outlaw (3). (HU). May not be repeated for credit.

RCHUMS 220. Narration

Consent of instructor required. (4). (CE). May not be repeated for credit.

RCHUMS 221. The Writing of Poetry

Permission of instructor. (4). (CE). May not be repeated for credit.

RCHUMS 230. Biblical, Greek, and Medieval Texts: Original Works and Modern Counterparts

(3). (HU). May not be repeated for credit.

RCHUMS 235. Topics in World Dance (3). (HU). May not be repeated for credit.

RCHUMS 236 / SAC 236. The Art of the Film

(4). (HU). May not be repeated for credit.

RCHUMS 242. Creative Adaptation

Completion of the First-Year Writing Requirement. (4). (CE). May not be repeated for credit. W.

RCHUMS 249. Foundations of Music *(CE). May not be repeated for credit.*

RCHUMS 250. Chamber Music

(1 - 2; 1 in the half-term). (CE). May be repeated for a maximum of 8 credits. May be elected more than once in the same term. Offered mandatory credit/no credit.

RCHUMS 251. Topics in Music

(4). (HU). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

RCHUMS 252. Topics in Musical Expression

(2 - 4). (CE). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

RCHUMS 253. Choral Ensemble

(1). (CE). May be repeated for credit. Offered mandatory credit/no credit.

RCHUMS 258. Afro-Cuban Drumming and Styles

(4). (CE). May not be repeated for credit.

RCHUMS 259. Musical Improvisation (4). (CE). May be elected twice for credit.

RCHUMS 265 / ASIAN 265 / HISTART 265 / PHIL 265. The Arts and Letters of China (4). (HU). May not be repeated for credit.

RCHUMS 272 / HISTART 272. Art in the Modern World: Avant-Garde to Contemporary

(4; 3 in the half-term). (HU). May not be repeated for credit.

RCHUMS 275. The Western Mind in Revolution: Six Interpretations of the Human Condition

(4). (HU). May not be repeated for credit.

RCHUMS 280 / ENGLISH 245 / THTREMUS 211. Introduction to Drama and Theatre (*3*; *2* in the half-term). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RCHUMS 281.

RCHUMS 281. Introduction to Comedy and Tragedy (4). (HU). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RCHUMS 280.

RCHUMS 282. Drama Interpretation I: Actor and Text (4). (CE). May not be repeated for credit.

RCHUMS 290. The Experience of Arts and Ideas in the Twentieth Century (4). (HU). May not be repeated for credit.

RCHUMS 291. The Experience of Arts and Ideas in the Nineteenth Century (4). (HU). May not be repeated for credit.

RCHUMS 305. Cultural Confrontation in the Arts

Sophomore standing. (3). (HU). May not be repeated for credit.

RCHUMS 308 / ASIAN 308. Arts and Ideas of Modern South and Southeast Asia (3). (HU). May not be repeated for credit.

RCHUMS 309. Classical Sources of Modern Culture (4). (HU). May not be repeated for credit.

RCHUMS 310 / MEMS 310. Pagans, Christians, and Barbarians in Late Antiquity and the Early Christian Period

(3). (HU). May not be repeated for credit.

RCHUMS 312 / SLAVIC 312. Central European Cinema A knowledge of Russian is not required. (3). (HU). (R&E). May not be repeated for credit. Taught in English.

RCHUMS 313 / SLAVIC 313. Russian and Ukrainian Cinema (3). (HU). May not be repeated for credit. F.

RCHUMS 314 / MEMS 314. The Figure of Rome in Shakespeare and 16th-Century Painting

(3). (HU). May not be repeated for credit.

RCHUMS 315. Representations of History in the Literature and Visual Arts of Rome (4). (HU). May not be repeated for credit.

RCHUMS 318. Critical Approaches to Literature (4). (HU). May be repeated for credit.

RCHUMS 320. Advanced Narration

Consent of instructor required. HUMS 220&P.I. (4). (CE). May not be repeated for credit.

RCHUMS 321. Advanced Poetry Writing

Consent of instructor required. RCHUMS 221 and permission of instructor. (4). (CE). May not be repeated for credit.

RCHUMS 325. Creative Writing Tutorial

Consent of instructor required. RCHUMS 320/221. (4). (CE). May be elected twice for credit.

RCHUMS 326. Creative Writing Tutorial

Consent of instructor required. RCHUMS 325 and permission of instructor. (4). May be repeated for credit.

RCHUMS 333. Art and Culture

(3 - 4). (HU). May be repeated for a maximum of 12 credits.

RCHUMS 334. Special Topics in the Humanities

(3 - 4). (HU). May be elected twice for credit. May be elected more than once in the same term.

RCHUMS 340. Four Interdisciplinary Studies in 19th- and 20th-Century Intellectual History: Psychoanalysis, Mysticism, Nihilism and Marxism

Junior/senior standing. (4). (HU). May not be repeated for credit.

RCHUMS 342. Representing the Holocaust in Literature, Film and the Visual Arts Consent of instructor required. Sophomore standing. (4). (HU). May not be repeated for credit.

RCHUMS 344 / HISTART 342. Reason and Passion in the 18th Century Sophomore standing. (3). (HU). May not be repeated for credit.

RCHUMS 347 / RUSSIAN 347. Survey of Russian Literature

A knowledge of Russian is not required. No knowledge of Russian literature or history is presupposed. (4). (HU). May not be repeated for credit.

RCHUMS 348 / RUSSIAN 348. Survey of Russian Literature

A knowledge of Russian is not required. (4). (HU). May not be repeated for credit. RCHUMS 350. Creative Musicianship

(4). (CE). May not be repeated for credit.

RCHUMS 351. Creative Musicianship Lab

RCHUMS 350. (1 - 2). (CE). May be repeated for credit.

RCHUMS 352. Found Instruments-Building, Design and Performance (4). (CE). May not be repeated for credit.

RCHUMS 354 / CAAS 354 / HONORS 354 / WOMENSTD 354. Race and Identity in Music

(3). (HU). (R&E). May not be repeated for credit.

RCHUMS 356. The Symphonic Century: Music and Revolution in the 19th Century (3). (HU). May not be repeated for credit.

RCHUMS 360. Existentialism

Junior/senior standing. (4). (HU). May not be repeated for credit.

RCHUMS 361. Psychoanalysis and the Modern Novel (3). (HU). May not be repeated for credit.

RCHUMS 362 / ASIAN 362. Writer and Society in Modern China No knowledge of Chinese is required. (4). (HU). May not be repeated for credit.

RCHUMS 364. Nietzsche's Last Year: Final Vision and Mental Collapse (3). (HU). May not be repeated for credit.

RCHUMS 365. Experiences of Atheism: A History of Skepticism and Unbelief (3). (HU). May not be repeated for credit.

RCHUMS 372. The Subject in the Aftermath of Revolution (*3*). (HU). May not be repeated for credit.

RCHUMS 373 / ASIAN 373. The Performing Arts in South and Southeast Asia (3). (HU). May not be repeated for credit.

RCHUMS 381. Shakespeare on the Stage RCHUMS 280. (4). (HU). May not be repeated for credit.

RCHUMS 383. Ibsen and Strindberg Previous acting, Shakespeare course. (4). (HU). May not be repeated for credit.

RCHUMS 386 / MEMS 421. Medieval Drama

(4). May not be repeated for credit.RCHUMS 387. Renaissance Drama(4). May not be repeated for credit.

RCHUMS 389. The Modern Theatre

(4). (HU). May be elected three times for credit. RCHUMS 390. Special Period and Place Drama

Consent of instructor required. RCHUMS 280 and permission of instructor. (4). May be repeated for credit.

RCHUMS 411. Translation Seminar Reading proficiency in a foreign language. Upperclass standing. (4). May not be repeated for credit.

RCHUMS 425. Creative Writing Tutorial Consent of instructor required. Restricted to RC Creative Writing concentrators. (4). May be elected twice for credit.

RCHUMS 426. Creative Writing Tutorial Consent of instructor required. Permission of instructor. (4). May be repeated for credit.

RCHUMS 444. George Balanchine and the Transformation of American Dance RCHUMS 260 or 235 or DANCE 220; Upperclass standing. (3). May not be repeated for credit. RCHUMS 480. Dramatic Theory and Criticism

RCHUMS 280 and three drama courses. (4). May not be repeated for credit. RCHUMS 481. Play Production Seminar

Consent of instructor required. (4). May be elected three times for credit.

RCHUMS 482. Drama Interpretation II: Performance Workshop

RCHUMS 280 and either RCHUMS 282 or playwriting. (4). May not be repeated for credit. RCHUMS 483. Environmental Theater Production Workshop in the Arboretum

Consent of instructor required. Previous acting, Shakespeare courses. (2 - 4 in the halfterm). May be elected four times for credit.

RCHUMS 485. Special Drama Topics Consent of instructor required. Sophomore standing. (1 - 2). May be repeated for a maximum of 4 credits. May be elected more than once in the same term.

INTERDIVISIONAL (RCIDIV)

RCIDIV 202. Issues in Science, Technology, Medicine, and Society

(3 - 4). (ID). May be elected twice for credit. May be elected more than once in the same term.

RCIDIV 222. Quantitatively Speaking

(4). (ID). (BS). (QR/1). May not be repeated for credit.

RCIDIV 302. Advanced Issues in Science, Technology, Medicine, and Society (3 - 4). (ID). May be elected twice for credit. May be elected more than once in the same term.

RCIDIV 318 / EEB 318 / ENVIRON 318. Food, Land, and Society

One year of college-level Biology, Environmental Science or Environmental Studies; General Ecology recommended. (4). (ID). May not be repeated for credit. W.

RCIDIV 319 / EEB 319 / ENVIRON 319. Food, Land and Society Field Study RCIDIV 318/ENVIRON 318/EEB 318. (Prerequisites enforced at registration.) (2). (EX-PERIENTIAL). May not be repeated for credit.

RCIDIV 350. Special Topics

(1). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. Offered mandatory credit/no credit.

RCIDIV 351. Special Topics

(2). May be repeated for a maximum of 8 credits. May be elected more than once in the same term. Offered mandatory credit/no credit.

RCIDIV 391 / ENVIRON 391. Sustainability and the Campus

An introductory course in Environmental Studies, Global Change, or related field (e.g., ENVIRON 201, 240, 270). (3). May not be repeated for credit.

RCIDIV 401. Senior Seminar in Science, Technology, Medicine, and Society (3 - 4). May be elected twice for credit. May be elected more than once in the same term.

LANGUAGE (RCLANG)

RCLANG 190. Intensive French I

(8). May not be repeated for credit. No credit granted to those who have completed or are enrolled in FRENCH 100, 101, 102, or 103. Pass/Fail with Narrative Evaluation.

RCLANG 191 / GERMAN 191. Intensive German I

(8). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 100, 101, 102, or 103. Conducted in German. Pass/Fail with Narrative Evaluation.

RCLANG 193 / RUSSIAN 103. Intensive First-Year Russian

(8). May not be repeated for credit. Credit is granted from only one course among RUSSIAN 103, 111, 123, or RCLANG 193. No credit is granted to those who have completed or are enrolled in RUSSIAN 101 or 102.

RCLANG 194. Intensive Spanish I

(8). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SPANISH 100, 101, 102, or 103. Pass/Fail with Narrative Evaluation.

RCLANG 195 / LATIN 195. Intensive Latin I (8). May not be repeated for credit.

RCLANG 196 / ASIANLAN 129. Intensive Japanese I

Consent of instructor required. (10). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 125, 126, or 127.

RCLANG 204. Spanish Language Internship Program I

Consent of instructor required. (1). (EXPERIENTIAL). May be elected eight times for credit. Offered mandatory credit/no credit.

RCLANG 206. Spanish Language Internship Program II

Consent of instructor required. (2 - 3). (EXPERIENTIAL). May not be repeated for credit. RCLANG 290. Intensive French II

RCLANG 190. (8). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in FRENCH 230, 231, or 232. Pass/Fail with Narrative Evaluation.

RCLANG 291 / GERMAN 291. Intensive German II

RCLANG 191/GERMAN 191, GERMAN 102, 103, or 221. (8). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in GERMAN 230, 231, or 232. Pass/Fail with Narrative Evaluation.

RCLANG 293 / RUSSIAN 203. Intensive Second Year Russian

RUSSIAN 102, 103, or 123 or RCLANG 193. (Prerequisites enforced at registration.) (8). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 201, 202, or 223.

RCLANG 294. Intensive Spanish II

RCLANG 194. (8). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SPANISH 230, 231, or 232. Pass/Fail with Narrative Evaluation.

RCLANG 295 / LATIN 295. Intensive Latin II

LATIN 102, 103, or 193/504, or RCLANG 195. (8). (Lang Req). May not be repeated for credit.

RCLANG 296 / ASIANLAN 229. Intensive Japanese II

Consent of instructor required. ASIANLAN 129 or RCLANG 196. (10). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ASIANLAN 225, 226, and 227.

RCLANG 304. PALMA: Spanish in the Community

RC students must have passed the RC proficiency test; non-RC students must have completed Spanish 276. (EXPERIENTIAL). May be elected four times for credit. Offered mandatory credit/no credit.

RCLANG 310. Accelerated Review-French

Permission of instructor. (4). May not be repeated for credit. Pass/Fail with Narrative Evaluation.

RCLANG 311. Accelerated Review-German

Consent of instructor required. Permission of instructor. (4). May not be repeated for credit. Pass/Fail with Narrative Evaluation.

RCLANG 314. Accelerated Review-Spanish

(4). May not be repeated for credit. Pass/Fail with Narrative Evaluation.

RCLANG 320. Séminaire en français

Consent of instructor required. Proficiency test and permission of instructor. (4). May be repeated for credit.

RCLANG 321. Readings in German

Consent of instructor required. Proficiency test. (4). May be repeated for credit. May be elected more than once in the same term.

RCLANG 323. Russian Readings

Proficiency in Russian (by RC standards). (4). May not be repeated for credit.

RCLANG 324. Readings in Spanish

Consent of instructor required. Proficiency test. Permission of instructor. (4). May be repeated for credit.

RCLANG 325 / LATIN 325. Readings in Latin Drama: From Text to Performance

One of RCLANG 295, LATIN 194, 195, 232, or 233, or permission of instructor. (4). May be elected twice for credit.

RCLANG 333 / SLAVIC 316. RUSLAN Service Learning: Russian Language, Culture, and People in the U.S.

Native proficiency or one course in Russian language, literature, culture, or history. (3). (R&E). (EXPERIENTIAL). May be elected twice for credit.

RCLANG 334. Tutoring Latino/a Adults and Children: Spanish in the Community Must pass RC Spanish Proficiency Test. (2 - 3; 2 in the half-term). (EXPERIENTIAL). May be elected twice for credit.

NATURAL SCIENCE (RCNSCI)

RCNSCI 104 / BIOLOGY 104. Introduction to the Natural Sciences

First- or second-year standing; written application to the Biological Station. (5 in the half-term). (NS). (BS). May not be repeated for credit. Credit is granted for a combined total of 17 credits elected in introductory biology. Does not meet prerequisites for any of the Biology concentration programs. Sp at the Biological Station.

RCNSCI 201. Topics in Science, Technology, Medicine, and Society (3 - 4). (NS). (BS). May be elected twice for credit.

RCNSCI 301. Advanced Topics in Science, Technology, Medicine, and Society (3 - 4). (NS). (BS). May be elected twice for credit. May be elected more than once in the same term.

RCNSCI 350. Ecology, Development, and Conservation in Latin America

Reading and listening proficiency in Spanish; high school biology or environmental science. (4). (NS). (BS). May not be repeated for credit.

RCNSCI 419 / NRE 574 / PUBPOL 519. Sustainable Energy Systems

Senior standing; college-level course in Math or Economics or physical science. (3). May not be repeated for credit.

SOCIAL SCIENCE (RCSSCI)

RCSSCI 220 / SOC 220. Political Economy

(4). (SS). May not be repeated for credit.

RCSSCI 260. Theorizing Knowledge in the Social Sciences (3). (SS). May not be repeated for credit.

RCSSCI 275 / HISTORY 285. Science, Technology, Medicine, and Society Sophomore standing. (4). (SS). May not be repeated for credit.

RCSSCI 280 / SOC 280. Moral Choice in Context: Social-Psychological and Historical Perspectives

Sophomore standing. (4). (SS). May not be repeated for credit.

RCSSCI 290. Social Science Basic Seminar (1). May not be repeated for credit. Offered mandatory credit/no credit.

RCSSCI 301. Social Science Theory I: From Social Contract to Oedipus Complex At least one 200-level social science course. (4). (SS). May not be repeated for credit. F.

RCSSCI 302. Contemporary Social and Cultural Theory *RCSSCI 301 or equivalent (as determined by the instructor). (4). (SS). May not be repeated for credit.*

RCSSCI 315. International Grassroots Development (4). (SS). May not be repeated for credit.

RCSSCI 327 / ANTHRCUL 327. Critical Theory in Medicine and Healing One course in ANTHRCUL or RCSSCI. (4). (SS). May not be repeated for credit.

RCSSCI 330 / CAAS 330. Urban and Community Studies I (4). May not be repeated for credit.

RCSSCI 354. Nonviolence in Action (4). (ID). May not be repeated for credit.

RCSSCI 357 / HISTORY 345. History and Theory of Punishment (4). May not be repeated for credit.

RCSSCI 360. Social Science Junior Seminar Upperclass standing. (3 - 4). (SS). May be repeated for a maximum of 12 credits. May be elected more than once in the same term.

RCSSCI 365. Excellence, Equity, and the Politics of Education (4). (SS). May not be repeated for credit.

RCSSCI 379 / HISTORY 379 / SI 379. History of Computers and the Internet

Junior standing. Familiarity with computer concepts helpful but not required. (4). (SS). May not be repeated for credit.

RCSSCI 390 / EDUC 390 / ELI 390 / LING 386. Community Service and Language, Education, and Culture

(1 - 3). (EXPERIENTIAL). May be elected three times for credit.

RCSSCI 428 / ANTHRCUL 428 / WOMENSTD 428. Sex Panics in the US and UK since 1890

One course in WOMENSTD or ANTHRCUL or RCSSCI, SOC, or HISTORY. (3). May not be repeated for credit.

RCSSCI 460. Social Science Senior Seminar

Senior standing. (4). May be repeated for credit.

RCSSCI 461. Senior Seminar

(3). May not be repeated for credit.

RCSSCI 463 / SOC 453. Mexican Labor in North America (4). May not be repeated for credit.

Romance Languages and Literatures

4108 Modern Languages Building 812 East Washington Street (734) 764-5344 (phone) (734) 764-8163 (fax) www.lsa.umich.edu/rll e-mail: rll.mailbox@umich.edu

Professors

- Vincenzo Binetti, 19th- and 20th-century Italian literature; cultural studies and literary theory
- David Caron, Late 19th- and 20th-century French narrative; gay studies
- Frank P. Casa, Golden Age literature; 20th-century literature
- Steven N. Dworkin, *Linguistics; medieval Spanish linguistics*
- Frieda Ekotto, 20th-century French and Francophone literature
- Enrique García Santo-Tomás, Spanish Golden Age literature
- Michèle Hannoosh, French language and literature; 19th-century literature, art, and culture
- Alejandro Herrero-Olaizola, *Latin American literature; critical theory; comparative literature; relations between Peninsular and Latin American studies*

Peggy McCracken, Medieval French literature; gender studies

- William Paulson (Edward Lorraine Walter Collegiate Professor), 18thand 19th-century French literature; relations among culture, science, and technology
- Javier Sanjinés, 19th- and 20th-century Latin American literature; Andean literature and cultural studies

Associate Professors

- Catherine Brown, Medieval European literature, philosophy, theology; the practice of scholarship; the poetics of scholarly prose; materialities of thought and communication
- Alina Clej, 19th- and 20th-century French literature; comparative literature
- Alison Cornish, Medieval and Renaissance Italian literature, Dante
- Jarrod Hayes, French and Francophone literature
- Juli Highfill, Modern Peninsular Spanish literature
- George Hoffmann, 16th-century French literature
- Lawrence LaFountain-Stokes, Latin American, Caribbean and U.S. Latino/Latina Literature and culture; theatre and performance studies; Queer, Lesbian, and Gay Studies; Women's and Gender Studies
- Cristina Moreiras-Menor, Modern and contemporary Peninsular literature and culture; film
- Teresa Satterfield, Linguistics; Romance linguistics
- Paolo Squatriti, Italian history and culture; Medieval history; technology and resource use
- Gustavo Verdesio, Latin American Colonial studies; popular culture; literary theory
- Gareth Williams, Contemporary Latin American literature; film

Assistant Professors

Paulina Alberto, Brazilian and Latin American history

- Giorgio Bertellini, Silent film; Italian, North American and Eastern European cinema; Intersections of Gender and Racial Culture; Immigration; National Identity and International Film Culture
- Kate Jenckes, 20th and 21st-century Latin American literature; literary and cultural theory
- Jaime Rodríguez-Matos, Caribbean literature, Latin American poetry, Latino/a culture, political theory and philosophy
- Ryan Szpiech, Medieval Iberian Literatures, Sephardic Studies, Medieval Islam
- Daniel Noemi Voionmaa, Latin American literature and culture; Southern Cone Studies

Lecturers

Romana Capek-Habekovic, *Director, elementary Italian language program*

Rachael Criso, *Business French Program coordinator* Carlos de los Santos, *Spanish language coordinator* María Dorantes, *Director, elementary Spanish language program* Olga Gallego, *elementary Spanish language; Spanish syntax* Raquel González, *elementary Spanish language* Ann Hilberry, *elementary Spanish language coordinator* Lori McMann, *elementary French language coordinator* Kathleen Meyer, *elementary French language coordinator*

Andrew Noverr, elementary Spanish language coordinator

- Helene Neu, Director, elementary French language program; French phonetics
- Michelle Orecchio, *elementary Spanish language coordinator* Dennis Pollard, *elementary Spanish language coordinator*
- Kristina Primorac-Waggoner, elementary Spanish language coordinator

Amaryllis Rodriguez Mojica

Adelaide Smith, *elementary Italian language coordinator* Lorrel Sullivan, *elementary French language coordinator* Yannick Viers, *French language coordinator*

Professors Emeriti Frank P. Casa, Chambers, Fraker, Goic, Gray, Hafter, Lopez-Grigera, Mermier, Muller, Nelson, Stanton, Wolfe

The department offers courses in French, Italian, Portuguese, Spanish, Romance linguistics, and Romance languages and cultures. The primary goals of the undergraduate program are:

- (1). mastery of the language;
- (2). an understanding and interpretation of Romance literatures and cultures; and
- (3). preparation for teaching or other careers requiring specialized linguistic knowledge and skill.

The study of a second language expands the outlook and interests of the educated citizen. By providing insight into the social and intellectual life of other peoples, language study fosters humanistic attitudes and cultivates a spirit of tolerance and understanding.

Students supplement their training in classes by use of the Language Resource Center facilities and by participation in extra-curricular language activities.

The Language Requirement for the A.B. or B.S. Degree. Students who have previous training or experience in a particular language are required to take a placement test before electing a course in that language. Please note that students may not take the placement test in a particular language more than one time. Placement test information, including testing dates, are available on the department website at:

www.lsa.umich.edu/rll/langinstruct/placementtest.html

Students who demonstrate a fourth-term proficiency are certified to have fulfilled the LSA language requirement. Other students are placed in courses according to their demonstrated degree of competence and satisfy the LSA language requirement by successful completion of FRENCH 232, ITALIAN 232, PORTUG 232, SPANISH 232, or the equivalent. Students with previous background in or exposure to a Romance language are encouraged to continue study of that language through the freshman and sophomore years. The language requirement cannot be satisfied by out-of-residence credit which is elected after the student has begun degree enrollment in LSA.

Language Resource Center. The Language Resource Center, in the Modern Languages Building, provides students with a variety of materials and facilities designed to help them improve their command of foreign languages. Among the LRC's services for students

are foreign language word-processing and other productivity software, computer-based applications for practicing grammar, vocabulary, comprehension and other skills, satellite-based television in many languages, foreign-language reference materials, publications, audio tapes, videos, and DVDs. There is also study space available so that students can work collaboratively on course projects or meet with instructors in the evenings. Courses offered by the department require regular use of Language Resource Center facilities. For more information, the Language Resource Center maintains a website, www.umich.edu/~langres

French and Francophone Studies

May be elected as a departmental concentration program

Concentration in French allows students considerable flexibility in developing a program of study leading to competence in the French language and basic familiarity with French and Francophone cultures and literatures.

Prerequisites to Concentration. FRENCH 235.

Concentration Program. A minimum of 30 credits in French and Francophone Studies courses numbered FRENCH 240 and above. Of these, a minimum of 18 credits must be numbered 300 or above, or equivalent. A maximum of two courses in the concentration may be chosen from courses taught in English without language prerequisites. A minimum of 15 of the required 30 credits must be taken either in residence or through a study abroad program affiliated with the University of Michigan. Concentrators must take one of the following courses in RLL at the Ann Arbor campus: FRENCH 340-379, 391-392, 402, 450-499.

To ensure that French concentrators and academic minors gain a broad range of knowledge in the French language, literature, and culture, a maximum of six credits from FRENCH 380, 381, and 414 as well as any of their equivalents accepted as transfer and/or study abroad credit can count toward the concentration or academic minor.

French concentrators are encouraged to elect courses related to their field of study outside of the department and to consider the possibility of studying at the year abroad program in Aix.

Students pursuing graduate studies in French should be aware that most graduate programs expect substantial preparation in literature. For this reason, students interested in earning a graduate degree in French should give particular consideration, in choosing their courses, to FRENCH 270-274, 362-369, 378, and 400-level courses in literature and culture.

Honors Concentration. Qualified students may be admitted to a program of advanced study in the beginning or middle of the junior year (or at the beginning of the senior year following participation in a junior year in France program), leading to the degree of Bachelor of Arts with Honors in French. Admission to senior-level Honors work in French is by application only (forms are available on the department website at: www.lsa.umich.edu/rll/concminors/frhonors.html). The Honors Committee expects applicants to demonstrate superior ability for their level in both oral and written French, and to present evidence of serious interest in research.

The normal concentration requirements in French and Francophone Studies must be completed along with the following:

- (1). Three additional credits in French and Francophone Studies at the level of 300 or above;
- (2). Composition of a thesis, in French, incorporating the results of individual research, the minimum length being 30 pages; and
- (3). A discussion of the thesis and of an agreed upon set of related readings with the student's faculty advisor and one other faculty reader.

A grade point average of at least 3.5 in all courses, as well as in all French and Francophone courses is required for admission and for

graduation with Honors in French. Intending students should contact the Honors advisor toward the end of their junior year, and fill out an application form. Upon admission, they enroll in FRENCH 491 and 492, Senior Honors I and II, usually in both terms of their senior year, writing their thesis under the supervision of a member of the professional staff.

Concentration Requirements in French and Francophone Studies for Students Preparing Teacher Certification. Candidates for a secondary school teaching certificate should study the general information about teaching certificate requirements, which appears under the Teacher Certification Program in this *Bulletin*.

A minimum of 30 credits in French and Francophone Studies courses numbered FRENCH 240 and above. Of these, a minimum of 18 credits must be numbered 300 or above, or equivalent. FRENCH 333, 335, and 438 are required (438 must be elected as EDCURINS 456 and will not count in the 30 credits). Only one course in the concentration may be chosen from courses taught in English without language prerequisites. A minimum of 15 of the required 30 credits must be taken either in residence or through a study abroad program affiliated with the University of Michigan.

Advising. Appointments are scheduled at the department office, 4108 Modern Languages Building, (734) 764-5344.

Year Abroad. The University of Michigan jointly sponsors a Year Abroad in France (University of Aix-en-Provence) with the University of Wisconsin and Indiana University. Information about this program and other study abroad opportunities is available at the Center for Global and Intercultural Study (CGIS), 1712 Chemistry Building, (734) 764-4311. See also Global and Intercultural Study (CGIS) in this *Bulletin* and the department website at: www.lsa.umich.edu/rll/studyabroad

France Summer Study Program. The University of Michigan sponsors a six-week program in Grenoble during the summer half term in France for second and third year courses. Information about this program is available at the Center for Global and Intercultural Study (CGIS), 1712 Chemistry Building, (734) 764-4311. See also the department website at: www.lsa.umich.edu/rll/studyabroad

For information on receiving credit for study abroad in other programs, consult a concentration advisor.

Italian

May be elected as a departmental concentration program

Concentration in Italian allows students considerable flexibility in developing a program of study leading to competence in the Italian language and basic familiarity with Italian literature and culture.

Prerequisites to Concentration. ITALIAN 230, 232, or 233; or the equivalent

Concentration Program. A minimum of 30 credits in Italian courses numbered ITALIAN 235 and above. 18 credits must be conducted in the target language of Italian. Of these, at least one course must be at the 200-level beyond ITALIAN 233, at least one at the 300-level, and at least two at the 400-level. Two courses must be focused on Italian literature and/or culture of periods prior to 1900. Three credits may be accepted from courses in a cognate field, selected in consultation with and approved by the concentration advisor.

Residence requirement: A minimum of 15 of the required 30 credits must be taken either in residence or through a study abroad program affiliated with the University of Michigan.

Honors Concentration. Students holding a cumulative GPA of 3.5 and Italian Concentration GPA of 3.5, who have demonstrated superior ability in the language and serious interest in a project of research, may be admitted to a program of advanced study at the beginning of the senior year, leading to the degree of Bachelor of Arts with Honors in Italian. In addition to the normal concentration requirements, students are required to prepare a 30-page thesis in Italian and to pass an oral examination in Italian on the same subject before the last two weeks of classes. In order to be admitted to the program, students must obtain written approval from the professor with whom they wish to write the thesis and complete an application, available on the department website at www.lsa.umich.edu/rll/concminors/ithonors.html.

Advising. Advising appointments are scheduled at the department office, 4108 Modern Languages Building, (734) 764-5344.

Study Abroad in Italy. The University of Michigan jointly sponsors semesters abroad in Sesto Fiorentino, Italy, outside of Florence, together with the University of Wisconsin and Duke University. Information about this and other programs is available at the Center for Global and Intercultural Study (CGIS), 1712 Chemistry Building, (734) 764-4311. Italian concentrators are encouraged to consider study abroad programs with an emphasis on Italian immersion. For information on receiving credit for study abroad in other programs, consult the undergraduate advisor.

Portuguese

Not a concentration program

There is no concentration in Portuguese, but students can select courses from the beginning level, PORTUG 101-102, through 231-232. Students may pursue their interest in Brazilian Studies in the Latin American and Caribbean Studies concentration and academic minor programs.

Spanish

May be elected as a departmental concentration program

A concentration in Spanish allows students considerable flexibility in developing a program of study leading to competence in the language and a basic knowledge of Hispanic cultures and literatures. All students should consult with a concentration advisor to develop a program of study that best corresponds to their interests and career plans.

Prerequisites to concentration: SPANISH 275 and 276. For eligible students, SPANISH 290, *Spanish for Heritage Language Learners*, may be substituted for SPANISH 275. Students who complete SPAN-ISH 290 will also be exempted from SPANISH 276 if they go on to complete SPANISH 310, *Advanced Grammar and Composition*. Both prerequisites, SPANISH 275 and 276, will be waived for Residential College students who complete one RCLANG 324 readings course in Spanish. Students who complete a second RCLANG 324 course will receive concentration credit for a Spanish elective at the 300 level.

Concentration Program: A minimum of 30 approved credits at the 300 and 400 levels. At least 15 of those credits must be taken at the 400-level. Specific course selections must include two literature courses at the 300 level (6 credits) and two literature courses at the 400 level (6 credits). Other courses, or "electives in Spanish," may be selected in Hispanic culture, linguistics, and film. Approved courses in other fields, if taught in Spanish, may also count as electives in Spanish (such courses are typically taken abroad). One approved, optional cognate course (3 credits), taught in English in the area of Hispanic studies, is allowed. Students should consult a concentration advisor and develop a balanced program of study that includes the cultural production of various countries and historical periods.

Residence requirement: A minimum of 15 of the required 30 credits must be taken either in residence or through a study abroad program affiliated with the University of Michigan.

Honors Concentration. Qualified students holding a cumulative GPA of 3.5 and a Spanish concentration GPA of 3.7 may apply to the Honors program in Spanish at the beginning of the junior year. To

apply students must fill out an application available on the department website at $% \left({{{\boldsymbol{x}}_{i}}} \right)$

www.lsa.umich.edu/rll/concminors/sphonors.html

and submit a copy of their transcript, a one-page statement of purpose, and a sample essay in Spanish. After reviewing the materials, the Honors advisor will interview the applicant to discuss his/her interests and objectives. To graduate with an Honors concentration, a student must complete the normal concentration requirements in Spanish along with the following requirements:

- 1. One additional course in SPANISH (3 credits) at the 400 level.
- 2. Composition of a thesis in Spanish (a minimum of 40 pages). The thesis may consist of a critical study relating to Hispanic literature/culture, a creative writing project, or a multi-media project (in which case the page requirement may not apply). The research, planning, and execution will take place during two academic terms. After choosing a faculty member to direct the thesis, the student will enroll in SPANISH 490 and begin researching and drafting the thesis. By the end of the term in which the student elects SPANISH 490, the student will submit for a grade a complete bibliography and a prospectus. In the following academic term the student will enroll in SPANISH 491 and complete the thesis. SPANISH 490 and 491 will count within the seven course sequence of 400-level courses for the Honors degree.
- 3. A presentation and discussion of the thesis with the director and one or two other faculty members at the end of the term in which the student elects SPANISH 491. The Honors student has the option of inviting other students to the event.

Teaching Certificate. Candidates for a secondary school teaching certificate should study the general information about requirements, which appears under the Teacher Certification Program in this *Bulletin.*

A teaching major in Spanish requires 30 credits beyond SPANISH 276. From 9 to 12 credits must be selected at the 300 level, including at least 3 credits in literature and a culture/civilization course (SPANISH 340 or 341). The remaining 18 to 21 credits must be selected at the 400 level, including two linguistics courses (chosen among SPANISH 405, 410, 411, and 414). SPANISH 413 must be elected as EDCURINS 455 and will not count as part of the 30 required Spanish credits.

Advising. Advising appointments are scheduled at the department office, 4108 Modern Languages Building, (734) 764-5344.

Study Abroad Program. The University of Michigan sponsors semester/year abroad programs at host universities in Latin America and Spain: Santiago, Chile; Buenos Aires, Argentina; Granada, Spain; Madrid, Spain; and Seville, Spain. In addition, the university sponsors summer abroad programs in Salamanca, Spain, and in Guanajuato, Mexico. Information about these programs is available at the Center for Global and Intercultural Study (CGIS), 1712 Chemistry Building, (734) 764-4311. See also the chapter "Global and Intercultural Study (CGIS)" in this *Bulletin.* For information on study abroad programs sponsored by other universities, as well as guidelines for choosing programs, refer to the study-abroad section of the Romance Language web page: www.lsa.umich.edu/rll

Romance Languages and Literatures

May be elected as a departmental concentration program

Concentration in Romance Languages and Literatures allows students to include more than one Romance language in a program of study that also encourages them to discover and to make connections between the two Romance languages and cultures that they choose to pursue. All students should consult with a concentration advisor to develop a program of study that best corresponds to their interests and career plans.

Prerequisites to Concentration. Same as those for concentrations in the individual languages:

- FRENCH 235 for students of French
- ITALIAN 232 or 233 for students of Italian
- SPANISH 275 and 276 for students of Spanish

In addition, upper-level courses have the following prerequisites:

- Two French courses FRENCH 250-99 for most French courses 300 and above
- ITALIAN 235 for other concentration-level Italian courses
- Three 300-level Spanish courses for 400-level Spanish courses

Concentration Program. A minimum of 42 credits consisting of the following:

- I. A minimum of 33 credits of coursework in two languages (from French, Italian, or Spanish) that meet the following qualifications:
 - only courses that would count towards the individual language concentrations may be used to satisfy this requirement
 - courses must be listed in *Bulletin* as taught in the target language
 - a minimum of 12 credits in each language
 - a minimum of 21 credits from upper-level courses (at least six credits in each language)

N.b. "upper-level" means:

300 or above in French and Italian 400 or above in Spanish

II. A minimum of 9 additional credits, including:

1. one course in Romance philology or linguistics

2. one elective:

- a. a ROMLANG/ROMLING number; or
- b. another concentration-level course in French, Spanish, or Italian (in English or the target language)
- 3. ROMLANG 498, the Senior Seminar in RLL

Part I of the requirements gives students the choice between treating the languages more or less equally and having "primary" and "secondary" languages.

Part II of the requirements fosters "bridges" between the two languages that are of both a practical/linguistic nature and an intellectual one.

Requirement II.1 grounds the concentration in Romance Languages and Literatures in an understanding of the linguistic "kinship" between Romance languages. The following courses have been approved by the RLL curriculum committee as options for meeting the linguistics requirement (II.1):

- ROMLING 300, Introduction to the Romance Languages
- ROMLING 400, Topics in Romance Languages and Literatures, sections titled "Romance-Based Pidgins and Creoles" or "Romance-Based Bilingualism"
- LING 446/LACS 446.

Requirement II.2 encourages students to explore the intellectual connections between the fields of French and Francophone studies, Hispanic studies, and Italian studies as well as fosters both a comparative and interdisciplinary understanding of Romance studies. Students should have their elective (Requirement II.2) approved by the RLL advisor.

All RLL concentrators will be enrolled in the senior seminar **(Requirement II.3)** during the fall academic term of their senior year. This seminar relies on students' prior coursework as a basis for reinforcing connections between courses in French, Italian, and Spanish as well as offers an introduction to the methods of Romance Studies and an exploration of potential topics for which crossing boundaries between languages might provide productive avenues of inquiry. A major component of the senior seminar involves individual research projects tailored to each student's linguistic competences.

Residence requirement: A minimum of 21 of the required 42 credits must be taken either in residence or through a study abroad program affiliated with the University of Michigan.

Honors Concentration. Qualified students may be admitted to a program of advanced study, leading to the degree of Bachelor of Arts with Honors in Romance Languages and Literatures. The Curriculum Committee in Romance Languages and Literatures expects applicants to present evidence of superior language skills and a serious interest in comparative research involving both of their languages and the cultures articulated through them. Interested students should contact the Honors advisor in Romance Languages and Literatures toward the end of their junior year. Admission to senior-level Honors work in Romance Languages and Literatures is by application only. In addition to the application form (available on the department website at:

www.lsa.umich.edu/rll/concminors/rllhonors.html.

Students should submit a copy of their transcript, a one-page statement of purpose, and a sample essay.

The normal concentration requirements in Romance Languages and Literatures must be completed along with the following:

- 1. Composition of a thesis incorporating the results of individual research, the minimum length being 40 pages; and
- A discussion of the thesis and of an agreed upon set of related readings with the student's faculty advisor and one other faculty reader. Ideally, the two readers will represent the student's two languages.

A grade point average of at least 3.5 in all courses, as well as in all courses taken for the concentration is required for admission and for graduation with Honors in Romance Languages and Literatures. For students opting to write an Honors thesis in Romance Languages and Literatures, the senior seminar constitutes their fall term of work on the thesis. In the winter term of their senior year, they enroll in ROMLANG 499, the Senior Honors Course, in which they will complete their thesis under the supervision of a faculty member whose research interests are more closely aligned with the student's.

Teacher Certification. By taking a number of courses in each language beyond the requirements for the concentration in Romance Languages and Literatures, students may qualify for teaching certification in both a major and a minor language. The exact requirements for certification are available at the following School of Education website:

www.soe.umich.edu/secondary/courses/requirements/majorminor

Candidates for a secondary school teaching certificate should study the general information about teaching certificate requirements, which appears under the Teacher Certification Program in this *Bulletin*, and contact the School of Education.

Advising. Appointments are scheduled at the department office, 4108 Modern Languages Building. (734) 764-5344.

Study Abroad. Concentrators in Romance Languages and Literatures are encouraged to consider the possibility of studying abroad for at least one of their languages, the University of Michigan jointly sponsors study abroad programs in French, Italian, and Spanish. Information about these programs is available at the Center for Global and Intercultural Study (CGIS), 1712 Chemistry Building, (734) 764-4311. See also Global and Intercultural Study (CGIS) in this *Bulletin* and the department website at:

www.lsa.umich.edu/rll/studyabroad

Romance Languages & Literatures Academic Minors

Academic minors in Romance Languages and Literatures are not open to students with any concentration or any other academic minor in Romance Languages and Literatures.

Students wishing to pursue an academic minor must develop a specific plan for its completion in consultation with a designated advisor. Appointments may be scheduled at 4108 Modern Languages Building, (734) 764-5344.

French and Francophone Studies

The French and Francophone Studies academic minor offers students concentrating in other fields the opportunity to acquire additional competence in French and Francophone studies. The linguistic and cultural knowledge gained in the process may help expand not only the students' career opportunities, but also their critical awareness of the intellectual problems and possibilities involved in the study of cultures other than their own.

Prerequisites to the Academic Minor: FRENCH 235.

Academic Minor Program: 18 credits of courses in FRENCH numbered FRENCH 240 and above, with a minimum of 9 credits at the 300 level.

Constraints: No more than one French course taught in English without language prerequisites may be counted toward the academic minor. 300-level courses must include at least one course in Cultural and Literary Studies. At least 9 of the 18 credits for the academic minor must be taken in residence or in a study abroad program affiliated with the University of Michigan. Academic minors must take one of the following courses in RLL at the Ann Arbor Campus: FRENCH 340-379, 391-392, 402, 450-499.

To ensure that French concentrators and academic minors gain a broad range of knowledge in the French language, literature, and culture, a maximum of six credits from FRENCH 380, 381, and 414 as well as any of their equivalents accepted as transfer and/or study abroad credit can count toward the concentration or academic minor.

Italian

The objective of the academic minor in Italian are to develop some facility in the use of Italian, to recognize major monuments of Italian literature, to gain insight in to the history and present of Italian culture. This academic minor offers students an opportunity to complement the knowledge gained in their principal field while focusing on linguistic competence and a grounding in one of the world's most historically influential, currently vibrant literatures and cultures. **Prerequisites to the Academic Minor:** ITALIAN 230, 232, or 233; or the equivalent

Academic Minor Program: 18 credits of courses in ITALIAN numbered ITALIAN 235 or higher, of which four courses must be conducted in the Italian language.

The 18 credits must include at least one course each at the 200-level beyond 233, the 300-level, and the 400-level.

Constraints: At least 9 of the 18 credits for the Academic Minor must be taken in residence or in a study abroad program affiliated with the University of Michigan.

Spanish Language, Literature, and Culture

The Spanish academic minor offers students concentrating in other fields the opportunity to acquire additional competence in Spanish studies. The linguistic and cultural knowledge gained in the process may help expand not only the students' career opportunities, but also their critical awareness of the intellectual problems and possibilities involved in the study of cultures other than their own.

Prerequisites to the Academic Minor: SPANISH 275 and 276.

Academic Minor Program for students entering LSA or the University in Fall 2006 and thereafter: 21 credits of courses in SPANISH with 12 credits (4 courses) introducing the field of Hispanic Studies at the 300 level, and 9 credits (3 courses) pursuing more indepth investigation of literary, cultural, or linguistic subjects at the 400 level. The academic minor must include two 300-level literature courses – one of which must be selected from SPANISH 320, 371, 372, 381, or 382 – and one 400-level literature course. All courses included in the academic minor must be taught in Spanish. At least 12 of the 21 credits for the academic minor must be taken in residence on the Ann Arbor Campus or through a study abroad program affiliated with the University of Michigan.

Academic Minor Program for students entering LSA or the University before Fall 2006: 18 credits of courses in SPANISH with 9 credits (3 courses) introducing the literature and culture of the Hispanic world at the 300 level, and 9 credits (3 courses) pursuing more in-depth investigation of literary, cultural, or linguistic subjects at the 400 level. All courses included in the academic minor must be taught in Spanish. However, one course taught in Spanish in another field may be included (usually taken abroad). In addition, one cross-listed course taught bilingually (with a mix of Spanish and English components) may be included. At least 9 of the 18 credits for the academic minor must be taken in residence on the Ann Arbor Campus or through a study abroad program affiliated with the University of Michigan

COURSES IN ROMANCE LANGUAGES AND LITERATURES

FRENCH (FRENCH)

Students who intend to continue a language begun in high school or another college or university must take the Placement Test to determine the language course in which they should enroll. Please note that students may not take the French placement test more than one time. Students must check with the Course Coordinator for any exceptions to the Placement Test level. For more information, visit the department website:

www.lsa.umich.edu/rll/langinstruct/placementtest.html

FRENCH 100. Intensive Elementary French

No prior instruction in French OR placement of FRENCH 101. (Prerequisites enforced at registration.) Students with any prior study of French must take the Placement Test. (8 in the half-term). May not be repeated for credit. No credit granted to those who have completed FRENCH 101, 102, 103, 111 or 112 or RCLANG 190.

FRENCH 101. Elementary French

No prior instruction in French OR placement of FRENCH 101. (Prerequisites enforced at registration.) Students with any prior study of French must take the Placement Test. (4). May not be repeated for credit. No credit granted to those who have completed FRENCH 100, 111 or 112, or RCLANG 190.

FRENCH 102. Elementary French, Continued

FRENCH 101 with a grade of C- or higher. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed FRENCH 100, 103, 111 or 112, or RCLANG 190.

FRENCH 103. Review of Elementary French

Students with any prior study of French must take the Placement Test. Only the placement score and not language coursework completed at a previous school will determine placement; RCLANG 150. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed FRENCH 100, 102, 111 or 112, or RCLANG 190.

FRENCH 111. First Special Reading Course

(4). May not be repeated for credit. No credit granted to those who have completed FRENCH 100, 101, 102, 103 or RCLANG 190. Completion of FRENCH 111-112 does not satisfy the LSA language requirement.

FRENCH 112. Second Special Reading Course

FRENCH 111. (4). May not be repeated for credit. No credit granted to those who have completed FRENCH 100, 101, 102, 103 or RCLANG 190. Completion of FRENCH 111-112 does not satisfy the LSA language requirement.

FRENCH 230. Intensive Second-Year French

FRENCH 100, 102, or 103 or RCLANG 190 with a grade of C- or higher; or assignment of FRENCH 231 on Placement test. (Prerequisites enforced at registration.) (8 in the half-term). (Lang Req). May not be repeated for credit. No credit granted to those who have completed FRENCH 231 or 232 or RCLANG 290 or 310.

FRENCH 231. Second-Year French

FRENCH 100, 102, or 103 or RCLANG 190 with a grade of C- or higher; or assignment of FRENCH 231 on Placement test. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed FRENCH 230 or RCLANG 290 or 310.

FRENCH 232. Second-Year French, Continued

FRENCH 231 with a grade of C- or higher; RCLANG 250; assignment by placement test. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed FRENCH 112 or 230 or RCLANG 290 or 310.

FRENCH 235. Advanced Practice in French

FRENCH 230 or 232 with a grade of C- or higher; or RCLANG 290 or 310, or assignment by placement test. Only the placement score and not language coursework completed at a previous school will determine placement. (Prerequisites enforced at registration.) Students who receive transfer credit from for FRENCH 232 and wish to continue with their language study are strongly encouraged to take the placement exam to be certain that they are prepared for FRENCH 235. (3). May not be repeated for credit.

FRENCH 240. French and Francophone Topics in Translation

A knowledge of French is not required. Enrollment restricted to first- and second-year students. (3). (HU). May not be repeated for credit. Taught in English.

FRENCH 270. French and Francophone Literature and Culture

FRENCH 235 with a grade of C- or higher. (Prerequisites enforced at registration.) (3). (HU). May be elected twice for credit. May be elected more than once in the same term.

FRENCH 272. French and Francophone Film, Media, and Culture

FRENCH 235 with a grade of C- or higher. (Prerequisites enforced at registration.) (3). (HU). May be elected twice for credit. May be elected more than once in the same term.

FRENCH 274. French and Francophone Societies and Culture

FRENCH 235 with a grade of C- or higher. (Prerequisites enforced at registration.) (3). (HU). May be elected twice for credit. May be elected more than once in the same term.

FRENCH 276. Spoken and Written Performance in French

FRENCH 235 with a grade of C- or higher. (Prerequisites enforced at registration.) (3). (HU). May be repeated for a maximum of 6 credits.

FRENCH 333. French Phonetics

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

FRENCH 335. Composition and Stylistics

Two courses in FRENCH numbered 250 and above. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

FRENCH 337. Seminar in Translation

Two courses in FRENCH numbered 250 and above. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

FRENCH 340. French Literature in Translation

A knowledge of French is not required. (3; 2 in the half-term). (HU). May not be repeated for credit. Taught in English.

FRENCH 342. French and Francophone Film Taught in English

A knowledge of French is not required. (3). (HU). May not be repeated for credit. Taught in English.

FRENCH 343 / HISTORY 323. French Enlightenment

(3). (HU). May not be repeated for credit.

FRENCH 350. Special Topics in French and Francophone Studies

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). (HU). May be elected twice for credit. May be elected more than once in the same term.

FRENCH 361. French American Studies

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). May be elected twice for credit. May be elected more than once in the same term. Taught in French.

FRENCH 362. Quebec and French Canadian Studies

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). May be elected twice for credit.

FRENCH 363. Caribbean Studies

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). May be elected twice for credit.

FRENCH 366 / MEMS 386. Medieval Literature, History, and Culture

Two courses in FRENCH numbered FRENCH 250-299; or FRENCH 235 and two RCLANG 320; or FRENCH 235, one course in FRENCH numbered FRENCH 250-299 and one RCLANG 320. (Prerequisites enforced at registration.) (3). (HU). May be repeated for a maximum of 6 credits.

FRENCH 367 / MEMS 377. Literature, History, and Culture of Early Modern France

Two courses in FRENCH numbered FRENCH 250-299; or FRENCH 235 and two RCLANG 320; or FRENCH 235, one course in FRENCH numbered FRENCH 250-299 and one RCLANG 320. (Prerequisites enforced at registration.) (3). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

FRENCH 368. Enlightenment, Revolution, and Romanticism

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). (HU). May be elected twice for credit.

FRENCH 369. Literature, History, and Culture of Modernity

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). (HU). May be elected twice for credit.

FRENCH 374. Problems in Society and Social Theory

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). May be elected twice for credit.

FRENCH 378. Studies in Genre

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits.

FRENCH 379. Studies in Gender and Sexuality

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320 (RCCORE 320); or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320 (RCCORE 320). (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits.

FRENCH 380. Intermediate Business French

[FRENCH 250 through 299; (1 course)] or [FRENCH 235 AND RCCORE 320 (RCLANG 320); (2 courses)] or study abroad equivalent. (Prerequisites enforced at registration.) (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in FRENCH 414. A maximum of 6 credits from FRENCH 380, 381, and 414 as well as any of their equivalents accepted as transfer and/or study abroad credits con count toward the French concentration or academic minor.

FRENCH 381. Internship in France or Other Francophone Countries

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320; or FRENCH 235, one course in FRENCH numbered 250-299 and one RCLANG 320. (Prerequisites enforced at registration.) FRENCH 380. (3). (EXPERIENTIAL). May not be repeated for credit. A maximum of 6 credits from FRENCH 380, 381, and 414 as well as any of their equivalents accepted as transfer and/or study abroad credits can count toward the French concentration or academic minor. Offered mandatory credit/no credit.

FRENCH 399. Independent Study

Two courses in FRENCH numbered 250-299; or FRENCH 235 and two RCLANG 320; or FRENCH 235, one course in FRENCH numbered 250-299, and one RCLANG 320. (Prerequisites enforced at registration.) (1 - 3). (INDEPENDENT). May not be repeated for credit.

FRENCH 414. Advanced Business French

FRENCH 380. (Prerequisites enforced at registration.) (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in BA 415. A maximum of 6 credits from FRENCH 380, 381, and 414 as well as any of their equivalents accepted as transfer and/or study abroad credits can count toward the French concentration or academic minor.

FRENCH 450. Special Studies

Three courses in FRENCH numbered 300 or above. (Prerequisites enforced at registration.) (3). May be repeated for credit.

FRENCH 453 / HISTART 464. Interdisciplinary Topics in French Art, Literature, and Culture

Upperclass standing. (3). May be repeated for a maximum of 6 credits. Taught in English. Rackham credit requires additional work.

FRENCH 462 / MEMS 445. Literature of the Sixteenth Century

Three courses in FRENCH numbered 300 or above. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

FRENCH 466. Literature of the Twentieth Century

Three courses in FRENCH numbered 300 or above. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

FRENCH 467. Twentieth-Century Novel

Three courses in FRENCH numbered 300 or above. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

FRENCH 491. Senior Honors Course

Seniors only. (3; 2 in the half-term). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of FRENCH 492, the final grade is posted for both term's elections.

FRENCH 492. Senior Honors Course

Senior standing. (Prerequisites enforced at registration.) FRENCH 491 or ROMLANG 498. (3; 2 in the half-term). May not be repeated for credit.

ITALIAN (ITALIAN)

Students who intend to continue a language begun in high school or another college or university must take the Placement Test to determine the language course in which they should enroll. Please note that students may not take the Italian placement test more than one time. Beginners desiring to acquire proficiency at a faster pace are encouraged to enroll in ITALIAN 103, followed by ITALIAN 233. Students who choose this option can satisfy the language requirement only if they then receive credit for a more advanced course taught in Italian (ITALIAN 235 or higher). Students must check with the Course Coordinator for any exceptions to the Placement Test level. For more information, visit the department website: www.lsa.umich.edu/rll/langinstruct/placementtest.html

ITALIAN 100. Intensive Elementary Italian

No prior instruction in Italian language OR placement of ITALIAN 101. (Prerequisites enforced at registration.) Students with any prior study of Italian must take the Placement Test. (8). May not be repeated for credit. Credit is not grated for both ITAL-IAN 100 and 101, 102, 103, 111, or 112.

ITALIAN 101. Elementary Italian

No prior instruction in Italian language OR placement of ITALIAN 101. (Prerequisites enforced at registration.) Students with any prior study of Italian must take the Placement Test. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ITALIAN 100, 103, 111, or 112.

ITALIAN 102. Elementary Italian

ITALIAN 101 with a grade of C- or higher. College or university transfer students with any prior study of Italian must take the Placement Test. Only the placement score and not language coursework completed at a previous school will determine placement. (Prerequisites enforced at registration.) ITALIAN 102 is NOT open to students who have begun instruction at the high school level. College or university transfer students who have received credit for one term must take the placement test to determine the appropriate course for their needs. (4). May not be repeated for credit. No credit is granted to those who have completed or are enrolled in ITALIAN 100 or 103.

ITALIAN 103. Accelerated Italian

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ITALIAN 100, 101, or 102.

ITALIAN 205. Italian Conversation for Non-concentrators

ITALIAN 100 or 102 with a grade of C- or higher; or assignment by placement test of ITALIAN 231 or higher. (1). May not be repeated for credit. Offered mandatory credit/no credit.

ITALIAN 206. Conversation for Non-concentrators

ITALIAN 100 or 102 with a grade of C- or higher; or assignment by placement test of ITALIAN 231 or higher; ITALIAN 206 may be elected prior to ITALIAN 205. (1). May not be repeated for credit. ITALIAN 206 may be elected prior to ITALIAN 205. Offered mandatory credit/no credit.

ITALIAN 230. Second-Year Italian

ITALIAN 100 or 102 or 103 with a grade of C- or higher; or assignment of ITALIAN 231 on placement test. College or university transfer students with any prior study of Italian must take the Placement Test. Only the placement score and not language coursework completed at a previous school will determine placement. (Prerequisites enforced at registration.) (8). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ITALIAN 112, 231, 232 or 233.

ITALIAN 231. Second-Year Italian

ITALIAN 100 or 102 or 103 with a grade of C- or higher; or assignment by placement test. College or university transfer students with any prior study of Italian must take the Placement Test. Only the placement score and not language coursework completed at a previous school will determine placement. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ITALIAN 112, 230 or 233.

ITALIAN 232. Second-Year Italian, Continued

ITALIAN 231 with a grade of C- or higher; or assignment by placement test. College or university transfer students with any prior study of Italian must take the Placement Test. Only the placement score and not language coursework completed at a previous school will determine placement. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ITALIAN 112, 230 or 233.

ITALIAN 233. Accelerated Second Year Italian

ITALIAN 100, 102, or 103 with a grade of C- or higher; or assignment of ITALIAN 231 on placement test. Only the placement score and not language coursework completed at a previous school will determine placement. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ITALIAN 112, 230 or 232. This course does not satisfy the language requirement.

ITALIAN 235. Advanced Practice in Italian

ITALIAN 230, 232, or 233. (3). May not be repeated for credit. Course is conducted in Italian.

ITALIAN 236. Reading and Composition

ITALIAN 230, 232, or 233. (3). May not be repeated for credit.

ITALIAN 250. Undergraduate Seminar in Italian Studies

Enrollment restricted to first- and second- year students. No knowledge of Italian language required. (3). (HU). May not be repeated for credit.

ITALIAN 270. Italian Literature and Culture

ITALIAN 230, 232, or 233. (3). (HU). May be elected three times for credit. May be elected more than once in the same term.

ITALIAN 275. Multimedia Language and Culture I

ITALIAN 230, 232, or 233. (3). May not be repeated for credit. Taught in Italian. ITALIAN 276. Multimedia Language and Culture, II

ITALIAN 230, 232, or 233. (3). May not be repeated for credit. Taught in Italian. ITALIAN 300. Advanced Composition and Conversation

ITALIAN 235. (3). May not be repeated for credit. The class is taught in Italian.

ITALIAN 305. Introduction to the Study of Literature in Italian ITALIAN 230, 232, or 233. (3). May not be repeated for credit.

ITALIAN 310. Italian Cities

A knowledge of Italian is not required. (3). (HU). May not be repeated for credit. Taught in English.

ITALIAN 311. Making Difference in Italy

(3). (HU). (R&E). May not be repeated for credit. Taught in English. A knowledge of Italian is not required.

ITALIAN 313. Italian Families

A knowledge of Italian is not required. (3). (HU). May not be repeated for credit. Taught in English.

ITALIAN 314 / HISTORY 326. Modern Italy: 1815 to Present (3). May not be repeated for credit.

ITALIAN 315. Italian Cinema and Society Since 1945 *A knowledge of Italian is not required. (3). (HU). May not be repeated for credit. Taught in English.*

ITALIAN 317. The Renaissance

(3). May not be repeated for credit. ITALIAN 320. Modern Italian Literature

ITALIAN 230, 232, or 233. (3). May be elected twice for credit.

ITALIAN 333 / MEMS 333. Dante's Divine Comedy *A knowledge of Italian is not required. (3). (HU). May not be repeated for credit. Taught in English.*

ITALIAN 340. Contemporary Italian Culture ITALIAN 230, 232, or 233. (3). (HU). May not be repeated for credit.

ITALIAN 359. Italian Culture and History

A knowledge of Italian is not required. (3). (HU). May be repeated for a maximum of 9 credits. Taught in English.

ITALIAN 361. Advanced Comprehension

ITALIAN 230, 232, or 233. (3). May not be repeated for credit.

ITALIAN 399. Directed Reading

Consent of instructor required. Permission of department. (1 - 3). (INDEPENDENT). May be repeated for credit.

ITALIAN 422. Politics and Literature

ITALIAN 230, 232, or 233. (3). May not be repeated for credit.

ITALIAN 425. Italian Romanticism ITALIAN 230, 232, or 233. (3). May not be repeated for credit.

ITALIAN 430. Twentieth Century Italy through its Literature

TALIAN 430. Twentern century tary timograms file a ture TALIAN 230, 232, or 233. (3). May be elected twice for credit. Students may not repeat ITALIAN 430 with the same topic ID for credit.

ITALIAN 461. Italian Through Opera

ITALIAN 230, 232, or 233. (3). May be elected twice for credit. Rackham credit requires additional work.

ITALIAN 468. New Italian Media

ITALIAN 230, 232, or 233. (3). May be repeated for a maximum of 6 credits. Taught in Italian. Rackham credit requires additional work.

ITALIAN 470. Advanced Topics in Italian Literature

ITALIAN 230, 232, or 233. Taught in Italian. (3). May be elected three times for credit. May be elected more than once in the same term. Rackham credit requires additional work.

ITALIAN 471. Italian Theater

ITALIAN 230, 232, or 233. (3). May not be repeated for credit.

ITALIAN 475. Dante, Petrarca, Boccaccio

ITALIAN 230, 232, or 233. (3; 2 - 3 in the half-term). May be elected twice for credit. May be elected more than once in the same term. F, W: Ann Arbor; Sp: Florence.

ITALIAN 499. Advanced Independent Study

ITALIAN 230, 232, or 233. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 9 credits.

PORTUGUESE (PORTUG)

Students who intend to continue a language begun in high school or another college or university must take the Placement Test to determine the language course in which they should enroll. Please note that students may not take the Portuguese placement test more than one time. To schedule a Portuguese placement test with the instructor, please contact the RLL main office at (734) 764-5344 for more information.

PORTUG 101. Elementary Portuguese

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PORTUG 100 or 415. F.

PORTUG 102. Elementary Portuguese

PORTUG 101 (C- or better). (Prerequisites enforced at registration.) Students who have not taken PORTUG 101 at UM must schedule a placement exam with the instructor. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PORTUG 100 or 415.

PORTUG 150. First Year Seminar in Brazilian Studies

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit.

PORTUG 231. Second-Year Portuguese

PORTUG 102 (C- or better). (Prerequisites enforced at registration.) Students who have not taken PORTUG 102 at UM must schedule a placement exam with the instructor. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PORTUG 230.

PORTUG 232. Second-Year Portuguese

PORTUG 231 (C- or better) or PORTUG 415 (C- or better). (Prerequisites enforced at registration.) Students who have not taken PORTUG 231 at UM must schedule a placement exam with the instructor. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PORTUG 230.

PORTUG 235. Advanced Practice in Portuguese

PORTUG 232 (C- or better). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

PORTUG 301. Readings in Luso-Brazilian Culture

Permission of instructor. (3). May not be repeated for credit.

PORTUG 350. Independent Study

Consent of instructor required. PORTUG 232. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

PORTUG 415. Portuguese for Spanish Speakers

SPANISH 275 and 276 (C- or better) or Graduate Standing. (Prerequisites enforced at registration.) Students who have not taken SPANISH 275 and 276 at U-M must schedule a placement exam with the instructor. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in PORTUG 100, 101, or 102.

PORTUG 450. Independent Study

Consent of instructor required. Permission of department. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

PORTUG 489. Directed Readings in Portuguese

Consent of instructor required. Permission of department. (2 - 3). (INDEPENDENT). May be repeated for credit.

ROMANCE LANGUAGES AND LITERATURES (ROMLANG)

ROMLANG 400. Topics in Romance Languages and Literature

(1 - 4). May be elected twice for credit. Course may be taught in a Romance language. Rackham credit requires additional work.

ROMLANG 495. Independent Study

Consent of department required. Application required. (1 - 3). (INDEPENDENT). May not be repeated for credit.

ROMLANG 498. Senior Seminar in Romance Languages and Literatures

RLL concentrators and senior standing. (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

ROMLANG 499. Senior Honors Course

Consent of department required. RLL concentrators senior standing, and completion of ROMLANG 498. (3; 2 in the half-term). (INDEPENDENT). May not be repeated for credit.

ROMANCE LINGUISTICS (ROMLING)

ROMLING 300. Introduction to the Romance Languages

French, Spanish, or Italian: five terms at college level or equivalent. (3; 2 in the halfterm). May not be repeated for credit.

ROMLING 330 / SPANISH 330. Introduction to Spanish Linguistics

SPANISH 275 & 276; or SPANISH 290 & 310; or SPANISH 276 & 290; or RCLANG (RCCORE) 324. (Prerequisites enforced at registration.) (4). May not be repeated for credit. Taught in Spanish. A maximum of 3 credits of ROMLING 330 may be counted toward the Spanish concentration or academic minor program.

ROMLING 333 / SPANISH 333. Corrective Spanish Phonetics

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ROMLING 410 / SPANISH 410. Spanish Phonetics and Phonology

SPANISH 330 (or equivalent) and two other 300 level SPANISH courses (excluding 308); or two RCLANG 324 courses and SPANISH 330 (or equivalent) and one other 300 level Spanish course (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

ROMLING 414 / SPANISH 414. Background of Modern Spanish

Three courses chosen from: SPANISH 300 and higher (excluding 308) or study abroad equivalent; up to two RCLANG 324 elections may count for this prerequisite. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Taught in Spanish.

ROMLING 450. Independent Study

Consent of instructor required. Permission of department. (1 - 3). (INDEPENDENT). May be repeated for credit.

SPANISH (SPANISH)

Students who intend to continue a language begun in high school or another college or university must take the Placement Test to determine the language course in which they should enroll. Please note that students may not take the Spanish placement test more than one time. Students must check with the Course Coordinator for any exceptions to the Placement Test level. For more information, visit the department website.

www.lsa.umich.edu/rll/langinstruct/placementtest.html

SPANISH 100. Intensive Elementary Spanish

No prior instruction in Spanish language OR placement of SPANISH 101. (Prerequisites enforced at registration.) Students with any prior study of Spanish must take the Placement Test. (8 in the half-term). May not be repeated for credit. No credit granted to those who have completed SPANISH 101, 102, 103, 111 or 112, or RCLANG 194.

SPANISH 101. Elementary Spanish

No prior Spanish language or placement of SPANISH 101. (Prerequisites enforced at registration.) Students with any prior study of Spanish must take the Placement Test. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SPANISH 100, 111 or 112, or RCLANG 194.

SPANISH 102. Elementary Spanish, Continued

SPANISH 101 with a grade of C- or higher. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SPANISH 100, 103, 111 or 112, or RCLANG 194.

SPANISH 103. Review of Elementary Spanish

RCLANG 154. Assignment of SPANISH 103 by placement test. College or university transfer students with any prior study of Spanish must take the Placement Test. (Prerequisites enforced at registration.) Only placement score and not language coursework completed at a previous school will determine placement. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SPANISH 100, 102, 111 or 112, or RCLANG 194.

SPANISH 230. Intensive Second-Year Spanish

SPANISH 100, 102 or 103 with a grade of C- or higher; or RCLANG 194; or assignment of SPANISH 231 by placement test. College or university transfer students with any prior study of Spanish must take the Placement Test. Only the placement score and not language coursework completed at a previous school will determine placement. (Prerequisites enforced at registration.) (8 in the half-term). (Lang Req). May not be repeated for credit. No credit granted to those who have completed SPANISH 112, 231 or 232, or RCLANG 294 or 314.

SPANISH 231. Second-Year Spanish

SPANISH 100, 102 or 103 with a grade of C- or higher; or RCLANG 194; or assignment of SPANISH 231 by placement test. College or university transfer students with any prior study of Spanish must take the Placement Test. Only the placement score and not language coursework completed at a previous school will determine placement. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed SPANISH 112, 230, or RCLANG 294 or 314.

SPANISH 232. Second-Year Spanish, Continued

[RCLANG 254] or [SPANISH 231 (C- or higher); or assignment by Placement Test. College or university transfer students with any prior study of Spanish must take the Placement Test.]. (Prerequisites enforced at registration.) Only placement score and not language coursework completed at a previous school will determine placement. (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed SPANISH 112 or 230; or RCLANG 294 or 314.

SPANISH 275. Grammar and Composition

SPANISH 230 or 232 with a grade of C- or higher; RCLANG 294 or 314; or assignment of SPANISH 275 by placement test. (Prerequisites enforced at registration.) Students who receive transfer credit for SPANISH 232 and wish to continue with their language study are strongly encouraged to take the Spanish placement exam to be certain that they are prepared for SPANISH 275. (3). May not be repeated for credit.

SPANISH 276. Reading and Composition

SPANISH 230 or 232 with a grade of C- or higher; RCLANG 294 or 314; or assignment of SPANISH 275 by placement test. (Prerequisites enforced at registration.) Students who receive transfer credit for SPANISH 232 and wish to continue with their language study are strongly encouraged to take the Spanish placement exam to be certain they are prepared for SPANISH 276. (3). May not be repeated for credit.

SPANISH 305. Spanish for the Professions

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 308. Workshop in Academic Writing

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (1). May not be repeated for credit.

SPANISH 308 must be taken in conjunction with a SPANISH 300- or 400-level course with enough writing to satisfy the ULWR. Please check with the instructor to see if the course you select to take with SPANISH 308 meets the ULWR requirement (a minimum of 25 written pages).

SPANISH 310. Advanced Composition and Style

SPANISH 275 and 276; or SPANISH 290; or RCLANG 324; or equivalent. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 320. Introduction to the Study of Literature

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

SPANISH 327 / AMCULT 327 / ENGLISH 387. Latino/Latina Literature of the U.S. (3). (HU). May not be repeated for credit. Taught in English.

SPANISH 328. Studies in Hispanic Popular Culture

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 330 / ROMLING 330. Introduction to Spanish Linguistics

SPANISH 275 & 276; or SPANISH 290 & 310; or SPANISH 276 & 290; or RCLANG (RCCORE) 324. (Prerequisites enforced at registration.) (4). May not be repeated for credit. Taught in Spanish. A maximum of 3 credits of SPANISH 330 may be counted toward the Spanish concentration or academic minor program.

SPANISH 332. Short Narrative in Latin America/Spain

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

SPANISH 333 / ROMLING 333. Corrective Spanish Phonetics

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 335. Contemporary Spanish and Spanish-American Literature

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SPANISH 340. Introduction to Iberian Cultures

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 341. Introduction to Latin American Cultures

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 350. Independent Studies

Consent of instructor required. Permission of concentration advisor. Application required. (1 - 3). (INDEPENDENT). May not be repeated for credit.

SPANISH 355. New World Spanish

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 368. Literature and the Other Arts

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

SPANISH 371. Survey of Spanish Literature, I

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

SPANISH 372. Survey of Spanish Literature, II

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

SPANISH 373. Topics in Hispanic Literatures and Cultures

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). (HU). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SPANISH 380 / AMCULT 380 / SAC 380. Studies in Transnational Media

Prior coursework in Screen Arts & Cultures, Communications (TV), or Latino Studies. Knowledge of Spanish is not required. (3). May not be repeated for credit. Taught in English.

SPANISH 381. Survey of Latin American Literature, I

SPANISH 275 and 276, or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

SPANISH 382. Survey of Latin American Literature, II

SPANISH 275 and 276; or SPANISH 290 and 310; or SPANISH 276 and 290; or RCLANG 324. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

SPANISH 410 / ROMLING 410. Spanish Phonetics and Phonology

SPANISH 330 (or equivalent) and two other 300 level SPANISH courses (excluding 308); or two RCLANG 324 courses and SPANISH 330 (or equivalent) and one other 300 level Spanish course (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 411. Advanced Syntax

SPANISH 330 (or equivalent) and 2 other 300-level Spanish courses (excluding 308); or 2 RCLANG 324 courses and SPANISH 330 (or equivalent) and one other 300-level Spanish course (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 414 / ROMLING 414. Background of Modern Spanish

Three courses chosen from: SPANISH 300 and higher (excluding 308) or study abroad equivalent; up to two RCLANG 324 elections may count for this prerequisite. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 415. Problems in Language Translation

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 420 / AMCULT 420. Latin American & Latino/a Film Studies

Three courses chosen from: SPANISH 300 and higher (excluding 308) or study abroad equivalent; up to two RCLANG 324 elections may count for this prerequisite. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

SPANISH 428. Internship in Spanish

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (1 - 3). (INDEPENDENT). May not be repeated for credit.

SPANISH 430. Advanced Studies in Hispanic Culture and Society

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SPANISH 432. Gender, Writing, and Culture

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 435. Independent Study

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (1 - 3). (INDEPENDENT). May be repeated for a maximum of 3 credits.

SPANISH 437. Introduction to Literature Studies and Criticism

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SPANISH 438. The Economy and Politics in Latin America/Spain

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 440. Literatures and Cultures of the Borderlands: The Politics of Language Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May be elected twice for credit. May be elected more than once in the same term.

SPANISH 448. Hispanic Culture Through Community Service Learning

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 450. Middle Ages

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 451. Spanish Literature of the Fifteenth Century

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 456. Golden Age

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 458. The Picaresque Novel

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 459. Don Quijote

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 465. The Modern Spanish Novel I

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 467. Literary and Artistic Movements in Latin America/Spain

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May be elected twice for credit. May be elected more than once in the same term.

SPANISH 468. Modern Spanish Theater

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 470. Latin-American Literature, Sixteenth to Nineteenth Centuries

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 472. Pre-Columbian Societies

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 473. Colonial/Postcolonial Studies in Latin-American Cultures

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SPANISH 475. Latin-American Narrative

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May be elected twice for credit. May be elected more than once in the same term. Taught in Spanish.

SPANISH 476. Latin-American Poetry

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May be elected twice for credit. May be elected more than once in the same term. Taught in Spanish.

SPANISH 485. Case Studies in Peninsular Spanish and Latin American Literature Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May be elected twice for credit. May be elected more than once in the same term.

SPANISH 487. Studies in Hispanic Linguistics

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term. Rackham credit requires additional work.

SPANISH 488. Topics in Hispanic Literatures and Cultures

Three courses in SPANISH 300 or above (excluding 308); or two RCLANG 324 courses and two courses in SPANISH 300 or above (excluding 308). (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SPANISH 490. Spanish Honors: Introduction to Literary Studies and Criticism

Consent of instructor required. One 400-level SPANISH literature course, and permission of Honors advisor. (3). May not be repeated for credit.

SPANISH 491. Senior Honors Course

Consent of instructor required. SPANISH 490 or ROMLANG 498. Open only to seniors by permission of the departmental Honors Committee. (3). (INDEPENDENT). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the firstterm to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

Center for Russian, East European, and Eurasian Studies (REES)

1080 South University Avenue, Suite 3668 (734) 764-0351 (phone) (734) 763-4765 (fax) www.ii.umich.edu/crees e-mail: crees@umich.edu Associate Professor Douglas Northrop (History / Near Eastern Studies), Director

Professors Anderson (Sociology), Bardakjian (Near Eastern Studies), Brown (Natural Resources and Environment), Canning (History), Eley (History and German), J. Fine (History), Genné (Dance and Art History), Gitelman (Political Science and Judaic Studies), Greene (Music), Grzymala-Busse (Political Science), Jackson (Political Science), Kivelson (History), Knysh (Near Eastern Studies), Lambropoulos (Classical Studies, Comparative Literature), Levitsky (Public Policy), Libaridian (History), H. Markel (Medicine), Markovits (German, Political Science), Michalowski (Near Eastern Studies), Judaic Studies), O'Shea (Anthropology), Ronen (Slavic Languages and Literatures), Simon (Mathematics, Economics, Public Policy), Suny (History), Svejnar (Business, Economics), Toman (Slavic

Languages and Literatures), Whallon (Anthropology), Wiley (Music)

Associate Professors Borum (Architecture and Urban Planning), Brader (Political Science), Cheek (Music), Eagle (Slavic Languages and Literatures), Göçek (Sociology, Women's Studies), Hagen (Near Eastern Studies), Hart (Anthropology), Hell (German), Krutikov (Judaic Studies, Slavic Languages and Literatures), Lawrence (Education), Lemon (Anthropology), Leontis (Classical Studies), Maiorova (Slavic Languages and Literatures), M. Makin (Slavic Languages and Literatures), M. Makin (Slavic Languages and Literatures), Northrop (History, Near Eastern Studies), Porter-Szücs (History), Senkevitch (Architecture and Urban Planning, History of Art), Poskovic (Art and Design), Spector (German, History), Zaborowska (American Culture), Zubrzycki (Sociology)

Assistant Professors Aleksić (Slavic Languages and Literatures, Comparative Literature), Fehérváry (Anthropology), Herscher (Architecture and Urban Planning, History of Art, Slavic Languages and Literatures), Khagi (Slavic Languages and Literatures), Paloff (Slavic Languages and Literatures, Comparative Literature), Swanson (Philosophy), Trandafirescu (Architecture and Urban Planning) **Lecturers/Instructors** Branch (Business), A. Makin (Residential College, Slavic Languages and Literatures), Mendeloff (Residential College), Rogovyk (Slavic Languages and Literatures), Szabó (Judaic Studies), Westwalewicz (Slavic Languages and Literature)

Professors Emeriti Bornstein (Economics), Cameron (Business Administration), Carpenter (Slavic Languages and Literatures), Humesky (Slavic Languages and Literatures), Rosenberg (History), Shevoroshkin (Slavic Languages and Literatures), Stolz (Slavic Languages and Literatures), Stolz (Slavic Languages and Literatures), Zimmerman (Political Science), Zirbes (Art and Design)

The University of Michigan Center for Russian, East European, and Eurasian Studies is dedicated to advancing and disseminating interdisciplinary knowledge about the peoples, nations, and cultures of Russia, Central and Eastern Europe, and Eurasia, past and present. A constituent unit of the International Institute since 1993 and affiliate of the Weiser Center for Europe and Eurasia since 2008, CREES is a long-time recipient of federal education funding as a National Resource Center for this broad world area. It is one of the nation's leading institutes for interdisciplinary research and training on Russia, Central and Eastern Europe, and Eurasia.

Courses offered by the Center for Russian, East European, and Eurasian Studies. REES 301 is an undergraduate directed reading course under the guidance of a faculty member, on a specialized topic in Russian, East European, or Eurasian Studies. REES 395, 396, and 397 provide students with a comprehensive, interdisciplinary survey of the regions of the former Soviet Union and East Central Europe which introduce students to different approaches in the study of multinational, multi-cultural nations. These are appropriate selections for non-concentrators as well as potential concentrators. *N.B.:* Students may receive credit for REES 396 or 397, but not for both courses. REES 401 is a required undergraduate seminar focusing on a specific research project.

Courses in Other Departments. Lists of REES-approved and REES-related courses are available on the REES website: www.ii.umich.edu/crees

Russian, East European, and Eurasian Studies

May be elected as an area concentration program

The undergraduate curriculum in Russian, East European, and Eurasian Studies offers broad, interdisciplinary training for students who wish to acquire extensive knowledge of a country or countries of the former Soviet Union and East Central Europe. Proficiency in a language of the region is an important component of the REES concentration. The degree prepares concentrators for graduate study as well as professional opportunities in areas ranging from government to business to teaching.

Prerequisites. RUSSIAN 231, Introduction to Russian Culture, *or* SLAVIC 225, Arts and Cultures of Central Europe.

Concentration Program. A minimum of 30 credits, including:

- 1. REES 395, 396, or 397.
- 2. REES 401 or its equivalent.
- 3. RUSSIAN 301 and 302, or 303 with a grade of at least "B"; or completion of four terms of Armenian, Czech, Polish, Bosnian/Croatian/Serbian, or Ukrainian, with a grade of at least "B"; or satisfactory performance on a proficiency test in one of these languages.
- 4. Cognates: A minimum of 20 credits of CREES-approved upperlevel (300-400) courses distributed over four or more of the following fields: anthropology, economics, history, history of art, literature, music, political science, screen arts and cultures, and sociology, chosen in consultation with, and approved by, the CREES undergraduate advisor. A list of these is available on the CREES website at: www.ii.umich.edu/crees

Honors Concentration. Undergraduate concentrators who have maintained a 3.5 grade point average in the REES concentration and a 3.4 overall GPA may apply for admission to the Honors program. Applications for the program, which are available at the CREES office, are accepted annually in November of the applicant's junior year. In addition to the application, students must submit a current transcript and a sample paper in the discipline in which they intend to write their Honors thesis. A maximum of 15 persons will be accepted each year into the program.

Those accepted are expected to meet occasionally in an informal workshop at CREES and to work individually with their thesis advisor to prepare a prospectus. Credit for this preliminary work may be obtained by enrolling in REES 402 for two credits. During their senior year, students may elect REES 403 for each term (receiving a Y grade in December), for a two term total of six credits. Completed theses, which must be submitted by a due-date in late March, will be read by at least two faculty members including the student's advisor. Grades for theses will be based on the quality of the research, analysis, and writing they display. The letter grade for REES 403 and the levels of Honors with which the student will be graduated are:

A+	Highest Honors
А	High Honors
A-	Honors
B+ or below	No Honors

Students with questions about the program are encouraged to schedule a meeting with the CREES undergraduate academic advisor by calling (734) 764-0351.

Concurrent Undergraduate/Graduate Studies (CUGS) Program. Concentrators who are advanced in their studies and have exhausted the undergraduate resources in Russian, East European, and Eurasian Studies are encouraged to talk with the Graduate Studies Chair about applying for enrollment in LSA and the Rackham Graduate School through the Concurrent Undergraduate-Graduate Studies (CUGS) Program in LSA.

Study Abroad. An education abroad experience is strongly encouraged, especially those offered by the Center for Global and Intercultural Study (CGIS) in the Czech Republic, Finland, Hungary, Poland, and Russia. Some programs require knowledge of the local language, while others offer courses in English. Information about these the programs available website is on program [www.lsa.umich.edu/oip]. The CREES advisor, in cooperation with CGIS, will assist students in identifying education abroad opportunities consistent with their needs and interests. Limited funding will be made available to REES concentrators and minors to encourage and facilitate participation in education abroad programs. Applications for these funds should demonstrate a connection between the overseas program and the student's area(s) of emphasis. Although strongly encouraged, an education abroad experience is not required for the REES concentration or academic minors since some students may be unable to meet this requirement because of financial, family, or other considerations.

CREES also sponsors for-credit interdisciplinary study tours in Poland and Russia, taught by U-M faculty members.

Advising. Appointments are scheduled at the CREES office. Arrangements for continuing contacts are made in the first meeting with the undergraduate academic advisor. This meeting should be scheduled during the second term of the sophomore year.

REES Academic Minors

The Center for Russian, East European, and Eurasian Studies offers two interdisciplinary academic minors to students who wish to:

- better understand the history and culture of either Russia and the former Soviet Union *or* Eastern Europe
- gain insight into the political, economic, and social transitions taking place in the region.

Those electing a concentration in the department of Slavic Languages and Literatures may pursue a REES academic minor, but may not count any Slavic department courses toward satisfying the requirements for the REES academic minor. Students may concurrently pursue an academic minor in both REES and Slavic Languages and Literatures, with the following restrictions:

- 1. REES academic minors may not count any courses for which Slavic is the home unit;
- Slavic Department academic minors may not count REES 397 nor any courses for which REES is the home unit, which includes SLAVIC 395 and 396.

Students pursuing a REES academic minor must discuss their plans and course elections with the REES undergraduate academic advisor. Appointments are scheduled at the CREES office, 1080 South University Avenue, Suite 3668.

East European Studies

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 15 credits of courses on East European topics, selected in consultation with and approved by the REES undergraduate academic advisor. A minimum of 3 courses that will be counted toward the academic minor must be upper-level (300- or 400-level).

- 1. REES 396 Survey of Central and Eastern Europe and the Enlarged European Union
- OR
- REES 397 Eastern Europe in Transformation.
- 2. One history course.
- 3. One social science course in either anthropology, economics, political science, or sociology.
- 4. At least one course from the following fields: art history, literature, music, and screen arts and cultures.

Constraints: Bosnian/Croatian/Serbian, Czech, Polish, or Ukrainian language courses may not count toward the academic minor. *Not*

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open to those electing a concentration or another academic minor in REES.

Russian Studies

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 15 credits of courses on Russian specific topics, selected in consultation with and approved by the REES undergraduate academic advisor. A minimum of 3 courses that will be counted toward the academic minor must be upper-level (300- or 400-level).

1. REES 395 – Survey of Russia: The Russian Empire, the Soviet Union, and the Successor States.

2. One history course.*

- One social science course in either anthropology, economics, political science, or sociology.
- 4. At least one course from the following fields: art history, literature, music, and screen arts and cultures.

*In most cases, students who have taken REES 395 should not enroll in HISTORY 434.

Constraints: Russian language courses may not count toward the academic minor. *Not open to those electing a concentration or another academic minor in REES.*

COURSES IN RUSSIAN, EAST EUROPEAN, AND EURASIAN STUDIES (REES)

REES 301. Directed Reading

Consent of instructor required. Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits. F, W, Sp/Su, Sp, Su.

REES 310 / RUSSIAN 310. Moscow Study Tour: An Introduction to the Culture and History of Russia

Permission of department. (2). May not be repeated for credit.

REES 340 / AAPTIS 340 / ASIAN 340 / HISTORY 340 / MENAS 340. From Genghis Khan to the Taliban: Modern Central Asia

(4; 3 - 4 in the half-term). (SS). (R&E). May not be repeated for credit.

REES 395 / HISTORY 332 / POLSCI 395 / SLAVIC 395 / SOC 392. Survey of Russia: The Russian Empire, the Soviet Union, and the Successor States

(4; 3 in the half-term). (SS). May not be repeated for credit. May not be counted in a Slavic Department academic minor. F.

REES 396 / HISTORY 333 / POLSCI 396 / SLAVIC 396 / SOC 393. Survey of Central and Eastern Europe and the Enlarged European Union

(4; 3 in the half-term). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in REES 397. May not be counted in a Slavic Department academic minor.

REES 397 / ANTHRCUL 317. Eastern Europe in Transformation

(4). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in REES 396. May not be counted in a Slavic Department academic minor. **REES 401. Senior Seminar in Russian and East European Studies** *Permission of instructor. (4). May be repeated for a maximum of 8 credits.*

REES 402. Honors Workshop, Junior

Consent of instructor required. Honors student and junior standing, and permission of REES advisor. (2). May not be repeated for credit.

REES 403. Honors Colloquium, Senior

Consent of instructor required. REES 402 or a thesis prospectus accepted (prior to start of fall term of senior year) by REES Honors advisor and an individual thesis advisor. (1 - 6). May be repeated for a maximum of 6 credits. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of REES 403, the final grade is posted for both term's elections.

REES 405. Topics in Russian and East European Studies

(1 - 4). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

REES 410. Polish Culture

(1). May be repeated for a maximum of 2 credits. May be elected more than once in the same term.

REES 490 / SOC 490 / WOMENSTD 492. Women and Islam: A Sociological Perspective

(3). May not be repeated for credit.

Science Learning Center (SLC)

Main Branch 1720 Chemistry Building 930 North University Avenue (734) 764-9326 or 615-3133 (phone) www.lsa.umich.edu/slc e-mail: slc@umich.edu Claire Sandler, Director

Satellite Location 2165 Undergraduate Science Building (734) 764-5326

The Science Learning Center (SLC) is an interdisciplinary resource center that supports teaching and learning across the natural sciences of astronomy, biology, chemistry geological sciences, and physics.

The SLC serves as a clearinghouse where many outside-of-classroom learning activities are coordinated, and where students' opportunities to learn are strengthened by the availability of personnel, technology and other instructional resources. The Main Branch is located in the atrium of the Chemistry Building (1720 Chemistry) and is home to several areas of activity, including instructional technology labs, Graduate Student Instructor (GSI) and study group meeting alcoves, a loan desk for reserve and research materials, and a central meeting area. In the eight alcoves found at the Main Branch, students can consult with GSIs or meet with a group of peers; each alcove is furnished with a table, chairs and whiteboards. The Satellite Location is located on the second floor of the Undergraduate Science Building where users find a large study lounge plus three Team Rooms for student and faculty use. The SLC's borrowing collections include

textbooks, study guides, science journals, and other supplementary materials. Both locations offer access to a number of computers equipped with both general productivity and instructional software.

The SLC's facilities and programming are designed to improve student learning and engagement in the sciences, with particular emphasis on involvement in introductory courses. The Center plays an integral role in the university's vibrant learning community, encouraging students to become a part of a scientific community early in their undergraduate career.

The SLC focuses on offering:

- a place where students and GSIs come together for small group or one-on-one learning sessions
- a location for students to form and work in formal and informal study groups
- a site where technology enhanced instruction can be supported
- programming related to study skills, career development, graduate and professional education, and science interests
- instructional support offered by professional staff

The SLC organizes formal weekly study groups for a large number of courses in Chemistry, Biology and Physics. These optional Peer-Led Study Groups are led by Peer Leaders who are trained in group facilitation and collaborative learning techniques. Groups generally meet once every week for two hours and are comprised of 8-10 participants. The small size of the group, along with the nature if the focused activities, distinguishes a study group from a discussion section.

Program in Science, Technology and Society (STS)

2713 Haven Hall (office) / 1029 Tisch Hall (post) 435 South State Street Ann Arbor MI 48109-1003 (734) 763-2066 (phone) (734) 647-4881 (fax) www.umich.edu/~umsts e-mail: umsts@umich.edu Undergraduate Advising: sts.minor.advisor@umich.edu Graduate Advising: sts.grad.advisor@umich.edu

Steering Committee: Edwards (School of Information), Gaggio (History), Howell (History, Medicine, Public Health), Jackson (School of Information), McCullough (Architecture, Art & Design), Parthasarathy (Public Policy), Stern (Center for the History of Medicine, American Culture)

Professors: Barald (Program in Biomedical Sciences, School of Medicine), Douglas (Communication Studies), Howell (History, Public Health, Medicine), Inhorn (Public Health, Anthropology), Levine (Architecture and Urban Planning), Lindner (History), Markel (Center for History of Medicine, Medicine, History), Neuman (Communication Studies, Center for Political Studies), Perfecto (SNRE), Pernick (History), Rabkin (English), Robertson (Anthropology), Vandermeer (Ecology and Evolutionary Biology)

Associate Professors: Ackerman (School of Information), Anspach (Sociology, Women's Studies), Brown (Asian Languages and Cultures), Carson (History), Edwards (School of Information), Fadlalla (Anthropology, Women's Studies, CAAS), Frost (School of Information), Gaggio (History), Hagen (Near Eastern Studies), Hecht (History), Hunt (History), McCullough (Architecture, Art & Design), Metzl (Women's Studies, Psychiatry), Parrish (English), Renne (Anthropology, CAAS), Stern (Center for the History of Medicine, American Culture), Vaillant (Communication Studies)

Assistant Professors: Blumenthal (Law School), de la Cruz (History), Jackson (School of Information), Kirkland (Women's Studies), Owen-Smith (Sociology), Parthasarathy (Public Policy), Ticktin (Women's Studies, Anthropology)

Lecturers and Instructors: Badgley (Residential College, Museum of Paleontology), Granzow de la Cerda (Residential College, Biology), Harris (Obstetrics & Gynecology), Hirshbein (Psychiatry), O'Donnell (Residential College, Center for Theoretical Physics), Peters-Golden (Anthropology), Wright (Institute for Research on Women and Gender)

The U-M STS Program offers a structured academic curriculum through which students can explore the social, cultural, ethical, and political dimensions of science, technology, and medicine. Our program addresses a number of U-M's most important research and education priorities, including:

- Building awareness of how science, technology and medicine shape and inform modern societies.
- Identifying the social, political, and ethical problems characteristic of a highly technological world
- Explaining how science, technology, and medicine vary among the world's cultures, past and present
- Educating citizens to be engaged participants in the ongoing revolutions in science, technology, medicine, and information

STS presently offers an undergraduate academic minor, administered by the Residential College STS Program, as well as a graduate certificate.

Academic Minor. Technology often precipitates the most drastic, revolutionary changes in how societies and cultures engage one another. The Science, Technology, and Society (STS) academic minor helps students see beyond the veneer of policy issues to learn about the raw changes in our tools and methods. STS studies the ethical, environmental, and social implications of new tools and methods – and how these affect the developing world.

The academic minor helps students learn about such issues as:

- How science, technology, and medicine shape modern societies
- How social and political forces, choices, and values affect science, technology, and medicine
- How the social dynamics of science, technology, and medicine differ among world societies
- How issues of gender, race, and class appear in science, technology, and medicine

Students electing the STS academic minor learn multiple methods for studying and solving boundary-spanning problems, including not only those in traditional discipline-based approaches, but also in interdisciplinary and experimental ones.

For information on the academic minor in Science, Technology and Society, please see the academic minor's description under the Residential College in this *Bulletin*.

Screen Arts and Cultures

6525 Haven Hall 505 South State Street (734) 764-0147 (phone) (734) 936-1846 (fax) www.lsa.umich.edu/sac e-mail: sac.info@umich.edu Professor Abé Mark Nornes, Chair Stashu Kybartas, Associate Chair

Professors

- Richard Abel (Robert Altman Collegiate Professor of International Film and Media), *Silent French & American Cinema; International Film & Media, Exhibition/Promotion/Reception*
- Hubert Cohen (Residential College / Screen Arts & Cultures), Narrative Literature, Westerns, Nordic cinema, Religion in Film
- Susan J. Douglas (Catherine Neafie Kellogg Professor of Communication, Arthur F. Thurnau Professor) (Communication Studies), *the*

history of broadcasting in the United States and the representations of gender in the media

- Geoff Eley (Sylvia L. Thrupp Collegiate Professor of Comparative History) (History), *German history, modern Europe, historiography, cultural studies*
- Laurence A. Goldstein (English), 19th-Century Literature, Creative Writing
- Daniel Herwitz (Philosophy), European Avant-Garde, Aesthetics, Culture of Modernism and Postmodernism, Wittgenstein, Poststructuralism, Postcolonial Theory, Film and Philosophy
- Barbara Hodgdon (English / Theatre & Drama), *Shakespeare in Performance*
- Abé Mark Nornes (Asian Languages & Cultures / Screen Arts & Cultures), *Documentary, Japanese cinema*

Associate Professors

Peter M. Bauland (English), *History and Analysis of Major Film Direc*tors and Genres

262 / COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS

- Giorgio Bertellini (Screen Arts & Cultures / Romance Languages & Literatures), Silent film; Italian, North American and Eastern European cinema; Intersections of Gender and Racial Culture; Immigration; National Identity and International Film Culture
- Herbert Eagle (Slavic Languages and Literatures), Russian literature, Slavic and East European film, literary theory
- Amanda Lotz, Media institutions and media criticism, feminist media studies, U.S. television studies
- Johannes von Moltke (Germanic Languages & Literatures / Screen Arts & Cultures), *German Cinema, Film Theory, and Cultural Studies*
- Yeidy Rivero (American Culture / Screen Arts & Culture), *Television studies, race and media, global media, Latino/a, Spanish Caribbean, Latin American, and African diaspora studies*

Assistant Professors

- Manishita Dass (Screen Arts & Cultures / Asian Languages & Cultures), *Southeast Asia, India Cinema*
- Colin Gunckel (Screen Arts & Cultures / American Culture), American film history, Chicano/Latino film and media, Mexican Cinema
- Daniel Herbert, *political economy of the media industries, theories of intertextuality and intermediality, media geographies, transnation-al cinemas*
- Candace Moore, American Film History, American Television history, Cultures of Consumption, Feminist and Queer Media Studies
- Sheila Murphy, *Digital Media Studies, Video Games, TV Studies and Theory*
- Aswin Punathambekar, Media institutions, globalizations, new media and media convergence, postcolonial theory and criticism, contemporary south Asia and South Asian diaspora

Senior Lecturers

Robert Rayher, *Motion Picture Production Emphasizing Dramatic Narrative Techniques*

Terri Sarris, Video, Television, and Film Production

Lecturers

Alexis Bravos, Video, Television, and Film Production

James Burnstein, Screenwriting

- Victor Fanucchi, Screenwriting as Literature
- Mark Kligerman, *History of American Cinema, Film Genres, and Au*thorship Studies
- Stashu Kybartas, Film/Video Production with Emphasis on Alternatives to Dramatic Narrative Structure

Terry Lawson, Screenwriting

Chris McNamara, Computer Animation

Daniel Shere, Screenwriting

Oliver Thornton, Screenwriting for Television

Professors Emeriti of Film and Video Studies Frank E. Beaver, Ira Konigsberg

The curriculum in Screen Arts and Cultures provides an integrated program of courses in the history, aesthetics, theory, and techniques of film and moving image electronic media (television, single camera video, digital). Emphasis is placed on a liberal arts sequence that provides students with a solid foundation for understanding how film and electronic-based visual media arise out of varied cultural, historical, social, and technological circumstances. Three prerequisite courses prepare them for advanced study in the history and aesthetics of moving image media and for production courses. An introductory course in production gives students hands-on experience in film, video, and television. Courses in film history prepare students for electives in the films of specific cultures, nations, and time periods, as well as in the study of film style illuminated by the work of individual artists and in various genres. Television history allows them to assess trends in the social, technological, and formal development of the most influential medium of the second half of the twentieth century. Required courses in theory and criticism examine the methods that have been used to study film, television, and digital media. Production core courses are designed to help concentrators work creatively in film and moving image electronic media (television, single camera video, digital) as they become familiar, through electives, with interdisciplinary, humanistic perspectives on how moving image technology has been used in different cultures as a medium of communication and artistic expression, and how various kinds of institutional practice have characterized its use. The Screen Arts and Cultures curriculum is designed to prepare students for more advanced work in film writing and criticism, in creative film, video-making, and studio television work, and for advanced study in graduate programs in moving image media.

James Gindin Visiting Artists Series. The James Gindin Visiting Artists Series provides screenwriting students with the unique opportunity to work regularly in small seminars with some of the most respected screenwriters in filmmaking. The series is named in memory of James Gindin, the popular late U-M professor of English who was an acclaimed scholar of 19th-century British literature and modern fiction.

Donald Hall Screenwriting Collection. The Donald Hall Screenwriting Collection, an extensive DVD media and script library, has been established by Four Friends Foundation to serve University of Michigan students interested in studying great films and film scripts. The collection is named for Donald Hall, the renowned poet and author who taught at Michigan from 1957 to 1975 and who is at present the national Poet Laureate.

Scholarships and Awards. Numerous scholarships and awards are available to students in the Department of Screen Arts and Cultures at the University of Michigan.

The Avery and Jule Hopwood Awards in Creative Writing. Under the terms of the will of Avery Hopwood, a member of the Class of 1905, the annual income from a generous endowment fund is distributed in prizes for creative work in four fields: dramatic writing, fiction, poetry, and the essay. Competition is open to qualified students enrolled in any school or college of the University. Entrants must, however, be enrolled in a designated writing course elected through the Department of English Language and Literature, Residential College, the Department of Screen Arts and Cultures, or the Department of Theatre. For full information about the conditions of competition contact the Hopwood Program Associate, 1006 Angell Hall, (734) 764-6296.

The Arthur Miller Award of the University of Michigan Club of New York Scholarship Fund. The University of Michigan Club of New York has generously agreed to sponsor a scholarship award in honor of distinguished playwright and U-M graduate Arthur Miller. The contest is open to currently enrolled University of Michigan students, of sophomore or junior standing, who have demonstrated writing talent in the area of drama, screenplay, fiction, or poetry.

The Eileen and Leonard Newman Award in Dramatic Writing. The winner will receive an award of \$1,000.

The Kasdan Scholarship in Creative Writing. The Kasdan Scholarship in Creative Writing was established by University of Michigan graduates Lawrence and Meg Kasdan. The recipient of the award will be selected on the basis of financial need and promise in the writing of screenplays, drama, or fiction. Manuscripts will be judged by a member of the University of Michigan faculty. Contestants may submit manuscripts in one of the areas of screenplay, drama, or fiction. For further information, inquire at the Hopwood Room, 1176 Angell Hall.

The Trueblood Fellowship. Awards of up to \$750 given to support students involved in the performance aspects of film, television, or video art.

The Leo Burnett Foundation Grants Program. Awards of up to \$750 given to research and production projects that explore and illuminate the role of film or television in a market economy.

The Hubert and Ellen Cohen Film Essay Award. Hubert Cohen, a faculty member, and his wife, Ellen, have established a film essay award fund for Screen Arts and Cultures concentration. The subject can engage with film history, film criticism, or film theory. Essays on television are also eligible for this award. It is not to be merely a paper written for a course; it can be an Honors thesis. The essay must be at least 5000 words in length. The manuscript will be read and evaluated by a committee of at least two studies faculty members. The award will be offered at the end of Winter Term each year.

The Garnett Garrison Scholarship. Awards of up to \$2000 which help support Screen Arts and Cultures Honors students to defray the costs of preparing their Honors thesis, production, or screenplay.

The Alice Webber Glover Scholarship Award. Awards of up to \$2000 given to help with the special costs associated with the writing and/or production of student film, video, or digital media productions.

Peter and Barbara Benedek Award for Best Screenplay. A competitive award for screenwriting in which the winning screenplay will receive \$2500 and possible representation by United Talent Agency.

Peter and Barbara Benedek Award for Best TV Script. A competitive award for TV writing in which the winning TV script will receive \$2500 and possible representation by United Talent Agency.

The Sidney J. Winer Scholarship Award for Internship Support. This \$2000 award is intended to help defray the cost of a summer internship in the entertainment industry.

Screen Arts and Cultures

May be elected as an interdepartmental concentration program

Prerequisite to Concentration: SAC 236; SAC 272; plus one history course from the following: SAC 351, 352, 353, or 355.

Students will apply for entry to the concentration after having completed the prerequisites with a minimum grade point average of 2.0. In accord with LSA policies, students who do not meet the minimum grade requirement but still hope to declare the Screen Arts and Cultures concentration may retake one prerequisite course. If they meet the criteria above with the new grade they earn in the re-taken course, they may declare Screen Arts and Cultures as their concentration.

Concentration Program (30 credits). A grade of C– or better must be achieved in any course taken to satisfy the concentration requirements.

- 1. Core Required Courses (18 credits).
 - A. One history course beyond the prerequisite from among the following: SAC 351, 352, 353, or 355.
 - B. One theory course beyond the prerequisite from among the following: SAC 372, 375, 376, or 461.
 - C. Introduction to production course: SAC 290.
 - D. Two production or writing courses from the following: SAC 300, 301, 302, 306, 310, 311.
 - E. One studies course from among the following in national, regional, or transnational cinema: SAC 380, 440, 441, 442, 470, 485, or a similar course pre-approved by the advisor.
- Required Electives (12 credits; 4 courses): Students are required to take a total of 12 credits of electives with no more than one course in production.

Advising. Students who may be interested in a concentration in Screen Arts and Cultures are encouraged to consult with a department advisor. Appointments are scheduled at 6525 Haven Hall, (734) 764-3825.

Honors Concentration. The Honors concentration in the Department of Screen Arts and Cultures offers qualified Screen Arts and Cultures concentrators a special opportunity. Upper-level students with strong academic records and a demonstrated ability to carry out the independent work required to complete an Honors thesis, screenplay, film, video or digital production are encouraged to apply. The Screen Arts and Cultures Honors concentration is not restricted to students who have been in the College Honors Program in their freshman and sophomore years.

Upon successful completion of the Honors concentration, students may graduate with "Honors," "High Honors," or "Highest Honors" in Screen Arts and Cultures, depending on the evaluation of their thesis, screenplay, or project. These Honors designations appear on their diploma along with any College Honors designations they earn from their overall grade point.

Students accepted into the Honors concentration also become members of the Honors Program of the College of Literature, Science, and the Arts. As members of the LSA Honors Program, they gain access to a variety of special services such as possible financial support for their Honors work. In addition, students may also apply for competitive scholarships administered by the Department of Screen Arts and Cultures to help with costs associated with Honors projects.

Admission. To be considered for the Honors concentration, students must have a grade point average of 3.5 or higher in the Screen Arts and Cultures concentration. Students must also identify a Screen Arts and Cultures faculty sponsor and file an application for admission to the Honors concentration no later than three terms prior to the intended graduation date. For further information, contact the Screen Arts and Cultures Department at (734) 764-0147.

Screenwriting sub-concentration. The department offers a subconcentration in Screenwriting to undergraduate students in the Screen Arts & Cultures concentration who demonstrate a special talent for writing for the screen.

Students interested in the sub-concentration must take the same prerequisite courses required of students wishing to declare the Screen Arts & Cultures concentration. Students with a minimum grade point average of 2.0 in these three courses should meet with an advisor to declare their concentration in Screen Arts & Cultures. Students must then take SAC 290 and 309, followed by SAC 310. After successful completion of SAC 310, and acceptance and successful completion, B or better, in SAC 410, the student may apply for the Screenwriting sub-concentration. The student should contact the Coordinator of Screenwriting to state his/her interest in applying to the sub-concentration. Final approval for the Screenwriting sub-concentration, B or better, of either SAC 427, Screenwriting III, or SAC 311, Screenwriting for Television.

Note: If a students is not accepted into the Screenwriting subconcentration, he or she may continue with the Screen Arts and Cultures concentration. The courses required of the student to apply for the sub-concentration will all satisfy requirements in the general SAC concentration, whether or not the student is successful in his/her application to the Screenwriting sub-concentration. Students who receive notice of their acceptance into the Screenwriting subconcentration from the Screenwriting Coordinator should see the Associate Chair of Screen Arts & Cultures to complete a revised concentration declaration form to notify the college of their admission into the Screenwriting sub-concentration.

Sub-concentrators are expected to complete all normal Screen Arts and Cultures concentration requirements in the studies-based part of the curriculum.

After successful completion of SAC 410, students with a GPA of 3.5 or above in the Screen Arts and Cultures concentration and 3.4 GPA overall may wish to declare Honors in Screenwriting. Interested students should consult the Coordinator of Screenwriting.

Screen Arts and Cultures Academic Minor

Global Media Studies

The academic minor in Global Media Studies is not open to students with a concentration in the Department of Screen Arts and Cultures. Independent Studies (SAC 499) may not be used toward the academic minor. Students may not use more than one course to satisfy the requirements of both a concentration and an academic minor. Students are prohibited in the Category A of this academic minor from taking more than one course grounded in any single national cinema. Students should take at least two of their elective courses at the 300 level or higher.

Students interested in the academic minor in Global Media Studies should develop a specific plan for its completion in consultation with one of Screen Arts and Cultures' designated advisors. Appointments are scheduled in 6525 Haven Hall, phone (734) 764-3825.

The Global Media Studies academic minor exists for students interested in the study of film and electronically based visual media as national, regional, and global phenomena. This course of study is intended to aid students in obtaining culturally specific as well as cross-cultural understanding of the global impact of moving image media. The academic minor contributes to an understanding of the unique qualities of textual expression derived from specific cultural and historical contexts as well as to effects of more globalized developments in media technology, narrative and stylistic forms. Students will have the opportunity to study specific cultural modes of media production and reception including, but not limited to, the familiar U.S. cultural/industrial model. The coursework in this academic minor provides students with the opportunity to reflect on the expansive geographical scope and cultural diversity of film and moving image electronic media (television, single-camera video, digital).

Prerequisites to the Academic Minor: None.

Academic Minor Program: At least 16 credits (and five courses), to be chosen from the following three categories as stated below, with at least two courses at the 300-level or above:

1. Required Core Courses: seven credits from the following:

- A. SAC 236, The Art of the Film
- B. One of the following: SAC 351, 352, or 353.

2. Electives

A. **Moving Image Media in National & Regional Contexts.** Two courses totaling at least six credits are to be chosen from the following approved electives, with no more than one course centered on U.S. media or in a single, non-U.S. national cinema

U.S. media

AMCULT 351, 490 SAC 355, 365, 366 (approved topics), 367, 368, 381, 450, 451, 460

Non U.S. media AMCULT 420 ASIAN 245, 475 CAAS 232, 440 GERMAN 172, 330, 331 RCHUMS 312, 313 SAC 232, 245, 440, 441, 455 (approved topics) SLAVIC 312, 313 SPANISH 420

B. **Comparative Media Studies.** One course of at least three credits to be chosen from among the following approved electives:

AMCULT 380 ASIAN 440 CAAS 232, 442, 470 PHIL 440 SAC 361, 366 (approved topics), 380, 420, 422, 442, 455 (approved topics), 470, 485 SPANISH 380 WOMENSTD 361

COURSES IN SCREEN ARTS AND CULTURES (SAC)

SAC 190. First-Year Film Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3; 2 in the half-term). (HU). May not be repeated for credit.

SAC 236 / RCHUMS 236. The Art of the Film

(4). (HU). May not be repeated for credit.

SAC 272. Classical Film Theory (3). May not be repeated for credit.

SAC 290. Introduction to Film, Video and Television Production

(3). (CE). May not be repeated for credit.

SAC 300. Filmmaking I

SAC 290 and SAC Concentrator. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SAC 301. Video Making I

SAC 290 and SAC Concentrator. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SAC 302. Television Studio I

SAC 290 and SAC Concentrator. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SAC 304. Interdisciplinary Collaborations in Visual Media I

SAC 290 with a minimum grade of C- or better, and concentration in Screen Arts and Cultures. (Prerequisites enforced at registration.) (1 - 3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SAC 306. Digital Animation I

Consent of instructor required. FILMVID/SAC 290. Students should have basic working knowledge of the Macintosh platform, Photoshop, and digital video. (3). May not be repeated for credit.

SAC 307. Film Analysis for Filmmakers

SAC 236 and SAC 290. (3). May not be repeated for credit.

SAC 308. Screenwriting for Non-Majors (3). (CE). May not be repeated for credit.

SAC 309. The Screenplay as Literature SAC 236. (3). May not be repeated for credit.

SAC 310. Screenwriting

SAC 290, SAC concentrators only. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SAC 311. Screenwriting for Television

SAC 290, SAC concentrators only. (Prerequisites enforced at registration.) (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SAC 320. Documentary Film

SAC 230 or 236. (3). (HU). May not be repeated for credit.

SAC 330 / ENGLISH 330. Major Directors

SAC 331 / ENGLISH 331. Film Genres and Types

FILMVID/SAC 236. (3). (HU). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

FILMVID 236 or SAC 236. (3). (HU). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

SAC 333. Fascist Cinemas

SAC 236. (4). May not be repeated for credit.

SAC 340. Writing Film Criticism

SAC 230 or 236. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

SAC 341 / ASIAN 341. Bollywood and Beyond: An Introduction to Popular Indian Cinema

(4). (HU). May not be repeated for credit.

SAC 351. Film History, Origins to 1929

SAC 236. (3). (HU). May not be repeated for credit.

SAC 353. Film History, 1960-Present SAC 236. (3). (HU). May not be repeated for credit.

SAC 355. Television History

SAC 236. (3). (HU). May not be repeated for credit.

SAC 365. Race and Ethnicity in Contemporary American Television SAC 236. (3). (HU). May not be repeated for credit.

SAC 366. Topics in Film, Television and Popular Culture (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

SAC 367. Introduction to Digital Media Studies

(3). (HU). May not be repeated for credit.

SAC 368. Topics in Digital Media Studies SAC 367. (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term.

SAC 372. Contemporary Film Theory

SAC 236. (3). (HU). May not be repeated for credit.

SAC 375. Television Theory and Criticism

SAC 236. (3). May not be repeated for credit.

SAC 376. Digital Media Theory

SAC 236. (3). (HU). May not be repeated for credit.

SAC 380 / AMCULT 380 / SPANISH 380. Studies in Transnational Media

Prior coursework in Screen Arts & Cultures, Communications (TV), or Latino Studies. Knowledge of Spanish is not required. (3). May not be repeated for credit. Taught in English.

SAC 381 / AMCULT 381. Latinas/Latinos and the Media

Consent of department required. AMCULT 213 or SAC 236 (FILMVID 236) or AMCULT 380/SAC 380 (FILMVID 380) or SPANISH 380. (3). (HU). May not be repeated for credit.

SAC 400. Filmmaking II

SAC 300, SAC concentrators only. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SAC 401. Video Making II

SAC 301, SAC concentrators only. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SAC 402. Television Studio II

SAC 302, SAC concentrators only. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

SAC 404. Interdisciplinary Collaborations in Visual Media II

A 300- (or 400-) level production course in the relevant emphasized area: SAC 300, 301. 302. or 306: and permission of instructor. (1 - 3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SAC 406. Digital Animation II

Consent of instructor required. SAC 306. (3). May not be repeated for credit.

SAC 410. Screenwriting II

SAC 310 and SAC concentrators. (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SAC 411. Writing for Television II

SAC 311. (Prerequisites enforced at registration.) SAC 290 and 310. (3). May not be repeated for credit.

SAC 422. Topics in Avant-Garde Film

SAC 230 or 236. (3). May not be repeated for credit.

SAC 423. Practicum for the Screenwriter

SAC 290, 310, and 410. (3). May be elected twice for credit. May be elected more than once in the same term.

SAC 427. Screenwriting III

SAC 310 and 410. Limited to students whose work is judged as showing outstanding potential in writing for the screen. (3). May not be repeated for credit.

SAC 440 / CAAS 440. African Cinema

CAAS 200. (3). May not be repeated for credit.

SAC 441. National Cinemas

SAC 230 or 236 or 360. (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SAC 455. Topics in Film Studies

SAC 230 or 236. (3). May be repeated for a maximum of 9 credits. May be elected more than once in the same term

SAC 461 / WOMENSTD 461. Explorations in Feminist Film Theory

Junior standing and WOMENSTD 240. (3). May not be repeated for credit.

SAC 480. Internship

Consent of instructor required. (2). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. Pass/Fail with Narrative Evaluation

SAC 485. The Global Screen

Junior or Above. (Prerequisites enforced at registration.) Junior standing; SAC 230 or 236. (3). May be repeated for a maximum of 6 credits. May be elected more than once in the same term.

SAC 489. Senior Screenwriting Tutorial

SAC 410, SAC concentrators only. (Prerequisites enforced at registration.) (3). (INDE-PENDENT). May not be repeated for credit.

SAC 490. Senior Honors Research

Consent of instructor required. SAC Concentrators only. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 4 credits. May be elected more than once in the same term.

SAC 499. Independent Study

Consent of instructor required. Permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for credit. May be elected more than once in the same term. May not be used toward the Global Media Studies academic minor.

SAC 500. Directed Study in Screen Arts and Cultures

Consent of instructor required. Permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

Slavic Languages and Literatures

3040 Modern Languages Building 812 East Washington Street (734) 764-5355 (phone) (734) 647-2127 (fax) www.lsa.umich.edu/slavic e-mail: slavic@umich.edu Associate Professor Herbert Eagle, Chair

Professors

Omry Ronen, Historical and descriptive poetics of Russian literature of the nineteenth and twentieth centuries, metrics, Russian Formalism and Structuralism, popular sub-genres

Jindrich Toman, Slavic linguistics, Czech literature

Associate Professors

Herbert Eagle, Russian and East European literature and film, literary and film theory

Mikhail Krutikov, Jewish literature, Jewish-Slavic relations

Michael Makin, Russian literature of the nineteenth and twentieth centuries, Russian language

Olga Maiorova, Nineteenth-century Russian literature, culture, and history

Assistant Professors

- Tatjana Aleksić, Literary Theory, Postmodern Fiction, Contemporary Balkan literature with an emphasis on Serbian and Modern Greek fiction, Nationalism, Postcolonialism, Exile, Issues of Identity, Balkan Folklore, and Oral Poetry
- Andrew Herscher, Modern and contemporary architecture, urbanism, and visual culture in Central and Southeastern Europe
- Sofya Khagi, Nineteenth and Twentieth Century Russian Poetry, Russian and European Romanticism, Russian and Western Dystopia, Existentialist Thought, East European Literary Theory, Post-Soviet Literature and Culture, Contemporary Baltic Cultures
- Benjamin Paloff, Polish, Russian and Czech modern literatures, literary theory, poetics, and translation theory and practice

Lecturers

Natalia Kondrashova, Linguistics Alina Makin, Russian language Ewa Malachowska-Pasek, Polish Language

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Svitlana Rogovyk, Language pedagogy, Russian and Ukrainian languages

Marija Rosic, *Bosnian, Croatian, Serbian languages* Nina Shkolnik, *Russian Language* Piotr Westwalewicz, *Polish Language and Culture*

Professors Emeriti Bogdana Carpenter, Assya Humesky, Ladislav Matejka, Vitaly Shevoroshkin, Benjamin A. Stolz

The department teaches the languages, literatures, and cultures of the Slavic nations. The Russian language is spoken by more people than any other language except Chinese and English; in addition there are some one hundred and fifty million speakers of Czech, Polish, Bosnian/Croatian/Serbian, and Ukrainian. These are vehicles of some of the world's great cultures and are of increasing importance as a key to communication in trade and technology. Courses are offered in Slavic languages, literatures, and cultures. The undergraduate curriculum is designed primarily to provide competence in Czech, Polish, and Russian along with knowledge of Czech, Polish, and Russian literature and cultures. A concentration is offered in Polish and Russian, academic minors in Czech, Polish, Russian, Ukrainian, and Cultures and Literatures of Eastern Europe. The department also offers courses in Bosnian, Croatian, and Serbian, as well as Ukrainian.

The curriculum provides the language training prerequisite to specialization in a variety of careers *(e.g.,* government, diplomacy, international trade, teaching), and offers an enriching cultural and linguistic background to non-concentrators, especially those interested in the ethnic heritage of the Slavic peoples.

Placement Information for Introductory Language Courses. Students with high school training in Russian are required to take both the reading and listening (CEEB) Russian tests to evaluate their language proficiency. The results of the placement test determine the proper placement. The Slavic Department has final authority to determine the most appropriate course level. Heritage students (students partially raised in a Slavic-speaking environment) are required to contact the Slavic Department prior to enrolling in any language classes.

Intensive Language Programs. The Slavic Department and the Residential College jointly sponsor a proficiency oriented program of intensive Russian, consisting of a sequence of two eight-credit courses (RUSSIAN 103 and 203) equivalent to the regular first- and second-year program, plus a four-credit Readings Course (RCLANG 323) enabling a student to reach advanced proficiency in all four language skills in three terms. The program also includes daily Russian Language Table and weekly Russian Tea. For more information contact the RC's main office at (734) 647-4363. The Slavic Department also offers spring and summer term intensive Russian language courses (1st-3rd year). See the *Schedule of classes* for specific information.

Russian Tea. Students of Russian are invited to attend Russian Tea, sponsored and organized by the Residential College. For more information, contact Alina Makin, resco@umich.edu.

Study Abroad. The department encourages qualified students to participate in selected study abroad programs in Slavic countries and is affiliated with the CIEE Cooperative Russian Language Program at St. Petersburg State University. The program is administered by the Center for Global and Intercultural Study (CGIS).

Slavic Studies Undergraduate Essay Prizes are prizes of \$100 awarded for the best undergraduate essays written in the Slavic Department. One prize for the best essay written in English and one prize for the best essay written in a Slavic Language.

Language Resource Center. The department uses the Language Resource Center, which is located on the second floor of the Modern Languages Building. Students have access to the LRC's open computer labs, as well as audio listening/recording stations, video stations, text-books and dictionaries, a free-reading text library, audio tapes, video tapes, software, realia, and copy machines. The LRC monitors Russian T.V. and makes this programming available at multiple outlets. Video materials of films and programs in a number of Slavic languages are also available.

Courses in English. The department offers a series of courses in English translation designed to survey the Slavic literatures and cultures for concentrators in Russian and Polish and for non-concentrators. These courses include:

RUSSIAN 231, 241, 315, 322, 346, 347, 348, 357, 358, 360, 361, 365, 382, 449, 450, 460, 461, 462, 463, 464, 472, 476, 477, 478, 479, 485;

SLAVIC 210, 225, 240, 250, 270, 281, 290, 312, 313, 435, 470, 481, 487, 490;

POLISH 314, 325, 326, 432; CZECH 315, 480, 483, 484

Russian concentrators who elect RUSSIAN 462, 463, or 464 are expected to read Russian texts.

Half–Term Information. The Slavic Department offers spring and summer term intensive Russian language courses $(1^{st}-3^{rd} \text{ year})$. See the *Schedule of Classes* for specific information.

Russian

May be elected as a departmental concentration program

The Russian concentration aims to combine, in the best traditions of a liberal arts degree, practical language learning with the study of culture through literature and culture. It provides extensive language training and demanding courses in literary history and analysis. Moreover, the Department firmly believes that serious language study offers broad intellectual benefits in and of itself. In the upperlevel Russian language courses, it aims to develop linguistic selfconsciousness and a basis for the study of linguistics proper. In literary studies many undergraduates take not only the required courses (both in translation and in Russian), but also elect more specialized courses such as "monograph" studies of Pushkin (RUSSIAN 461), Dostoevsky (RUSSIAN 462), Chekhov (RUSSIAN 463), and Tolstoy (RUSSIAN 464).

Russian is also an especially rewarding second concentration when combined with political science, history or another social-science discipline. Students who complete the intensive year-long program in their first year are particularly well equipped to follow the dualconcentration path.

Student have three possible ways to complete the Russian concentration program: the standard concentration option, based on the study of Russian literature and language; a Culture track and a Heritage Speakers track.

Concentration Program

A. Russian Language and Literature

- 1. **Prerequisites to Concentration.** RUSSIAN 101, 102, 201, and 202, (or RUSSIAN 103 and 203 or RUSSIAN 123 and 223) or the equivalent. Interested students are advised to begin Russian during their first year.
- 2. **Core Courses:** RUSSIAN 301 (or RCLANG 323) and 302; RUSSIAN 451 or 499; RUSSIAN 347 and 348; and at least one course in Russian literature after 1900 *(e.g.,* RUSSIAN 449, 450, 467, 468, 469, 470, 471, 472, 475).
- 3. **Upper-level Russian language and literature electives:** at least two courses (in addition to those listed above) from RUSSIAN 401*, 402*, 410, 413, 414, 415, 416, 417, 418, 419, 420, 453, 454, 455, 456, 460, 461, 462, 463, 464, 465, 466, 476, and 485.

**Advising Recommendation:* For most students RUSSIAN 401/402 will be the preferred choice. Students who do not

take the RUSSIAN 401/402 sequence will find RUSSIAN 451 or 499 much more difficult.

4. **Cognates for Russian Language and Literature:** three or more credits in advanced courses (300-level or above) in another Slavic language (Czech; Bosnian, Croatian & Serbian; Ukrainian; and Polish) or another foreign language, or cognate courses studying some other aspect of Russia. Special attention is called to courses listed under *Russian, East European, and Eurasian Studies.*

B. Culture track (subplan)

- 1. **Prerequisites to Concentration.** RUSSIAN 101, 102, 201, and 202, (or RUSSIAN 103 and 203 or RUSSIAN 123 and 223) or the equivalent. Interested students are advised to begin Russian during their first year.
- Core Courses: RUSSIAN 231 or SLAVIC 270 or SLAVIC 240 or SLAVIC 281; RUSSIAN 301 (or RCLANG 323) and 302; RUSSIAN 401 and 402; RUSSIAN 451 or RUSSIAN 499.
- Upper-Level Electives for Culture Subplan: At least two of RUSSIAN 322, RUSSIAN 477, SLAVIC 313, RUSSIAN 358, SLAVIC 481, RUSSIAN 347 or 348.
- 4. Cognate requirement for Russian Language and Literature.

C. Heritage Speakers track (subplan)

- 1. **Prerequisites for Heritage Speakers Subplan:** RUSSIAN 225 or 202, or equivalent, or placement in an upper-level course; and RUSSIAN 231.
- Core Courses for Heritage Speakers Subplan: RUSSIAN 325 or 302, or equivalent; RUSSIAN 401, 402, 501, and 502; two of RUSSIAN 451, RUSSIAN 499, RCLANG 323
- 3. Upper-Level Electives for Heritage Speakers Subplan: At least two of RUSSIAN 347, 348, 449, 450, or other literature courses with permission of advisor.
- 4. Cognate requirement for Russian Language and Literature.

Honors Concentration. Undergraduate concentrators who have maintained a 3.5 grade point average in Russian courses and 3.4 overall GPA may apply for admission to the Honors concentration. In addition to regular concentration requirements, qualified Honors concentrators work on a major project during the senior year, and complete an Honors thesis based on their research.

Advising. Professor Michael Makin, the undergraduate concentration advisor, should be consulted by prospective concentrators before the end of the sophomore year. Appointments are scheduled online at www.lsa.umich.edu/slavic.

Teaching Certificate. Candidates for a teaching certificate with a teaching minor in Russian should consult Professor Makin and the School of Education Teacher Education office, 1228 School of Education Building, (734) 615-1528. Information about general requirements for a teaching certificate appears elsewhere in this *Bulletin*.

Polish

May be elected as a departmental concentration program

The Polish Program at the University of Michigan is considered one of the strongest, possibly the strongest, Polish programs in the country. Language courses are the core, with offerings including First, Second, Third, and Fourth Year Polish. U-M is thus the only American university to offer four levels of Polish every year. It also offers on a regular basis Polish literature survey courses, as well as courses on Polish drama, novel, film, and popular culture. People of Polish heritage form the fourth largest ethnic group in the state of Michigan, and a great number of students at the University of Michigan have Polish roots. The strength of the program has been possible thanks to intensive cooperation with the Center of Russian, East European, and Eurasian Studies. The Center actively supports Polish activities across the campus and helps coordinate a large network of faculty that include in their teaching and research different aspects of Polish culture. The Polish program also benefits from the activities of the Copernicus Endowment, most notably its annual Copernicus Lectures delivering leading Polish scholars, artists, writers, and public figures.

The concentration is intended for undergraduates who have in interest in Polish language and culture for academic, cultural, or frequently heritage reasons. It will appeal to students who are contemplating professional, scholarly, or business careers that will involve work in Poland. Its goal is to give students interested a solid base in Polish language and culture, knowledge they can apply in a future academic and/or professional career. It aims to enable research and day-to-day communication, at the same time that it provides competence in salient aspects of Polish literature and culture.

In addition to the concentration, the department offers an academic minor in Polish Language, Literature, and Culture.

Prerequisites to Concentration. POLISH 121, 122, 221, and 222, or the equivalent.

Concentration Program

1. Core Courses (12 credits): POLISH 321 and 322 or 421 and 422; POLISH 325, 326

2. Electives (15 credits):

- HISTORY 330, 331, 482
- POLISH 314, 432
- POLISH 450 (up to 3 credits)
- REES 396
- SLAVIC 225, 240, 270, 312, 396, 490 (Polish topics);
- Two terms of another Slavic language (Bosnian / Croatian / Serbian, Czech, Russian, Ukrainian)
- 3. **Study Abroad Option:** students may satisfy up to 4 credits of the electives through a Study Abroad program in Poland.

Caution: While experience in the country of the student's concentration is invaluable, academic courses for foreign students in Poland tend to be less rigorous in their content and requirements than courses at the U-M. In order to receive credit for courses taken at a Polish university, students need to present – upon their return – course syllabi as well as samples of final examinations and requirements; they will be evaluated by the faculty in charge of the Polish program.

Honors Concentration. Undergraduate concentrators who have maintained a 3.5 grade point average in Polish courses and 3.4 overall GPA may apply for admission to the Honors concentration. In addition to regular concentration requirements, qualified Honors concentrators work on a major project during the senior year, and complete an Honors thesis based on their research.

Advising. Piotr Westwalewicz should be consulted by prospective concentrators before the end of the sophomore year. Appointments are scheduled online at www.lsa.umich.edu/slavic.

Slavic Languages and Literatures Academic Minors

Academic minors in Slavic Languages and Literatures are not open to those electing a concentration or any other academic minor in the Department of Slavic Languages and Literatures, nor to those electing a concentration in the Center for Russian, East European, and Eurasian Studies (REES). Students may concurrently pursue an academic minor in both REES and Slavic with the following restrictions: (1) REES academic minors may not count any courses for which Slavic is the home unit; (2) Slavic academic minors may not count REES 397 or any courses for which REES is the home unit, which includes SLAVIC 395 and 396.

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Students wishing to pursue an academic minor in Slavic Languages and Literatures must develop a specific plan for its completion in consultation with the department's designated advisor:

Eastern Europe: Prof. Michael Makin Czech: Prof. Jindrich Toman Polish: Dr. Piotr Westwalewicz Russian: Prof. Michael Makin Ukrainian: Svitlana Rogovyk

Appointments are scheduled online at www.lsa.umich.edu/slavic.

Cultures and Literatures of Eastern Europe

The academic minor in Cultures and Literatures of Central Europe is intended for students interested in developing their knowledge and understanding of Slavic studies but who are unable to dedicate time to language study to complete a rigorous program of study.

This academic minor affords such students the opportunity to build their new interest into a recognized program of academic study with a framework that would enable coordinated study over several terms. This program has been designed specifically for students who have either:

- become interested in Slavic studies later in their academic careers and are thus unable to complete a language requirement; or
- demanding concentration programs that do not include flexibility to take on an extensive course of language study but are interested in the literatures and culture of Eastern Europe.

The academic minor is divided between Russian Studies, and Polish, BCS, Czech, Eastern-European Jewish studies, and cross-cultural Slavic studies (reflecting the overall distribution of course offerings in the Department). Students must take courses from both of these groups, and may choose to specialize in Russian studies, or in one or more other areas of Eastern and Central European culture. Thus, a student completing this academic minor will have acquired relatively detailed knowledge in at least one area of the department's specialization, while also having been exposed to the diversity of cultures found between the Danube and the Pacific Ocean.

Prerequisites to the Academic Minor. None. No knowledge of the languages of Eastern Europe is required.

Academic Minor Program. At least fifteen credits elected in the following courses in Eastern European Literatures and Cultures, of which only one course may be below the 300-level. Students may take as many courses as they like in one of the two groups, but must elect a **minimum of six credits** in the other group:

- Group A: POLISH 314, 325, 326; CZECH 315, 484; BCS 436; SLAVIC 225, 240, 270, 281, 312, 470, 480, 481, 488, 490.
- Group B SLAVIC 313; RUSSIAN 231, 322, 346, 347, 348, 356, 358, 444, 449, 450, 453, 454, 460, 462, 463, 464, 466, 467, 468, 469, 473, 474.

Czech Language, Literature, and Culture

The academic minor in Czech Language, Literature, and Culture is designed to give students a fundamental competence in Czech language upon which they can build, as well as a knowledge of some of the major cultural achievements and individual masterpieces of Czech literature and cinema.

The intended audience comprises all undergraduates with substantial interest in Czech studies. Such students might include those who envision doing professional work in the Czech Republic, those intending to pursue graduate work in areas related to Czech culture and society, as well as those who may wish to learn more about their own heritage. The academic minor presents the opportunity to gain basic competence in Czech language, upon which one can build toward whatever higher level of proficiency one requires. Furthermore, the academic minor gives students exposure to and knowledge of the work of some of the major figures in Czech culture, including such internationally acclaimed authors as Jaroslav Hašek, Karel Čapek, and Milan Kundera, as well as the Nobel Prize winning poet Jaroslav Seifert. The ways in which Czech culture met the challenges of World War II, and of the subsequent forty years of Communist rule, is given major emphasis in several of the courses. Students may also learn about the important contributions of Czech filmmakers to world culture. Thus, the academic minor will have substantial value for all students who have an intellectual interest in Czech culture, even in cases where Czech studies do not figure directly in the student's career plans. This might be the case particularly for students who trace part of their own family heritage to the Czech lands. Finally, several of the courses address question about ethnic discriminations as they have been dealt with in literature and film, a feature which would deepen students' understanding through the comparative perspective it would provide.

Prerequisites to the Academic Minor. CZECH 241 or equivalent.

Academic Minor Program. 16 credits of courses, including CZECH 242 (4 credits) and 12 credits in courses selected from the following two categories, with at least 6 credits from category B.

Category A: Courses on Central European Slavic Culture (no more than 6 credits from Category A may count in the academic minor):

- SLAVIC 225 (Arts and Cultures of Central Europe)
- SLAVIC 312 (Central European Cinema)
- SLAVIC 423 (Central European Literature in the Twentieth Century)

Students may count up to 3 credits of Third-Year Czech (CZECH 341 and 342) toward the academic minor.

Category B: Courses on Czech culture, literature, and cinema (at least 6 credits are required from Category B):

- CZECH 480 (Supervised Czech Reading)
- CZECH 483 (Czech Literature from the Middle Ages to the Enlightenment)
- CZECH 484 (Modern Czech Literature)
- SLAVIC 490 (Issues of the Cultures of Eastern Europe)

Polish Language, Literature, and Culture

The academic minor in Polish Language, Literature, and Culture is designed to give students a fundamental competence in Polish language upon which they can build, as well as a knowledge of some of the major cultural achievements and individual masterpieces of Polish literature and cinema.

The intended audience comprises all undergraduates with substantial interest in Polish studies, but with insufficient time to pursue a concentration in this area. Such students might include those who envision doing professional work in Poland, those intending to pursue graduate work in areas related to Polish culture and society, as well as those who may wish to learn more about their own heritage.

Prerequisites to the Academic Minor. POLISH 221 or equivalent.

Academic Minor Program. 16 credits of courses, including POLISH 222 (4 credits), and 12 credits in courses selected from the following two categories, with at least 6 credits from category B.

Category A: Courses on Central European Slavic Culture (no more than 6 credits from Category A may count in the academic minor):

- SLAVIC 225 (Arts and Cultures of Central Europe)
- SLAVIC 312 (Central European Cinema)

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SLAVIC 423 (Central European Literature in the Twentieth Century)

Students may count up to 3 credits of Third-Year Polish (POLISH 321 and 322) toward the academic minor.

Category B: Courses on Polish culture, literature, and cinema (at least 6 credits are required from category B):

- POLISH 314, Polish Cinema
- POLISH 325 (Polish Literature in English, to 1900)
- POLISH 326 (Polish Literature in English, 1900 to present)
- POLISH 432 (Topics in Polish Literature)
- SLAVIC 490 (Issues of the Cultures of Eastern Europe)

Russian Language, Literature, and Culture

The academic minor in Russian Language, Literature, and Culture is designed to give students a fundamental competence in Russian language upon which they can build, as well as a knowledge of some of the major cultural achievements and individual masterpieces of Russian literature and cinema.

The intended audience comprises all undergraduates with substantial interest in Russian language, literature, and culture, but with insufficient time to pursue a concentration in this area. Such students might include those who envision doing professional work in Russia, those intending to pursue graduate work in areas related to Russian culture and society, as well as those who may wish to learn more about their own heritage.

Prerequisites to the Academic Minor. RUSSIAN 201 or equivalent.

Academic Minor Program. RUSSIAN 202 or 203 or 223 or RCLANG 293, and 12 additional credits in courses selected from among the following, with at least 6 credits elected at the upper level:

- RUSSIAN 231, 301, 302, 322, 346, 347, 348, 358, 449, 450, 451, 453, 462, 463, 464, 466, 469, 474, 478, 479, 480, 499
- SLAVIC 240 and 313

Ukrainian Language, Literature, and Culture

An academic minor in Ukrainian Language, Literature, and Culture would provide to students already engaged with the language an opportunity to expand their knowledge and understanding of Ukrainian culture in the broader context of European society as a whole.

The academic minor in Ukrainian is a vibrant and multi-faceted program that integrates Ukrainian studies into broader intellectual and policy agendas, while promoting research and scholarly work on contemporary Ukraine in the United States. Its curriculum will educate students on the history, language, literature, and politics of Ukraine. In addition, study of Ukraine brings an important comparative perspective to international and interdisciplinary studies at the University of Michigan, as the Ukraine has historically been viewed as a meeting place of several major cultures: East Slavic, Jewish, Austro-Hungarian, and others.

This program could be of particular interest to undergraduate students in concentrations like Judaic Studies, History, the Program in the Environment, Political Science, and Sociology.

Ukraine's highly educated population (seventh in Europe), natural wealth, size (second largest state in Europe), and location make it an

important country both regionally and globally. Located in the borderland between Europe and Asia, Poland and Russia, and with its recent independence, it is an important time to introduce a broader audience the rich legacy of Ukrainian literature, history, and culture. Since its independence from the Soviet Union, Ukraine has occupied a vital but often ambiguous strategic position as an independent country important to the security and stability of all of Europe. Ukraine's changing boundaries over the centuries gives us a completely different view of the culture of the post-Soviet years, and now in the expansion of the EU.

The latest achievements of inner freedom and the recognition of a diversity of cultures in Ukraine have become the main means for fostering research and academic contacts between Ukraine and the U.S. Ukraine is engaged in the global processes of state building, creation of a market economy, and social changes. Ukraine's democratic "Orange Revolution" has led to closer cooperation and more open dialogue between Ukraine and the United States.

The EU is seeking an increasingly close relationship with Ukraine, going beyond co-operation, to gradual economic integration and a deepening of political co-operation. NATO and the Ukraine actively cooperate in international peace-support operations and have developed practical cooperation in a wide range of other areas. In May 2008 Ukraine became a member of the World Trade Organization and has since engaged in negotiations for the establishment of a deep and comprehensive Free Trade Area.

Prerequisites to the Academic Minor. UKRAINE 251 (with a grade of "C" or better) or equivalent as determined by the Departmental placement examination.

Academic Minor Program. At least 16 credits of courses including

- 1. UKRAINE 252
- 2. 12 credits in courses selected from the following two categories, with at least 6 credits from Category A.

Category A: Ukrainian Language, Literature, and Culture

- UKRAINE 451 (Advanced Ukrainian),
- UKRAINE 452 (Advanced Ukrainian: Contemporary Issues)
- UKRAINE 421 (Directed Readings in Ukrainian Literature)
- SLAVIC 490 (Topic: Introduction to Ukrainian Culture)

Category B: Eastern European Slavic Culture (No more than 6 credits from this category)

- HISTORY 432 (Medieval and Early Modern Russia)
- SLAVIC 240 (Slavic Folklore)
- SLAVIC 270 (Contact and Conflict: Jewish Experience in Eastern Europe)
- SLAVIC 313 (Russian and Ukrainian Cinema)
- SLAVIC 395 (Survey of Russia: The Russian Empire, the Soviet Union, and the Successor States)
- SLAVIC 435 (Cultural History of Russian Jews)
- SLAVIC 490 (Topics: Rock Kills Communism; Revolution the Attic):
- (Up to 3 Credits) Study Abroad, Summer Internships in Ukraine and/or Field Work in Ukrainian Communities of Metro Detroit. The Department offers help in negotiating summer internships with companies in UKRAINE or within local Ukrainian communities.

COURSES IN SLAVIC LANGUAGES AND LITERATURES

BOSNIAN, CROATIAN, AND SERBIAN (BCS)

BCS 131. First-Year Bosnian/Croatian/Serbian I (4). May not be repeated for credit.

BCS 132. First-Year Bosnian/Croatian/Serbian II BCS 131. (4). May not be repeated for credit.

BCS 231. Second-Year Bosnian/Croatian/Serbian I BCS 132. (Prerequisites enforced at registration.) (4). May not be repeated for credit.

BCS 232. Second-Year Bosnian/Croatian/Serbian II BCS 231. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit.

BCS 436. Modern Bosnian/Croatian/Serbian Literature (3). May be elected twice for credit.

(3). Whay be checked twice for creat.

BCS 439. Directed Reading of Bosnian/Croatian/Serbian Literature Consent of instructor required. Permission of instructor. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits.

CZECH (CZECH)

CZECH 141. First-Year Czech

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in CZECH 143.

CZECH 142. First-Year Czech

CZECH 141. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in CZECH 143.

CZECH 241. Second-Year Czech CZECH 142 or 143. (4). May not be repeated for credit.

CZECH 242. Second-Year Czech CZECH 241. (4). (Lang Reg). May not be repeated for credit.

CZECH 315. The Czech New Wave and Its Legacy

(3). (HU). (R&E). May not be repeated for credit.

CZECH 480. Supervised Czech Reading

Consent of instructor required. Permission of instructor. (1 - 4). (INDEPENDENT). May be elected twice for credit.

CZECH 484. Modern Czech Literature

(3). May not be repeated for credit.

POLISH (POLISH)

POLISH 121. First-Year Polish (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in POLISH 123. F.

POLISH 122. First-Year Polish

POLISH 121. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in POLISH 123. W.

POLISH 221. Second-Year Polish POLISH 122. (4). May not be repeated for credit. F.

POLISH 222. Second-Year Polish POLISH 221. (4). (Lang Req). May not be repeated for credit. W.

POLISH 314. Polish Cinema (3). (HU). May not be repeated for credit.

POLISH 321. Third-Year Polish POLISH 222. (3). May not be repeated for credit. F.

POLISH 322. Third-Year Polish

POLISH 321. (3). May not be repeated for credit. W.

POLISH 325. Polish Literature in English to 1890 (*3*). (*HU*). May not be repeated for credit.

POLISH 326. Polish Literature in English: 1890 to Present (3). (HU). May not be repeated for credit.

POLISH 421. Fourth-Year Polish I

POLISH 322. (3). May not be repeated for credit.

POLISH 422. Fourth-Year Polish II POLISH 421. (3). May not be repeated for credit.

POLISH 450. Directed Polish Reading

Consent of instructor required. POLISH 325 and/or 326 and reading knowledge of Polish; and permission of instructor. (1 - 3). (INDEPENDENT). May not be repeated for credit.

POLISH 491. Senior Honors Course

Consent of instructor required. Approval of departmental Honors Committee and permission of instructor. (3). May not be repeated for credit. Credit is granted for a combined total of six credits of POLISH 491 and 492. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

POLISH 492. Senior Honors Course

Consent of instructor required. Approval of departmental Honors Committee and per-

mission of instructor. (3). May be repeated for a maximum of 6 credits. Credit is granted for a combined total of six credits of POLISH 491 and 492.

RUSSIAN (RUSSIAN)

RUSSIAN 101. First-Year Russian

(5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 103/RCLANG 193 or RUSSIAN 123 or 111.

RUSSIAN 102. First-Year Russian, Continued

RUSSIAN 101. (Prerequisites enforced at registration.) (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 103/RCLANG 193 or RUSSIAN 123 or 111.

RUSSIAN 103 / RCLANG 193. Intensive First-Year Russian

(8). May not be repeated for credit. Credit is granted from only one course among RUSSIAN 103, 111, 123, or RCLANG 193. No credit is granted to those who have completed or are enrolled in RUSSIAN 101 or 102.

RUSSIAN 121. Applied Russian I

(4). May not be repeated for credit. Credit not granted to students who have taken RUSSIAN 521 or 522.

RUSSIAN 123. Intensive First Year Russian

(8 in the half-term). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 101, 102, or RUSSIAN 103/RCLANG 193. Sp, Su.

RUSSIAN 201. Second-Year Russian

RUSSIAN 102 or 103/RCLANG 193. (Prerequisites enforced at registration.) (5). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 203/RCLANG 193 or RUSSIAN 223.

RUSSIAN 202. Second-Year Russian, Continued

RUSSIAN 201. (Prerequisites enforced at registration.) (5). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 203/RCLANG 293 or RUSSIAN 223.

RUSSIAN 203 / RCLANG 293. Intensive Second Year Russian

RUSSIAN 102, 103, or 123 or RCLANG 193. (Prerequisites enforced at registration.) (8). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 201, 202, or 223.

RUSSIAN 223. Intensive Second Year Russian

RUSSIAN 123 or 103 or 102, or RCLANG 123. (Prerequisites enforced at registration.) (8 in the half-term). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 201, 202, or RUSSIAN 203/RCLANG 293. Sp, Su.

RUSSIAN 225. Russian for Heritage Speakers I

Native or near-native speaker or permission of instructor. (3). (Lang Req). May not be repeated for credit.

RUSSIAN 231. Russian Culture and Society: An Introduction

(3). (HU). May not be repeated for credit.

RUSSIAN 301. Third-Year Russian

RUSSIAN 202, 203, 223, 225, or RCLANG 293. (Prerequisites enforced at registration.) Satisfactory scores on a proficiency test. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 303 or 325. F.

RUSSIAN 302. Third-Year Russian

RUSSIAN 301 or RCLANG 323. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 303 or 325.

RUSSIAN 303. Third-Year Intensive Russian

RUSSIAN 202, 203, 223 or RCLANG 293. (Prerequisites enforced at registration.) (8). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 301, 302, or 325. S.

RUSSIAN 310 / REES 310. Moscow Study Tour: An Introduction to the Culture and History of Russia

Permission of department. (2). May not be repeated for credit.

RUSSIAN 322. Russia Today

(4). (HU). May not be repeated for credit.

RUSSIAN 325. Russian for Heritage Speakers II

Successful completion of RUSSIAN 225 or permission of instructor. (3). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 301, 302, or 303.

RUSSIAN 346. Russian Literature from Romanticism to Realism (3). (HU). May not be repeated for credit.

(3). (HU). May not be repeated for credit.

RUSSIAN 347 / RCHUMS 347. Survey of Russian Literature

A knowledge of Russian is not required. No knowledge of Russian literature or history is presupposed. (4). (HU). May not be repeated for credit.

RUSSIAN 348 / RCHUMS 348. Survey of Russian Literature

A knowledge of Russian is not required. (4). (HU). May not be repeated for credit.

RUSSIAN 357. Russian Drama in Context: From the Enlightenment to Post-Modernism

(3). (HU). May not be repeated for credit.

RUSSIAN 358. Central Asia through Russian Eyes: Cultural Appropriation of an Exotic Land

(3). (HU). (R&E). May not be repeated for credit. Taught in English.

RUSSIAN 361. Russian Modernism: Decadence, Symbolism, and the Avant-garde in Russia

(3). May not be repeated for credit.

RUSSIAN 365. Russian Fantasy and Science Fiction (3). (HU). May not be repeated for credit.

RUSSIAN 401. Fourth-Year Russian

RUSSIAN 302 or 303. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 403. F.

RUSSIAN 402. Fourth-Year Russian

RUSSIAN 401. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in RUSSIAN 403. W.

RUSSIAN 410 / EDCURINS 437. Teaching of Russian

RUSSIAN 302 or 303. (Prerequisites enforced at registration.) (2). May not be repeated for credit.

RUSSIAN 430. Supervised Reading of Russian Literature

Consent of instructor required. PER. CHRM. (1 - 4). (INDEPENDENT). May be elected twice for credit.

RUSSIAN 435 / HISTORY 435 / JUDAIC 435. Cultural History of Russian Jews through Literature and the Arts

(3). May not be repeated for credit. Rackham credit requires additional work.

RUSSIAN 451. Introduction to Russian Literature

RUSSIAN 302 or 303. (3). May not be repeated for credit. Taught in Russian. Rackham credit requires additional work.

RUSSIAN 460. Russian Social Fiction

(3). May not be repeated for credit.

RUSSIAN 461. Pushkin

(3). May not be repeated for credit.

RUSSIAN 462. Dostoevsky

(3). May not be repeated for credit. Taught in English. Russian concentrators are expected to read Russian texts.

RUSSIAN 463. Chekhov

PER. INSTR. (3). May not be repeated for credit. Taught in English. All readings may be done in English. Russian concentrators are expected to read Russian texts.

RUSSIAN 464. Tolstoy

(3). May not be repeated for credit. Taught in English. No prior knowledge of Russian literature and culture is necessary. Russian concentrators are expected to read Russian texts.

RUSSIAN 466. Gogol

Permission of instructor. (3). May not be repeated for credit.

RUSSIAN 469. 20th-Century Authors

(3). May be repeated for a maximum of 6 credits. Taught in English.

RUSSIAN 471. Modern Russian Poetry

A knowledge of Russian is required. (3). May not be repeated for credit.

RUSSIAN 474. Late 20th-Century Russian Literature

(3). May not be repeated for credit. Taught in English.

RUSSIAN 477. Russian Culture and National Ideology Permission of instructor. (3). May not be repeated for credit.

RUSSIAN 478. Vladimir Nabokov and World Literature I: The Russian Years Knowledge of Russian not required. (3). May not be repeated for credit.

RUSSIAN 479. Vladimir Nabokov and World Literature II: The American Years

Knowledge of Russian is not a prerequisite (all readings in English). (3). May not be repeated for credit. Taught in English.

RUSSIAN 485. Poetics & Rhetoric

(3). May not be repeated for credit. Taught in English.

RUSSIAN 491. Senior Honors Course

Consent of instructor required. Approval of departmental Honors Committee and permission of instructor. (3). (INDEPENDENT). May be repeated for a maximum of 6 credits. Credit is granted for a combined total of six credits of RUSSIAN 491 and 492. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of RUSSIAN 492, the final grade is posted for both term's elections.

RUSSIAN 492. Senior Honors Course

Consent of instructor required. Approval of departmental Honors Committee. (3). (IN-DEPENDENT). May be repeated for a maximum of 6 credits. Credit is granted for a combined total of six credits of RUSSIAN 491 and 492.

RUSSIAN 499. Advanced Seminar in Russian

RUSSIAN 302 or 303, and 351. (3). May not be repeated for credit. Taught in Russian.

RUSSIAN 552. Russian Literature of the Eighteenth Century

(3). May not be repeated for credit.

RUSSIAN 557. Russian Drama in Context: From the Eighteenth to the Twentieth Centuries

(3). May not be repeated for credit. Rackham credit requires additional work.

SLAVIC LINGUISTICS, LITERARY THEORY, FILM, AND SURVEYS (SLAVIC)

SLAVIC 151. First Year Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (4). (FYWR). May not be repeated for credit.

SLAVIC 225. Arts and Cultures of Central Europe (3). (HU). (R&E). May not be repeated for credit.

SLAVIC 240. Introduction to Slavic Folklore (3). (HU). May not be repeated for credit.

SLAVIC 270 / JUDAIC 271. Contact and Conflict: Jewish Experience in Eastern Europe through Art, Film and Literature (3). (R&E). May not be repeated for credit.

SLAVIC 281 / HJCS 281 / JUDAIC 281. Jews in the Modern World: Texts, Images, Ideas

(4). (HU). (R&E). May not be repeated for credit.

SLAVIC 290. Studies in Eastern European Cultures (1 in the half-term). (HU). May be repeated for a maximum of 3 credits. May be elected more than once in the same term.

SLAVIC 312 / RCHUMS 312. Central European Cinema A knowledge of Russian is not required. (3). (HU). (R&E). May not be repeated for credit. Taught in English.

SLAVIC 313 / RCHUMS 313. Russian and Ukrainian Cinema (3). (HU). May not be repeated for credit. F.

SLAVIC 316 / RCLANG 333. RUSLAN Service Learning: Russian Language, Culture, and People in the U.S.

Native proficiency or one course in Russian language, literature, culture, or history. (R&E). (EXPERIENTIAL). May be elected twice for credit.

SLAVIC 395 / HISTORY 332 / POLSCI 395 / REES 395 / SOC 392. Survey of Russia: The Russian Empire, the Soviet Union, and the Successor States

(4; 3 in the half-term). (SS). May not be repeated for credit. May not be counted in a Slavic Department academic minor. F.

SLAVIC 396 / HISTORY 333 / POLSCI 396 / REES 396 / SOC 393. Survey of Central and Eastern Europe and the Enlarged European Union

(4; 3 in the half-term). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in REES 397. May not be counted in a Slavic Department academic minor.

SLAVIC 450. Directed Readings in Slavic Studies

(1 - 4). (INDEPENDENT). May be elected twice for credit.

SLAVIC 470. Topics in Cultural Studies of Central, Eastern, and Southern Europe (3). May be repeated for a maximum of 9 credits.

SLAVIC 471. Seminar in Cultural Studies of Central, Eastern and Southern Europe

(3). May be elected twice for credit. Rackham credit requires additional work. SLAVIC 490. Issues in the Cultures of Fastern Europe

SLAVIC 490. Issues in the Cultures of Eastern Europe

(1). May be repeated for a maximum of 3 credits. May be elected more than once in the same term.

UKRAINIAN (UKRAINE)

UKRAINE 151. First-Year Ukrainian

(4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in UKRAINE 103.

UKRAINE 152. First-Year Ukrainian

UKRAINE 151. (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in UKRAINE 103.

UKRAINE 251. Second-Year Ukrainian

UKRAINE 152 or 103. (Prerequisites enforced at registration.) (4). May not be repeated for credit. No credit granted to those who have completed or are enrolled in UKRAINE 203.

UKRAINE 252. Second-Year Ukrainian

UKRAINE 251. (Prerequisites enforced at registration.) (4). (Lang Req). May not be repeated for credit. No credit granted to those who have completed or are enrolled in UKRAINE 203.

UKRAINE 421. Directed Reading in Ukrainian Literature

Consent of instructor required. Open to non-concentrators. A knowledge of Ukrainian is not required. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. Taught in English.

UKRAINE 451. Advanced Ukrainian I

UKRAINE 252. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

UKRAINE 452. Advanced Ukrainian II

UKRAINE 451. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

Social Work

School of Social Work 1772 School of Social Work Building 1080 South University Avenue (734) 764-3309 (phone) ssw.umich.edu/programs/undergrad e-mail: cascminor@umich.edu

Professor Laura Lein, Dean

Associate Professor Michael Spencer, Associate Dean for Educational Programs

Katie Richards-Schuster, Ph.D., CASC Undergraduate Minor Director

Not a concentration program

The University of Michigan School of Social Work is a community of internationally recognized faculty, gifted students, and dedicated alumni who share a common objective: to create social change and promote social justice through excellence in research, education, and practice. Consistently ranked among the top schools of social work in the nation, the School of Social Work has a master of social work program that is held in the highest regard by educators and professionals in the field.

Community Action and Social Change (CASC) Academic Minor

Students wishing to pursue an academic minor in Community Action and Social Change should meet with the program's designated advisor, Dr. Katie Richards-Schuster. Appointments are scheduled through the School of Social Work Dean's Office CASC Undergraduate Minor Program [email: cascminor@umich.edu or telephone: (734) 763-5733], 3815 SSW.

This multidisciplinary academic minor is a collaboration between the School of Social Work, the College of Literature, Science and the Arts, the Program in American Culture, Psychology, Sociology, and the Program in Intergroup Relations, the Residential College and the Michigan Community Scholars Program.

The CASC academic minor uses critical structural thinking to engage students in analyzing types, levels and sources of power to better understand how inequities are manifested, maintained and reinforced in society and how these inequities can be addressed through community action and social change efforts. It will extend opportunities for undergraduate students to:

- examine community action and social change concepts using a multidisciplinary framework;
- address community action and social change efforts in multilingual and multicultural communities;
- integrate, using a multidisciplinary framework, social justice values into the community action and social change processes; and
- 4. engage in service learning opportunities to promote community action or social change.

The academic minor requires 16 credits.

The courses that comprise this multidisciplinary academic minor are linked together through a common set of principles. These principles include:

- 1. Civic engagement is a critical component of undergraduate education.
- 2. Community engagement, action and social change need to incorporate social justice perspectives.
- 3. Undergraduate students need the theories and skills to:
 - recognize the importance of contexts on individual, group and interpersonal dynamics;
 - engage in critical sociopolitical historical structural analyses;
 - use a multi-level and multidisciplinary structural analysis and perspective;

- acknowledge and address the role of power and privilege in community action and social change efforts; and
- Identify goals for community change and the strategies and tactics to work with others towards these goals.

Advising. Advising responsibilities primarily reside with the School of Social Work. Core faculty from the other disciplines may also participate in advising. The faculty advisors work with students on academic minor course selection, career planning and integrative learning processes. The questions regarding curricular requirements for the academic minor will be handled by the Associate Dean for Educational Programs at the School of Social Work.

Prerequisites to the Academic Minor: None for the academic minor *per se,* although individual courses elected to meet the requirements of the academic minor may have course prerequisites.

Academic Minor Program. The academic minor requires at least 16 credits from the following courses:

A. Required Core Foundation Course:

SW 305: Theories and Practices for Community Action and Social Change

B. Context Cluster Electives (minimum three credits).

These electives provide students with a range of context, theories and multidisciplinary perspectives to support understanding of various community action and social change efforts:

- AMCULT 399: Race, Racism and Ethnicity
- ANTHRCUL 370/LING 370: Language and Discrimination
- ANTHRCUL 447: Culture, Racism and Human Nature
- ASIAN 259/HISTORY 255: Gandhi's India: The History of Modern South Asia
- CICS 101/GEOG 145/UC 145: Introduction to International Studies
- POLSCI 489: Advanced Topics in Contemporary Political Science (section titled "Citizenship and its Modern Challenges")
 PSYCH 498/WOMENSTD 498: Gender and the Individual
- PSTCH 496/WOMENSTD 498: Gender and the Individual
 RCSSCI 330: Urban and Community Studies 1 (section titled "Historical and Theoretical Perspectives")
- RCSSCI 334/HISTORY 344: The History of Detroit in the 20th Century
- SOC 423/AMCULT 421: Social Stratification (section titled "Gender, Sexuality, Disability, and Animal Inequality in America")
- SOC 434/CAAS 434: Social Organization of Black Communities
- SOC 454: Law and Society
- SOC 458: Sociology of Education
- SOC 461: Social Movements
- **C. Diversity Learning Cluster Electives** (minimum three credits).

These electives provide students with skills and learning opportunities to facilitate diversity learning to support community action and social change efforts:

- ELI 390/LING 386/EDUC 390/RCSSCI 390: Community Service and Language, Education, and Culture
- HISTORY 346/AMCULT 348: History of American Radicalism (section titled "From the Abolitionists to the Battle of Seattle")
- RCCORE 409: Study Off-Campus (Section title "Political Struggles in Mexico: Seminar and Field Study
- RCSSCI 360: Social Science Junior Seminar (Section title "Political Struggles in Mexico: Seminar and Field Study")
- SOC 389: Project Community (MCSP sections)
- UC 218/SOC 218: Foundations of Intergroup Relations
- UC 320/PSYCH 310/SOC 320: Processes of Intergroup Dialogues Facilitation
- UC 321/PSYCH 311/SOC 321: Practicum in Facilitating Intergroup Dialogues

- UC 370: UC Special Topics (section titled "Intergroup Conflict and Coexistence: Religion, Ethnicity, and Culture")
- WOMENSTD 420: Group Facilitation in Women's Studies
- **D. Action Service Learning Cluster Electives** (minimum three credits).

These electives provide students with opportunities to engage in service learning opportunities to promote community action and social change initiatives:

- AMCULT 306/PSYCH 317: Community Research
- AMCULT 319/PSYCH 319: Empowering Families and Communities
- AMCULT 321/PSYCH 325: Practicum in Multicultural Community
- ÉLI 390/LING 386/EDUC 390/RCSSCI 390: Community Service and Language, Education and Culture
- ENGLISH 310: Discourse and Society
- ENGLISH 319: Literature and Social Change (section titled "Theater and Social Change")
- POLSCI 389: Topics in Contemporary Political Science (section titled "Theory and Practice of Community Organizing")
- PSYCH 306: Project Outreach Group Leading
- RCHUMS 334: Topics in Humanities (section titled "Community Empowerment Through the Arts: An Introduction to Theory and Practice")
- SOC 325: The Sociology of Service Learning

- SOC 389: Project Community (section titled "Organizing for Social Justice")
- SOC 395: Directed Reading or Research (section titled "The Sociology of Service Learning")

The School of Social Work will also offer one credit mini-courses that are led by community leaders and social work faculty that will provide students additional elective opportunities linked to the core cluster areas.

E. Capstone.

When students have completed the core course and electives, a capstone one credit community action and social change experience will complete the academic minor requirements. This involve students in the academic minor working closely with social work faculty advisors or other steering committee members to engage in integrative learning tasks to support e-portfolio development and further service learning opportunities.

COURSES IN SOCIAL WORK (SW)

Courses in the School of Social Work are listed in the *Schedule of Classes* under the School of Social Work. Undergraduates wishing further information about course offerings should contact the School of Social Work. The following course counts as an LSA courses for LSA degree credit.

SW 305. Theories and Practices for Community Action and Social Change (3). (SS). May not be repeated for credit.

Sociology

3001 LSA Building 500 South State Street (734) 764-6324 (phone) (734) 763-6887 (fax) www.lsa.umich.edu/soc

e-mail: sociology.department@umich.edu Professor Howard Kimeldorf, Chair Associate Professor Jeffrey D. Morenoff, Associate Chair Associate Professor Alford A. Young, Jr., Undergraduate Director

Professors

- Barbara A. Anderson (Ronald Freedman Collegiate Professor of Sociology and Population Studies), *Social Change and Demographic Change, Soviet Society, Historical Demography, Demographic Techniques*
- William G. Axinn, *Demography, Family Sociology, Research Methods,* South Asian Studies
- Jennifer Barber, Family; Demography; Social Psychology; Social Statistics; Data Collection and Research Methods; South Asian Studies
- David L. Featherman, *Stratification, Social Psychology, Social Mobility, Health and Aging*
- Robert Groves, Survey Methods, Measurement of Survey Errors, Sampling, Statistics
- James House (Angus Campbell Distinguished University Professor of Survey Research), *Social Psychology, Social Structure and Personality, Psychosocial and Socioeconomic Factors in Health and Aging, Survey Research Methods, Political Sociology, American Socie ty*
- Howard Kimeldorf, *Political Sociology, Industrial Sociology, Class Analysis, Historical Comparative Sociology*
- Karin Martin, Gender, Feminist Theory, Family, Childhood and Adolescence, Social Psychology, Psychoanalytic Sociology
- Mark S. Mizruchi, Organizational Theory, Political Sociology, Economic Sociology, Social Network Analysis, Quantitative Methods
- Jeffrey Paige, *Political Sociology, Revolution, Latin America, Marxian Social Theory*
- Silvia Pedraza, *The Sociology of Immigration, Race, and Ethnicity in America, Theories of Race and Ethnic Relations, Labor Market Incorporation of Immigrants*

Pamela Smock, Social Stratification, Demography, Gender and Family Margaret Somers, Law, Sociology of Citizenship, Comparative History, Social and Political Theory, Political Sociology, Economic Sociology, Sociology of Knowledge

- George P. Steinmetz (Charles H. Tilly Collegiate Professor of Sociology and Germanic Languages and Literatures), *Historical Sociology, Social Theory, Cultural Sociology, Colonialism*
- Arland Thornton, *Family, Marriage and Divorce, Life Course, Demo*graphy, Intergenerational Relations, Gender Roles, Social Change
- Yu Xie (Otis Dudley Duncan Distinguished University Professor of Sociology), *Stratification, Sociology of Science, Methods and Statistics, Demography, Chinese Studies*
- Alford A. Young, Jr., (Arthur F. Thurnau Professor), *Theory, Race* and Ethnic Relations; Urban Sociology, Social Psychology, Qualitative Methods, History of Sociological Thought

Associate Professors

- Renee Anspach, Medical Sociology, Sociology of Deviance, Sociology of Gender, Social Psychology/Social Interaction, Applied Sociology
- Elizabeth Armstrong, Sexuality, Gender, Social Movements, Sociology of Culture, and sociology of higher education
- F. Müge Göçek, Historical Sociology, Sociological Theory, Social Change, Gender, Sociology of the Middle East
- David Harding, *Stratification/Mobility; Urban Sociology; Deviant Behavior/Social Disorganization*
- Karyn Lacy, Race, Class and Gender; Community; Qualitative Methodology
- Jeffrey D. Morenoff, Urban Sociology; Community Studies; Demography; Statistics; Crime and Neighborhood Changes
- Jason Owen-Smith, *Economy and Society; Organizations, Formal and Complex; Science and Technology*
- Fredrick Wherry, *Race, Ethnicity & Urbanization, Globalization and Sociology of Culture*
- Geneviève Zubrzycki, *Cultural Sociology; Religion; Collective Behavior* and Social Movements

Assistant Professors

Elizabeth Bruch, Social Demography, Social Stratification and Quantitative Methods

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Sarah Burgard, *Demography; Medical Sociology; Stratification* Robert Jansen (Michigan Society of Fellows), *Historical Comparative Sociology, Political Sociology, Cultural Sociology* Greta Krippner, *Economic Sociology, Political Sociology, Global and*

Political Economy, Sociological Theory

Sandra Levitsky, *Law, Social Movements and Change*

Sarah Quinn (Michigan Society of Fellows), *Economic Sociology*

Kiyoteru Tsutsui, Comparative/Political Sociology, Human Rights, Social Movements, and Japanese Society

Lecturers

PJ McGann, Sexuality and Homosexuality; Sex and Gender; Deviant Behavior/Social Disorganization; Qualitative Methodology Terence McGinn, Sociological Theory, Religion, Education Ian Robinson, Comparative Labor, Political Sociology Luis Sfeir-Younis, Sexuality, Multiculturalism

Adjunct Professors

Raymond DeVries, *Medical Sociology, Sociology of Bioethics* William Frey, *Urban Sociology, Social Demography, Migration* James Lepkowski, *Survey Sampling and Analysis of Categorical Data* Daphna Ovserman, *Social Psychology*

David Schoem, Intergroup Relations, Ethnic Identity, Jewish Community, Multiculturalism, Education

David Tucker, Interorganizational Relations and Social Policy

Professors Emeriti Duane F. Alwin, Mark Chesler, Donald R. Deskins, Jr., Reynolds Farley, Max Heirich, Albert Hermalin, John Knodel, Richard Lempert, Andre Modigliani, Gayl Ness, Howard Schuman, Mayer N. Zald

Sociology is the study of social relationships and social structures. It focuses on relations among people, groups, organizations, classes, cultures, and society. Sociology explores and analyzes issues vital to our personal lives, communities, and the world. The curriculum in sociology is designed to provide students with an understanding of the social character of human life and of the how it is shaped by varying forms of social organization. Students are introduced to the methods by which such knowledge is obtained and to the practical applications of sociological knowledge. Students considering sociology as a concentration are encouraged to speak with the concentration advisor.

Special Opportunities. The Department of Sociology offers a wide range of special opportunities for undergraduates to actively engage in the design of their education. These include: concentration advising, Project Community, independent studies with faculty, the Honors Program, SURO (Sociology Undergraduate Research Opportunities), the Eita Krom Prize, the Robert Cooley Angell Award, and a department-supported student organization, the Undergraduate Sociology Association.

Advising. An advisor is available to discuss the choice of sociology as a concentration, assist you in selecting courses, and advise you on co-curricular opportunities and career preparation. Students should schedule an advising appointment by contacting the Sociology Student Services office at (734) 764-6324 or by scheduling one online at www.lsa.umich.edu/soc/undergraduate.

Project Community. A number or sociology concentrators participate in Project Community (SOC 389: Practicum in Sociology), an experiential learning and community service program. Students earn academic credit by reflecting sociologically on their volunteer experience in education, criminal justice, public health, and community organizing. Roles open for student volunteers include those of tutors, referral service workers, health care assistants, patient educators, prisoner and youth advocates, and recreational or artistic workshop leaders. This course is an ideal experiential complement to the academic instruction provided by the department. Students, assisted by trained undergraduate coordinators and GSIs, gain useful skills and contacts while serving the needs of the community. Inquiries should

be made in the offices of Project Community, 1024 Hill Street, third floor, (734) 647-8771, or email pcinfo@umich.edu.

Sociology Undergraduate Research Opportunities (SURO). SURO allows undergraduates to work as research assistants with a faculty member or graduate student on a research project already in progress. Students learn more about a specific sociological topic and get an insider's look at the research process. Research topics and duties to be performed vary, but each SURO has a learning outcome for the undergraduate. Credit hours are determined by the supervising faculty member and reflect the amount of work expected of the student.

The Eita Krom Prize. The department annually awards the *Eita Krom Prize*, which provides cash awards to the sociology concentrator who submits the best paper on a sociological topic. Each term, papers are nominated by faculty members.

Teaching Certificate in Sociology or the Social Sciences. Concentrators interested in a teaching certificate should talk with a School of Education advisor. Concentration work in Sociology can be applied to teaching certificates in education in the social sciences and in general. The School of Education Teacher Education office is located in 1228 School of Education Building, 610 East University Avenue, (734) 615-1528, or email te.program@umich.edu.

Sociology

May be elected as a departmental concentration program

The sociology concentration allows for flexibility in course selection, enabling students to create a personalized program that matches their intellectual and career interests. The concentration requirements offer students a foundation in fundamental sociological principles, practices, theories, and methodology, and allows them to focus on a specific area of the discipline that inspires them.

Prerequisites to Concentration. Students planning to concentrate in sociology must elect an introductory courses before declaring the concentration. First- and second-year students choose from SOC 100, 101, 102, 105, 195, 202, or 300. If no previous introductory sociology has been elected, juniors may choose, and seniors *must* choose SOC 202 or 300.

Concentration Program. After electing one of the introductory prerequisites, concentrators are required to complete at least 30 credits of SOC courses, including:

- Statistics: SOC 210 or STATS 250 (or 350) (or their equivalent) completed with a grade of "C-" or better.
- Research Methods: SOC 310 or 312 completed with a grade of "C-" or better.
- Social Theory: SOC 305 completed with a grade of "C-" or better.
- Electives in Sociology. The remaining credits must be chosen from SOC courses at the 200 level and above, chosen in consultation with the concentration advisor.

Research Methods and Statistics aid in understanding sociological themes and concepts that are explored in our upper-level courses. Students are strongly encouraged to complete the Statistics and Research Methods requirement before their senior year.

The department will allow up to two courses from other LSA departments to be included in the concentration plan.

The department expects that 15 of the 30 required credits for a sociology concentration be earned on the UM–Ann Arbor campus.

A combined total of eight credits of independent study or experiential credit may be included in the concentration. This includes SOC 321, 324, 389, 394, 395, and 396. Note that there is an additional limit of SOC 389 credits; only four credit of SOC 389 may be included in the concentration program.

500-level Sociology courses may be taken by undergraduates with permission of instructor only.

Sociology Honors Program

The Honors Program in Sociology combines the advantage of a liberal arts college with that of a major research university by offering students the opportunity to answer their own independent research question with the guidance of faculty mentors. The research culminates in a thesis, a written analysis of the research data. The thesis demonstrates the expertise students have developed in their undergraduate years and illustrates their capacity to contribute to a field of inquiry – especially important should they pursue advanced degrees. It stands as an emblem both of undergraduate achievement and of scholarly promise.

Equally important, Honors students find the opportunity to work in tandem with inventive and highly-motivated peers a reward in itself. The sequence of thesis seminars provides a context in which students exchange information, provide support for one another's work, and offer feedback as projects develop.

Beyond these educational rewards, the pragmatic benefits of the Honors Program are also important: independent research naturally looks good to graduate and professional schools, as does a recommendation from a professor who knows the student well. A Michigan degree awarded "with Honors" (or perhaps "with Highest Honors") catches the eye of prospective employers.

Regardless of whether a student enters the University in the LSA Honors Program, all students who meet the minimum requirements for the Honors Program in Sociology must apply to participate. Students do not have to have been admitted to the LSA Honors Program as a first-year student in order to apply.

The Program begins with SOC 397 (3 credits) in the second term of the junior year and continues through the senior year with SOC 398 (3 credits) and 399 (3 credits). During SOC 398 and 399, students work with the supervision of their faculty mentors, while continuing to meet individually with the faculty Honors coordinator. SOC 397 is offered in the Winter Term only.

Honors Application Prerequisites and Course Planning. Applicants to the Honors Program in Sociology have at least a 3.5 GPA within their sociology courses and at least a 3.4 cumulative GPA. In addition, they already will have demonstrated originality in their own course work, shown a serious interest in scholarly research, and given evidence of their ability to work independently on a thesis. Students should plan on completing SOC 210 or STATS 250 (or 350) **prior** to enrolling in SOC 397 and should take SOC 310 or 312 prior to or concurrently with it. The Honors Program in Sociology is a three-term sequence of course and thesis work. Students typically apply as first-term juniors and begin with the first course, SOC 397, the following academic term.

To graduate with Honors, students must meet all concentration requirements; complete SOC 397, 398, and 399; write an acceptable Honors thesis; and maintain a 3.4 overall GPA. Upon completion of this course work and dependent upon the evaluation of the thesis, the academic record and diploma will designate the degree awarded "with Honors," "with High Honors," or "with Highest Honors."

Interested students should call (734) 764-6324 or visit www.lsa.umich.edu/soc/undergraduate to make an appointment with the department's concentration advisor.

COURSES IN SOCIOLOGY (SOC)

SOC 100. Principles of Sociology

Restricted to first, second, and third year students. (Prerequisites enforced at registration.) Seniors must elect SOC 300 to receive academic credit for an introductory sociology course. Juniors are encouraged to enroll in SOC 300. (4; 3 in the half-term). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SOC 195 or 300. No credit for seniors. May not be included in a Sociology concentration plan. (Introductory course).

SOC 102. Contemporary Social Issues: An Introduction to Sociology

Open to first- and second-year students. Juniors are strongly encouraged and seniors must take SOC 300 or 401. (4; 3 in the half-term). (SS). May be repeated for a maximum of 8 credits. Credit is granted for a combined total of eight credits elected through SOC 102, 202, 203, and 401, provided that the course topics are different. No credit for seniors. May not be included in a Sociology concentration plan. (Introductory course).

SOC 105. First Year Seminar in Sociology

Enrollment restricted to first-year students, including those with sophomore standing. (3). (SS). May not be repeated for credit. May not be included in a Sociology concentration plan.

SOC 110 / SI 110. Introduction to Information Studies

(4). (SS). May not be repeated for credit.

SOC 111 / AOSS 172 / ENSCEN 172 / ENVIRON 111 / GEOG 111 / GEOSCI 172. Introduction to Global Change: Human Impacts

(4). (SS). May not be repeated for credit. May not be included in a Sociology concentration plan. Satisfies the geography requirement for State of Michigan certification for social studies teachers. W.

SOC 122 / PSYCH 122 / UC 122. Intergroup Dialogues

(2). May be repeated for a maximum of 4 credits. May not be included in a concentration in Psychology or Sociology.

SOC 195. Principles in Sociology (Honors)

Open to first- and second-year students admitted to the Honors Program, or other first- and second-year students with a grade point average of at least 3.2. Juniors are strongly encouraged and seniors must take SOC 202 or 300. (4). (SS). May not be repeated for credit. Credit is not granted for both SOC 195 and SOC 100, 202, or 300. No credit for seniors. May not be included in a Sociology concentration plan. (Introductory course).

SOC 200 / AMCULT 200 / COMM 200 / PSYCH 208 / UC 200. The Academic Paradox (3). (ID). May not be repeated for credit. Does not count toward concentrations in American Culture, Communication Studies, or Psychology.

SOC 210. Elementary Statistics

Sociology concentrators should elect this course during their sophomore year. Honors concentrators should enroll in SOC 210 prior to beginning the Honors course sequence in the winter term of the junior year. (4; 3 in the half-term). (MSA). (BS). (QR/1). May

not be repeated for credit. No credit granted to those who have completed or are enrolled in STATS 100, 265, 311, 350, 405, or 412, or ECON 404 or 405, or IOE 265. F, W, Sp.

SOC 212 / GERMAN 212. Sports and Society

(3). (SS). May not be repeated for credit. Taught in English.

SOC 215 / ORGSTUDY 215. Organization and Society

One introductory course in Sociology. (4). May not be repeated for credit. SOC 218 / UC 218. Foundations of Intergroup Relations

(3). May not be repeated for credit.

SOC 220 / RCSSCI 220. Political Economy

(4). (SS). May not be repeated for credit.

SOC 230. Health and Population in South Africa *(3). (SS). May not be repeated for credit.*

SOC 235. South Africa in Transition: Field Experience

Consent of instructor required. Enrollment is restricted to students enrolled in or have taken SOC 230 and have instructor permission. (2). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

SOC 255. Sociology of Music

One course in sociology or musicology, or extensive personal background in music. (3). May not be repeated for credit.

SOC 260 / CMPLXSYS 260. Tipping Points, Bandwagons and Cascades: From Individual Behavior to Social Dynamics

(3). May not be repeated for credit.

SOC 280 / RCSSCI 280. Moral Choice in Context: Social-Psychological and Historical Perspectives

Sophomore standing. (4). (SS). May not be repeated for credit.

SOC 295. Topics in Sociology

(1 - 4). May be repeated for a maximum of 8 credits. May be elected more than once in the same term.

SOC 300. Sociological Principles and Problems

A student can enroll in SOC 300 as long as they have not taken SOC 100, 101, 102, 105, 195 or 202. (Prerequisites enforced at registration.) (3). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SOC 100 or 195.

SOC 303 / CAAS 303. Race and Ethnic Relations

An introductory course in Sociology or CAAS; CAAS 201 recommended. (4; 3 in the half-term). (SS). (R&E). May not be repeated for credit.

SOC 304 / AMCULT 304. American Immigration

(4). (SS). May not be repeated for credit.

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SOC 305. Introduction to Sociological Theory

(4; 3 in the half-term). May not be repeated for credit.

SOC 310. Sociological Research Methods

One introductory course in sociology (SOC 100, 101, 102, 105, 195, 202, 300, or 401). Must be declared sociology concentrator. (Prerequisites enforced at registration.) Sociology concentrators are strongly encouraged to elect SOC 310 in their junior year. Honor concentrators should elect this course prior to or concurrently with SOC 397 (the first required course in the Sociology honors sequence). (4; 3 in the half-term). (BS). (QR/1). May not be repeated for credit. Fulfills the sociology Research Methods Requirement. F, W, Su.

SOC 312. The Evaluation of Evidence in Sociology

Students enrolling in SOC 312 are very strongly encouraged to have already completed an introductory statistics course (e.g. SOC 210 or STATS 350) before enrolling in this course. (4). (QR/1). May not be repeated for credit. Fulfills the sociology Research Methods Requirement.

SOC 315. Economic Sociology

One of the following: introductory Economics, Sociology, or Political Science. (4). (SS). May not be repeated for credit.

SOC 320 / PSYCH 310 / UC 320. Processes of Intergroup Dialogues Facilitation

Admission by application. At least junior standing and PSYCH 122 or SOC 122. (3). (R&E). May not be repeated for credit.

SOC 321 / PSYCH 311 / UC 321. Practicum in Facilitating Intergroup Dialogues

PSYCH 310/SOC 320 and permission of instructor. (3). (EXPERIENTIAL). May not be repeated for credit. A combined total of eight credits of SOC 321, 324, 389, 394, 395, and 396 may be counted toward a concentration in Sociology.

SOC 323 / CAAS 321. African American Social Thought

CAAS 201. (3). (SS). May not be repeated for credit.

SOC 324 / PSYCH 324 / UC 324. Advanced Practicum in Intergroup Relations

Consent of instructor required. UC 320/PSYCH 310/SOC 320. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 6 credits. A combined total of eight credits of SOC 321, 324, 389, 394, 395, and 396 may be counted toward a concentration in Sociology.

SOC 325. Sociology of Service Learning

Consent of instructor required. Permission of instructor. (4). May not be repeated for credit.

SOC 342 / HISTORY 342 / POLSCI 345. History of European Integration (3). (SS). May not be repeated for credit.

SOC 344. Marriage and the Family: A Sociological Perspective

One introductory course in Sociology. (4; 3 in the half-term). (SS). May not be repeated for credit.

SOC 345 / WOMENSTD 348. Sociology of Sexuality

One introductory course in Sociology. (4; 3 in the half-term). May not be repeated for credit.

SOC 350. Human Rights in the United Nations

One introductory course is sociology, political science, or other disciplines that examine human rights and globalization. (4). May not be repeated for credit.

SOC 368. Criminology

(4; 3 in the half-term). (SS). May not be repeated for credit.

SOC 380 / ENVIRON 345 / POLSCI 331. Environmental Public Opinion Analysis (3). (SS). May not be repeated for credit.

SOC 389. Practicum in Sociology

(2 - 4). (EXPERIENTIAL). May be repeated for a maximum of 8 credits. May be elected more than once in the same term. A combined total of eight credits of SOC 321, 324, 389, 394, 395, and 396 may be counted toward a concentration in Sociology. A maximum of four credits of SOC 389 may be included in a concentration plan in sociology. Offered mandatory credit/no credit.

SOC 392 / HISTORY 332 / POLSCI 395 / REES 395 / SLAVIC 395. Survey of Russia: The Russian Empire, the Soviet Union, and the Successor States

(4; 3 in the half-term). (SS). May not be repeated for credit. May not be counted in a Slavic Department academic minor. F.

SOC 393 / HISTORY 333 / POLSCI 396 / REES 396 / SLAVIC 396. Survey of Central and Eastern Europe and the Enlarged European Union

(4; 3 in the half-term). (SS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in REES 397. May not be counted in a Slavic Department academic minor.

SOC 394. Undergraduate Research

Consent of instructor required. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. A combined total of eight credits of SOC 321, 324, 389, 394, 395, and 396 may be counted toward a concentration in Sociology.

SOC 395. Independent Study

Consent of instructor required. Enrollment requires departmental application and permission of supervising faculty. Sociology concentrators only. (1 - 4). (INDEPEN-DENT). May be repeated for a maximum of 8 credits. May be elected more than once in the same term. A combined total of eight credits of SOC 321, 324, 389, 394, 395, and 396 may be counted toward a concentration in Sociology.

SOC 396. Undergraduate Internship

Consent of department required. (1). (EXPERIENTIAL). May be repeated for a maximum of 2 credits. A combined total of eight credits of SOC 321, 324, 389, 394, 395, and 396 may be counted toward a concentration in Sociology. Offered mandatory credit/no credit.

SOC 397. Junior Honors in Sociology

Honors Sociology concentrators and [SOC 210 or STATS 350]. Consent of instructor required. (Prerequisites enforced at registration.) (3). May not be repeated for credit. W.

SOC 398. Senior Honors in Sociology

SOC 397. Consent of instructor required. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of SOC 399, the final grade is posted for both term's elections. F.

SOC 399. Senior Honors in Sociology

SOC 398. Consent of instructor required. (Prerequisites enforced at registration.) (3). May not be repeated for credit. W.

SOC 410. The American Jewish Community

One introductory course in Sociology. (3). May not be repeated for credit.

SOC 415. Culture and Consumption

One introductory course in sociology, psychology, or anthropology. (3). May not be repeated for credit.

SOC 417. Social Networks

One introductory SOC course. (3). May not be repeated for credit.

SOC 423 / AMCULT 421. Social Stratification

(3). May not be repeated for credit.

SOC 428. Contemporary China SOC 100, 195, or 300. (3). May not be repeated for credit.

SOC 430. World Population Dynamics

(3). (QR/2). May not be repeated for credit. No credit granted to those who have completed or are enrolled in SOC 530.

SOC 434 / CAAS 434. Social Organization of Black Communities

Introduction to SOC or introduction to CAAS. (3). May not be repeated for credit.

SOC 435. Urban Inequality and Conflict

Credit is granted for only one course from Soc. 335,435, or 535. Does not meet Soc. doctoral requirements. (3). May not be repeated for credit. Credit is granted for only one course from SOC 435 and 535.

SOC 440. Sociology of Work

One introductory course in Sociology. (3). May not be repeated for credit.

SOC 447 / WOMENSTD 447. Sociology of Gender

One introductory course in sociology or women's studies. (3). May not be repeated for credit.

SOC 450. Political Sociology (3). May not be repeated for credit.

SOC 453 / RCSSCI 463. Mexican Labor in North America (4). May not be repeated for credit.

SOC 454. Law and Society

One introductory course in Sociology. (3). May not be repeated for credit.

SOC 455 / RELIGION 455. Religion and Society (3). May not be repeated for credit.

SOC 457. Sociology of Nationalism

Introductory sociology course. (3). May not be repeated for credit.

SOC 458. Sociology of Education

One introductory course in Sociology. (3). May not be repeated for credit.

SOC 461. Social Movements

One introductory course in Sociology. (3). May not be repeated for credit.

SOC 465 / PSYCH 488. Sociological Analysis of Deviance

Introductory Sociology or introductory Psychology as a social science. (3). May not be repeated for credit.

SOC 472 / PSYCH 381. Advanced Laboratory in Social Psychology

STATS 350 or 425 or MATH 425; and one of the following: PSYCH 111, 112, 114, or 115. (Prerequisites enforced at registration.) PSYCH 280. (3). May not be repeated for credit. Satisfies a Psychology research-based laboratory requirement. F, W, Su.

SOC 475. Introduction to Medical Sociology

(3). May not be repeated for credit.

SOC 476. Sociology of Bioethics

One introductory course in sociology. (3). May not be repeated for credit.

SOC 490 / REES 490 / WOMENSTD 492. Women and Islam: A Sociological Perspective

(3). May not be repeated for credit.

SOC 495. Topics in Sociology

One introductory course in Sociology. (1 - 3). May be repeated for credit. May be elected more than once in the same term.

Center for South Asian Studies (CSAS)

1080 South University Avenue, Suite 3603 (734) 764-0448 (phone) (734) 936-0996 (fax) www.ii.umich.edu/csas e-mail: csas@umich.edu Professor Juan Cole (History), Director

Not a concentration program. Undergraduates may pursue South Asian Studies through a concentration or academic minor in the Department of Asian Language and Cultures.

One of the largest programs devoted to South Asia in the U.S., the Center seeks to promote a broader and deeper understanding of this region, its people and their cultures. Our goals are to ensure that our students graduate with a greater global perspective and understanding; and to support innovative and advanced faculty research on international issues of major importance to the United States and the world.

The Center for South Asian Studies offers a broad, interdisciplinary approach to the study of South Asia at the Master's and Graduate Certificate levels. Undergraduates may pursue South Asian Studies through a concentration or academic minor in the Department of Asian Language and Cultures. In addition to the courses offered by the Center, students can find courses on South Asia offered by the various disciplinary departments, such as History, Anthropology, Political Science, *etc.* The Center posts a complete South Asia area course list on its web site each term.

COURSES IN SOUTH ASIAN STUDIES (SAS)

SAS 455. Topics in South Asian Studies

Juniors, Seniors, and Grad students. (3). May be repeated for a maximum of 12 credits. May be elected more than once in the same term. Rackham credit requires additional work.

Center for Southeast Asian Studies (CSEAS)

1080 South University Avenue, Suite 3603 (734) 764-0352 (phone) (734) 936-0996 (fax) www.ii.umich.edu/cseas e-mail: cseas@umich.edu Associate Professor Allen D. Hicken (Political Sci

Associate Professor Allen D. Hicken (Political Science), Interim Director

Not a concentration program. Undergraduates may pursue Southeast Asian Studies through a concentration or academic minor in the Department of Asian Language and Cultures.

Southeast Asia is one of the world's most dynamic and interesting regions, and the University of Michigan is one of the best places to study Southeast Asia in the world.

The Center for Southeast Asian Studies is a U.S. Department of Education National Resource Center. The Center is committed to promoting a broader and deeper understanding of Southeast Asia and its peoples, cultures, and histories by providing resources for faculty, students and the community to learn and disseminate knowledge about the region.

The Center for Southeast Asian Studies offers a broad, interdisciplinary approach to the study of Southeast Asia at the Master's degree level. Undergraduates may pursue Southeast Asian Studies through a concentration or academic minor in the Department of Asian Language and Cultures. In addition to the courses offered by the Center, students can find courses on Southeast Asia offered by the various disciplinary departments, such as History, Anthropology, Political Science, *etc.* The Center posts a complete Southeast Asia area course list on its web site each term.

Drawing on over 100 years of engagement with the region, every year Michigan offers a wide range of courses, student clubs and events focusing on Southeast Asia. Whether you want to take a course on the region, travel to the Philippines, Indonesia, Singapore, Thailand or Vietnam with faculty members, or study abroad for a semester, you can discover more about this fascinating part of the world while you're here at Michigan.

First Year Southeast Asian Language Scholarships. In order to support learning about Southeast Asia, the Center for Southeast Asian Studies offers a set of scholarships for students taking First Year Filipino, Indonesian, Thai or Vietnamese in the coming school year. CSEAS will offer between 8 and 12 \$1000 scholarships on a competitive basis to students enrolling in one of the following sequence of courses:

- First-Year Filipino I and II: ASIANLAN 111.001 (Fall), ASIANLAN 112.001 (Winter)
- First-Year Indonesian I and II: ASIANLAN 121.001 (Fall), ASIAN-LAN 122.001 (Winter)
- First-Year Thai I and II: ASIANLAN 161.001 (Fall), ASIANLAN 162.001 (Winter)
- First-Year Vietnamese I and II: ASIANLAN 175.001 (Fall), ASIANLAN 176.001 (Winter)

The scholarships are available to both undergraduate and graduate students, but with preference to undergraduates in their first or second years at the University.

Winners of the scholarship competition will be given \$500 each academic term, paid out after the drop-add deadline each term, and applied to their Financial Aid package. Students must complete the two-course sequence.

Applying for the First Year Southeast Asian Language Scholarships:

A complete application will include:

- A completed application form
- A one-page personal statement
- A language self-report
- A letter of recommendation from a former or current language teacher (if possible) or from another teacher or instructor
- Academic transcripts

Applications are due in mid-March; Language scholars and alternates are named in early April. Consult the Center's website for specific dates.

For more information, please email us at cseas@umich.edu, or call (734) 764-0352.

Foreign Language and Area Studies (FLAS) Fellowships for Undergraduates. The Center announces a new funding opportunity for students who are U.S. citizens or permanent residents, and are able to study a Southeast Asian language (Filipino, Indonesian, Thai, or Vietnamese) at the second year level or beyond. An academic year fellowship covers \$10,000 toward tuition and a \$5,000 stipend. Contact the Center for details.

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Overseas Study. The University of Michigan's Center for Southeast Asian Studies is a member of several Southeast Asian Language consortiums that offer advanced language training abroad in Indonesia, Thailand, the Philippines, and Vietnam. The University of Michigan also belongs to the *Consortium for International Educational Exchange* (CIEE) that offers possibilities for study abroad in Thailand and Vietnam. It is also a member of the *Southeast Asian Summer Studies Institute* (SEASSI) held each summer at the University of Wisconsin–Madison. For further information on summer programs, please consult our website:

www.ii.umich.edu/cseas/academics/summerprog.

COURSES IN SOUTHEAST ASIAN STUDIES (SEAS)

SEAS 215 / UC 215. Contemporary Social Issues in Southeast Asia (3). (SS). May not be repeated for credit. W.

SEAS 450. Minicourse in Southeast Asian Studies

Junior, Senior, or graduate students. (1 - 2). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. Rackham credit requires additional work.

SEAS 452 / HISTORY 452. History of Late-Colonial Southeast Asia, 1780-1942 (3). May not be repeated for credit.

SEAS 453 / HISTORY 453. History of Post-Colonial Southeast Asia, 1942-2000 (3). May not be repeated for credit.

SEAS 455. Topics in Southeast Asian Studies

Junior, Senior, graduate students. (3). May be repeated for a maximum of 12 credits. May be elected more than once in the same term. Rackham credit requires additional work.

Statistics

439 West Hall 1085 South University Avenue (734) 763-3519 (phone) (734) 763-4676 (fax) www.stat.lsa.umich.edu

Professor Tailen Hsing, Chair

Professors

- Richard Gonzalez (Psychology), Research methodology; mathematical psychology; statistics; judgment and decision making; psychology and law; group dynamics; social cognition
- Alfred Hero (EECS) (R. Jamison and Betty Williams Professor of Engineering), *Statistical communications theory, communications network, bioinformatics*
- Tailen Hsing, *Extreme value theory, functional data analysis, time series and spatial statistics*
- James Joyce (Philosophy), decision theory, game theory, philosophical aspects of probability and statistics, and philosophy of science
- Robert Keener, Sequential design, multivariate renewal theory, limit theorems
- Roderick Little (Biostatistics), Analysis of data with missing values, survey inference, biostatistics, psychiatric statistics
- Walter Mebane, American government and political methodology
- George Michailidis, *Analysis of high dimensional data, semi*supervised learning, network tomography, inverse problems on a graph, bioinformatics, data visualization
- Susan Murphy (Herbert E. Robbins Collegiate Professor of Statistics), Individually tailored treatments, multi-stage decisions, causal inference high dimensional modeling
- Vijayan Nair (Donald A. Darling Professor of Statistics), *Quality and productivity improvement, reliability, robust design, process control, spatial statistics*
- Ed Rothman, *Biological and legal applications, nonparametric regression, spatial statistics, statistical process control, the philosophy of W. Edwards Deming*
- Naisyin Wang, Non- and semiparametric methods, measurement error models, longitudinal and functional data analysis, biological and medical applications
- Yu Xie (Sociology) (Otis Dudley Duncan Distinguished University Professor of Sociology), Social Stratification, Methods and Statistics, Demography, Sociology of Science

Associate Professors

- Moulinath Banerjee, *Likelihood based methods, non-regular asymptotics, shape restricted estimation, nonparametric methods and their applications*
- Edward Ionides, inference for stochastic processes, with applications to cell motion, ecology, epidemiology and neuroscience
- Elizaveta Levina, Inference for high-dimensional data: "large p small n" problems, covariance estimation, dimensionality reduc-

tion, classification; Applications to wireless sensor networks, computer vision, spectroscopy, remote sensing, gene array data

- Kerby Shedden, Analysis of biomedical screening experiments; Longitudinal analysis; Applications to cheminformatics, cancer, behavioral genetics; Statistical computing
- Ji Zhu, Statistical machine learning and data mining; High dimensional data analysis; Statistical network analysis; Statistics in finance and marketing; Computational biology

Assistant Professors

- Yves Atchade, *Monte Carlo methods, Limit Theorems for Markov Chains and adaptive Markov chains, causal inference, social networks*
- Ben B. Hansen, Casual inference in comparative studies, particularly observational studies in the social sciences; matching and propensity scores; randomization-based inference; minimum expectedlength confidence intervals
- Long Nguyen, Machine learning; variational inference; nonparametric Bayesian methods for functional and spatial data; applications to statistical signal processing and ecological modeling
- Stilian Stoev, Stochastic processes, time series analysis and their applications

Senior Lecturer

Brenda Gunderson, *Statistical education, applied statistics, multiva*riate statistics

Professor Emeritus Bruce Hill, Michael Woodroofe

The field of Statistics offers a variety of exciting career opportunities. Statistics deals with methods for the collection, visualization, modeling and analysis of data. Massive amounts of data are now routinely collected in business, health, environment, engineering and social sciences. Statistics is the science that transforms these data into information that is critical for decision making. Statistics has always played a major role in marketing, public policy, social and health sciences through the design and analysis of surveys. More recently, statistical methods have been an important part of advances in medicine and engineering such as genetics, tomography, speech recognition, computational vision, and so on. Statistics is a vibrant field that is embarking on an even more exciting journey as we move ahead to the data-rich, information era of the 21st century. We invite you to be join us on this journey and share in the excitement!

The Department of Statistics offers an undergraduate concentration program in Statistics that consists of courses in applied and theoretical statistics, mathematics and computer science. Two undergraduate academic minor programs are also available: Applied Statistics and Statistics academic minors. The department also is the administrative home of the interdepartmental program in Informatics.

Informatics

May be elected as an interdepartmental concentration program

Informatics is the study of the structure, behavior and interactions of human and technical information processing systems. Informatics includes exploration of the representation, processing, and communication of information from computational, cognitive and/or social perspectives. This interdepartmental program combines study in the College of Literature, Science, and the Arts, the College of Engineering, and the School of Information. The concentration is administered by the Department of Statistics. Informatics concentrators may not use any STATS courses toward the LSA Area Distribution requirement.

Students interested in the Informatics concentration should consult the "Informatics" section in this *Bulletin*.

Statistics

May be elected as a departmental concentration program

The concentration program is designed to equip students with sufficient background and experience to enable them to implement various standard statistical analyses on real data sets. The program includes a combination of mathematics, probability, and theoretical statistics so a student will understand the bases of modern statistical methodology and to be able to read some of the statistical research literature. The computer courses provide training to enable a student to produce programs to perform various statistical computations. In short, the program is designed to provide the student with sufficient tools to enable him/her to contribute to the research efforts of diverse employers. In addition, the program has been designed in such a way that it will serve as prerequisite for graduate studies in statistics at virtually all major universities.

Prerequisites to Concentration. MATH 215 and 217; EECS 182 or 183.

Concentration Program. Upon completion of the above prerequisite courses, the concentration program consists of at least 30 credits, additionally, in statistics, mathematics and electrical engineering and computer science courses. These 30 credits must include the following:

- 1. Core Statistics courses: STATS 250 (or 350), 500, 425 and 426.
- 2. Core Computing course: STATS 406.
- 3. Additional Statistics courses: At least one of STATS 415, 430, 470, or 480.
- 4. Elective courses in Statistics, Mathematics, or EECS. These are advisor approved electives. The list of approved courses include:
 - STATS 404, 408, 449
 - any 500+ level Statistics courses,
 - any additional courses from #3 above,
 - 400+ level advisor-approved MATH courses, and
 - 300+ level *advisor-approved* EECS course.

Students interested in the application of statistics to various disciplines such as economics, biological sciences, and psychology are also encouraged to take courses in these areas.

Honors Concentration. Any student who has maintained an overall grade point average of at least 3.4 through the sophomore year may apply for admission to the Honors concentration program. Such application is made through a Statistics Department undergraduate concentration advisor. Students in the Honors program must complete the regular concentration program above with the following modifications: the math course must be MATH 451 and an overall GPA of at least 3.5. In addition, Honors concentrators must elect the Senior Honors Seminar (STATS 499) and complete a project under the direction of a member of the faculty. This additional requirement should be arranged and discussed with a Statistics Department undergraduate concentration advisor.

Advising. Normally, most statistics courses are elected after an introductory mathematics sequence has been completed or after consulting a department undergraduate advisor. See Department website for contact information: www.stat.lsa.umich.edu/undergrad

Statistics Academic Minors

Academic minors in Statistics are not open to students with a concentration or any other academic minor in Statistics.

Students wishing to pursue an academic minor in Statistics must develop a specific plan for its completion in consultation with a Statistics Department undergraduate concentration advisor. See Department website for contact information:

www.stat.lsa.umich.edu/undergrad

Applied Statistics

The Applied Statistics academic minor program is designed to introduce students to applied statistical methodology. The academic minor will provide students with an appreciation for the tools that enable them to be involved in the design and analysis of quantitative studies as part of their professional careers or for pursuing graduate studies in applied fields.

Prerequisites to the Academic Minor: MATH 115.

Academic Minor Program: At least 15 credits of courses, to be chosen from the following categories as stated:

- 1. Core Courses: STATS 250 (or 350) and 401
- 2. **Elective Statistics Courses:** At least three of the following courses: STATS 403, 408, 449, 470, 480. Advanced Statistics courses may be included with prior approval of a Statistics Department undergraduate concentration advisor.

Exclusions: The following courses may not be used as electives for the Applied Statistics academic minor: STATS 400, 404, 412, 489, 499.

Statistics

The Statistics academic minor program is designed to equip students with a general introduction to probability and statistics. It allows a broad selection of classes to suit both general and specific interests.

Prerequisites to the Academic Minor: MATH 215.

Academic Minor Program: At least 15 credits of courses, to be chosen from the following categories as stated:

- 1. Core Courses: STATS 250 (or 350) and 425, or STATS 412 and 425.
- 2. **Elective Statistics Courses**: At least three additional 400-level STATS courses to bring the credit total to 15, chosen in consultation with, and approved by, a Statistics Department undergraduate concentration advisor.

Exclusions: The following courses may not be used as electives for the Statistics academic minor: STATS 400, 404, 412, 489, 499.

COURSES IN STATISTICS (STATS)

STATS 125. Games, Gambling and Coincidences

Enrollment restricted to first-year students, including those with sophomore standing. (3). (MSA). (BS). (QR/1). May not be repeated for credit.

STATS 150. Making Sense of Data

(3). (MSA). (QR/1). May not be repeated for credit. No credit to those who have completed or are enrolled in SOC 210, IOE/STATS 265, STATS 350, 400, 412, ECON 404, ECON/STATS 405, or ENVIRON/NRE 438.

STATS 250. Introduction to Statistics and Data Analysis

(4). (NS). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ECON 404 or 405, or IOE 265 or STATS 265, 400, 405, or 412, or NRE 438 (or ENVIRON 438).

STATS 265 / IOE 265. Probability and Statistics for Engineers

MATH 116 and ENGR 101 with a grade of at least a C-. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in STATS 350, 400, 405, or 412, or ECON 404 or 405, or NRE 438 (or ENVIRON 438).

STATS 400. Applied Statistical Methods

High School Algebra. (4). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ECON 404 or 405, or STATS 265, 350, 405, or 412, or IOE 265, or NRE 438 (or ENVIRON 438). May not be used in the Statistics or Applied Statistics academic minor.

STATS 401. Applied Statistical Methods II

MATH 115, and STATS 350 or 400 or 405, or ECON 405, or NRE 438. No credit granted to those who have completed or are enrolled in STATS 413. (4). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in STATS 413.

STATS 403. Introduction to Quantitative Research Methods

MATH 115, one of STATS 265, 350, 400, 405, 412 or permission of instructor. (4). (BS). May not be repeated for credit.

STATS 404. Effective Communication in Statistics

STATS 470 or 480, and permission of department. (2). (BS). May not be repeated for credit. May not be used in the Statistics or Applied Statistics academic minor.

STATS 406. Introduction to Statistical Computing

STATS 401 AND MATH 215; or STATS 403 and MATH 215; or STATS 412; or MATH 425. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F.

STATS 408. Statistical Principles for Problem Solving: A Systems Approach High school algebra. (4). (BS). May not be repeated for credit. No credit granted to

High school algebra. (4). (BS). May not be repeated for credit. No credit granted to those who have completed or are enrolled in STATS 170.

STATS 412. Introduction to Probability and Statistics

Prior or concurrent enrollment in MATH 215. (3). (BS). (QR/1). May not be repeated for credit. No credit granted to those who have completed or are enrolled in ECON 405, STATS 265, 400, or 405, or IOE 265. One credit granted to those who have completed

or are enrolled in STATS 350. May not be used in the Statistics or Applied Statistics academic minor. F, W, Sp.

STATS 415. Data Mining and Statistical Learning

MATH 215 and 217, and one of STATS 401, 406, 412 or 426. (4). May not be repeated for credit.

STATS 425 / MATH 425. Introduction to Probability

MATH 215. (3). (BS). May not be repeated for credit. F, W, Sp, Su.

STATS 426. Introduction to Theoretical Statistics

STATS 425. (3). (BS). May not be repeated for credit. STATS 430. Applied Probability

STATS 425 or equivalent. (3). (BS). May not be repeated for credit.

STATS 449 / BIOSTAT 449. Topics in Biostatistics

STATS 401 or permission of instructor. (3). (BS). May not be repeated for credit.

STATS 466 / IOE 466 / MFG 466. Statistical Quality Control

STATS 401 or IOE 366 with a grade of C- or better; or graduate standing. (Prerequisites enforced at registration.) (3). (BS). May not be repeated for credit.

STATS 470. Introduction to the Design of Experiments

STATS 401 or 412 or 425, or MATH 425. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. F.

STATS 480. Survey Sampling Techniques

STATS 401 or 412 or 425 or MATH 425. (Prerequisites enforced at registration.) (4). (BS). May not be repeated for credit. W.

STATS 489. Independent Study in Statistics

Consent of instructor required. Permission of instructor. (1 - 4). May be repeated for a maximum of 4 credits. May not be used in the Statistics or Applied Statistics academic minor.

STATS 499. Honors Seminar

Consent of instructor required. Permission of departmental Honors advisor. (2 - 3). (BS). (INDEPENDENT). May not be repeated for credit. May not be used in the Statistics or Applied Statistics academic minor. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. F, W, Sp.

STATS 500. Applied Statistics I

MATH 417, and STATS 350 or 426. (3). (BS). May not be repeated for credit. F.

STATS 504. Statistical Consulting

STATS 401 or 500. (3). (BS). May be repeated for a maximum of 9 credits. STATS 525 / MATH 525. Probability Theory

MATH 451 (strongly recommended). MATH 425/STATS 425 would be helpful. (3). (BS). May not be repeated for credit.

STATS 526 / MATH 526. Discrete State Stochastic Processes

MATH 525 or STATS 525 or EECS 501. (3). (BS). May not be repeated for credit.

Gayle Morris Sweetland Writing Center

1310 North Quad 105 South State Street

(734) 764-0429 (phone)

(734) 763-9148 (fax)

www.lsa.umich.edu/swc

e-mail: swcinfo@umich.edu

Professor Anne Ruggles Gere (English and School of Education), Director

Dr. Naomi Silver, Associate Director

Not a concentration program

Professor: Anne Ruggles Gere (Arthur F. Thurnau Professor)

Lecturers: Paul Barron, Charlotte Boulay, Gina Brandolino, Louis Cicciarelli, George Cooper, Helen Fox, Alan Hogg, Elizabeth Hutton, K. Matthew Kelley, Danielle LaVaque-Manty, Raymond McDaniel, Jennifer Metsker, Christine Modey, Alexander Ralph, Christopher Schmidt, Naomi Silver, Carol Tell

At the University of Michigan, writing plays a critical role in students' thinking and learning, beginning with the first year and continuing into advanced writing in the disciplines. Students' ability to write prose characterized by intellectual force, clarity, appropriate organization and development of ideas, effective use of evidence, cogency, and stylistic control is crucial to their success both during their undergraduate years and beyond.

The Sweetland Writing Center (SWC) exists to support the improvement of student writing. To accomplish this mission, SWC:

- administers LSA's writing requirements;
- helps students choose their first writing course;
- reviews courses to satisfy the First-Year Writing Requirement;
- approves courses to satisfy the Upper-Level Writing Requirement;
- approves courses from other institutions that satisfy the First-Year Writing Requirement for transfer students;
- operates a Writing Workshop for both undergraduate and graduate students;
- operates three Peer Tutoring Centers and the Online Writing Lab;
- trains undergraduates to become Peer Tutors in SWC 300: Seminar in Peer Tutoring and SWC 301: Directed Peer Tutoring;
- teaches:
 - SWC 100: Transition to College Writing,
 - SWC 200: New Media Writing,
 - SWC 400: Advanced Rhetoric and Research,
 - SWC 410: Quantitative Analysis and Writing in the Disciplines,
 - SWC 630: Advanced Writing for Graduate Students, and
 - SWC 993: Teaching Writing in the Disciplines;
- runs an invitational faculty/graduate student seminar on writing instruction;
- consults with faculty and departments about First-Year and Upper-Level Writing Requirement courses;
- offers individual consultations in any area of writing pedagogy of interest to the instructor;

- offers workshops that deal with common and more specialized issues in writing;
- offers a Dissertation Writing Institute for graduate students; and
- conducts research on writing.

LSA Writing Requirements

The Sweetland Writing Center administers the First-Year Writing Requirement and the Upper-Level Writing Requirement. A minimum grade of C- in a Sweetland-approved course is necessary to satisfy each requirement.

The purpose of these writing requirements is to provide students with both introductory and advanced instruction in college-level writing. Courses from the 100 to the 400 level aim to enhance students' critical thinking and writing skills and prepare them for writing both in their undergraduate years and in their future educational and professional work.

First-Year Writing Requirement (FYWR). The goal of the First-Year Writing Requirement is to prepare students for the type of writing most often assigned and valued in University classes.

The First-Year Writing Requirement should be completed in the first year with a minimum grade of C– and must be satisfied before electing a class to satisfy the Upper-Level Writing Requirement. Advanced Placement (AP) credit is not equivalent to the FYWR.

Overall learning goals for students are as follows:

- produce complex, analytic, well-supported arguments that matter in academic contexts;
- read, summarize, analyze, and synthesize complex texts purposefully in order to generate and support writing;
- demonstrate an awareness of the strategies that writers use in different rhetorical situations;
- develop flexible strategies for organizing, revising, editing, and proofreading writing of varying lengths to improve development of ideas and appropriateness of expression; and
- collaborate with peers and the instructor to define revision strategies for particular pieces of writing, to set goals for improving writing, and to devise effective plans for achieving those goals.

First-Year Writing Requirement courses offered for a particular term can be found by using the advanced search function in the *LSA Course Guide* and selecting "first-year writing" under the "Other Requirements/Groupings" feature.

Rather than placing students in the course Sweetland judges appropriate for them, students are asked to select their first college writing course in consultation with their advisor. Prior to attending Orientation, students complete an online reading and writing assignment and answer questions about that experience and their previous experiences with writing. Students receive a course recommendation based upon their responses to this assignment. When meeting with their advisor during Orientation, students look at themselves as writers, discuss their course recommendation, and choose a writing course that will enable them to become more proficient and confident in University-level academic writing.

Students who seek a more individualized and gradual introduction to college writing may want to take *SWC 100: Transition to College Writing* offered by the Sweetland Writing Center before a First-Year Writing Requirement course. This course provides intensive one-on-one feedback on writing assignments, as well as the creation of an electronic portfolio, which enables students to integrate technology into their learning and reflect upon their development as writers.

International students who speak English as a second language may want to take *ELI 120: Academic Writing for International Undergraduates* offered by the English Language Institute before a First-Year Writing Requirement course. This course helps strengthen the writing skills of international undergraduates through critical reading and follow-up writing of text-types such as summary, critique and argument. ELI 120 can be taken at the same time as SWC 100 or prior to SWC 100.

Transfer students who have completed writing courses at another college or university may be able to use those courses to satisfy the First-Year Writing Requirement. The list of currently approved and non-approved courses is available at:

www.lsa.umich.edu/swc/requirements/first-year/transfer.

This webpage also provides information on what steps to take if the transfer course is not on either list.

Upper-Level Writing Requirement (ULWR). The goal of the Upper-Level Writing Requirement is to teach students to recognize and master the writing conventions of their chosen discipline.

Students must satisfy the First-Year Writing Requirement before electing one of the courses approved by the Sweetland Writing Center to satisfy the ULWR. A minimum course grade of C- is required in order to satisfy the ULWR.

Over the course of the term, students will complete several writing assignments that are related to course content and intended to help students practice the rhetoric of their specific discipline. Possible assignments may include journals, research papers, critical analyses, and/or lab reports. Students will receive a great deal of feedback on their writing from their ULWR instructor and are expected to revise much of their work throughout the term.

Overall learning goals for students are as follows:

- logically organize their thoughts into writing;
- use clear and concise language;
- analyze information masterfully;
- · incorporate appropriate evidence into their analyses; and
- understand the central concepts, approaches, materials and written conventions in their chosen discipline.

Upper-Level Writing Requirement courses offered for a particular term can be found by using the advanced search function in the *LSA Course Guide* and selecting "upper-level writing" under the "Other Requirements/Groupings" feature. A course approved to meet the requirement one term is not necessarily approved to meet the requirement in subsequent terms.

Instructor Support

Sweetland offers a variety of support and services for faculty and GSIs across the University. We are available to consult individually with instructors and visit classrooms as well as departments for workshops and training tailored to instructor and classroom needs.

Writing Support for Students

The Sweetland Writing Center aims to help writers become more confident, skilled, and knowledgeable about writing and the subjects they write about. Sweetland faculty and peer tutors supplement formal writing instruction in the Writing Workshop, Peer Tutoring Center, and the Online Writing Lab (OWL).

Writing Workshop. Writing Workshop offers free half-hour one-onone sessions with University writing instructors for students who want feedback on their writing. Make an appointment on our website, www.lsa.umich.edu/swc, or just walk into 1310 North Quad.

Peer Tutoring. The Sweetland Writing Center also operates three Peer Tutoring Centers, G219 Angell Hall, 1136 Shapiro Undergraduate Library, and the Lloyd Hall Writing Center, where students can get writing help on a walk-in basis, or electronically via Sweetland's Online Writing Lab (sitemaker.umich.edu/swcwritinghelp/home).

SWEETLAND WRITING CENTER COURSES (SWC)

SWC 100. Transition to College Writing

(3). May be repeated for a maximum of 6 credits. Offered mandatory credit/no credit.

SWC 200. New Media Writing

(1 - 4). May be elected three times for credit. May be elected more than once in the same term.

SWC 300. Seminar in Peer Tutoring

Application process and permission of department. (3). May not be repeated for credit. SWC 301. Directed Peer Tutoring

SWC 300. (Prerequisites enforced at registration.) (1 - 3). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

SWC 400. Advanced Rhetoric and Research

Completion of the First-Year Writing Requirement. (3). May not be repeated for credit. SWC 410. Quantitative Analysis and Writing in the Disciplines

First-year writing requirement. (3). (QR/2). May be repeated for a maximum of 6 credits.

Teacher Education Program

1228 School of Education Building 610 East University Avenue (734) 615-1528 (phone) (734) 647-9158 (fax) www.soe.umich.edu e-mail: te.program@umich.edu

Not a concentration program

The U-M School of Education offers undergraduate certification programs in elementary and secondary certification. The undergraduate elementary teacher education program prepares you to teach in:

- Grades K-8, in self-contained classrooms with all subjects
- Grades 6-8, in subject-area classrooms corresponding to your teaching major and/or minor

The secondary teacher education program prepares you to teach in:

• Your teaching major and/or minor in grades 6-12

Elementary Program. Students interested in earning an elementary school teaching certificate transfer to the School of Education, usually at the beginning of the junior year, for both a bachelor's degree and certification.

Secondary Program. Students interested in secondary education can choose to remain in their unit *(i.e.,* LSA) for their BA/BS degree and simultaneously complete certification requirements. Alternative-ly, secondary students can transfer to the School of Education, usually at the beginning of the junior year, and complete requirements for an education degree with a teaching certificate.

All prospective students are encouraged to discuss their degree and certification interests with advisors in both LSA and the School of Education early in their degree program to ensure that they have a thorough understanding of both degree and teacher certification requirements. Program requirements are subject to change.

To schedule an appointment with a School of Education academic advisor, please email soe.advising@umich.edu or call the Teacher Education office at (734) 615-1528. Please provide your name, UM-ID, phone number, and times you are generally available (for example, Fridays 11 a.m. – 3 p.m.) Advising appointments are available Monday – Friday, 9 a.m. – 5 p.m.

Application. Students in all schools and colleges desiring teacher certification must apply to the Teacher Education program. Students must have junior standing (a minimum of 54 credits) at the time of enrollment in the certification program.

The application deadline for fall term admission is January 15. Scholarships are only available to those applying for fall term admission. All elementary applicants must apply for fall term admission.

For secondary applicants only:

Secondary applicants who are ready to begin the program immediately have the option of applying for winter term admission. The application deadline for winter tem admission is October 15. There are no scholarship opportunities for those who apply for winter term admission. Applications received after the deadline may be considered on a space available basis. All students must obtain the application to the certification program from the Office of Undergraduate Admissions website at: www.admissions.umich.edu/applying

Admission Guidelines

Admission decisions are made on an individual basis and all available information is considered. The criteria are:

A. a minimum 2.5 overall grade point average with particular attention given to required courses* for teacher certification.

*Prior to application it is desirable for students to have taken the following: a course in English composition, an introductory psychology course (PSYCH 111 or equivalent); course work toward the teaching major and minor, and course work toward the distribution requirements (*i.e.*, humanities, natural science, and social science for secondary certification, as well as creative arts and mathematics for elementary certification). Although these courses are required to complete the certification program, they are not *required* prior to admission.

- B. Prior experience with children (*e.g.,* tutor, camp counselor, teacher aide, participation in University of Michigan Project Community or Project Outreach).
- C. Three letters of recommendation: one from a college or university instructor who can address your academic abilities and two from individuals capable of assessing your ability and potential to become a successful teacher. The first letter **must** come from a college or university instructor in your teaching major.
- D. a personal statement and, if secondary, a statement related to your proposed major.
- E. résumé.

Requirements for Teacher Certification

Grade Point Averages and Total Credits.

- A. An overall GPA of 2.0 based on University of Michigan course work only.
- B. A GPA of 2.0 in the teaching major and minor based on University of Michigan course work only.
- C. A minimum of 130 credits.

Distribution:

A. If secondary education:

At least 8 credits (from at least two departments) from each of the areas of humanities (including an approved freshman composition course), natural science, and social science *(including PSYCH 111)* as defined in the *LSA Bulletin*. Courses in this *Bulletin* count as designated *(e.g.,* HU, NS, SS). This number changes to 12 credits (from at least two departments) in each area if the student transfers into the School of Education for their degree.

Note: This is the School of Education certification distribution requirement, which is different from the LSA distribution policy. The same courses may be used for each, but the distribution requirement for each school must be satisfied.

- B. If elementary education:
 - 1. *Creative Arts.* 9 credits including two of the following 3 courses: EDUC 427 (3) Art Methods, MUSED 408 (3) Music Methods, PHYSED 336 (3) Children's Rhythms (or PHYSED 255) and 3 credits of electives to meet the requirement.
 - 2. *Humanities.* 9 credits including English Composition, Philosophy, and one elective.
 - 3. *Mathematics.* 9 credits including MATH 385, MATH 489, and one elective.
 - Natural Sciences. 9 credits including a minimum of 3 credits in each of the following: biological science, physical science, and earth science.
 - Social Sciences. 9 credits including one course in U.S. history (HISTORY 260 or 261), introductory psychology (PSYCH 111), and one elective designated SS in the LSA Bulletin.

Teaching Major and Minor Options: Students may begin at any time to fulfill the requirements of their specific teaching major and minor. Courses elected to satisfy LSA degree requirements (distribution and concentration) may be used to meet the requirements for the teaching major and minor. Please refer to the School of Education website for specific teaching major/minor requirements.

- A. Elementary Education: Consult the School of Education website and supplemental materials, such as the school's major/minor self-advising handouts which are available at: soe.umich.edu/elementary
- B. *Secondary Education:* LSA students who are candidates for a secondary teaching certificate *must* select a teaching major and minor. The teaching major is usually the same as the concentration for the BA/BS degree although the requirements for each may differ. A teaching minor is associated with the teaching certificate and might not be the same as an academic minor in LSA. The requirements for the various teaching majors and minors are available online at: soe.umich.edu/secondary

The required professional education methods course must be completed in the teaching major. Methods courses *must* be elected under the education department number.

Either the teaching major or minor must be in an area in which directed teaching is available.

Departmental Secondary-Level Teaching Majors and Minors

Arabic (teaching major only) Biology Chemistry Computer Science (teaching minor only) Economics English French German Health (teaching minor only) History Italian (teaching minor only) Latin Mathematics Music (teaching major only) Must apply through the School of Music, Theatre & Dance. Please contact them for more information. Physical Education Must apply through the School of Kinesiology. Please contact them for more information. Physics **Political Science** Psychology (teaching minor only) Sociology (teaching minor only) Spanish

Interdepartmental Secondary-Level Teaching Majors and Minors

Earth/Space Science

Integrated Science (Comprehensive or traditional teaching major only)

Social Studies (teaching major only)

Professional Requirements

Because the sequence of teacher certification courses is structured, it is necessary for prospective teacher certification students to carefully plan their course schedules **prior** to completion of the sophomore year. Students with education courses completed at another institution must consult the School of Education Teacher Education office regarding the professional requirements. *Education courses may not be elected on a pass/fail basis.*

Elementary Education

- 1. Required Courses for Fall Term in First Year in Program:
 - EDUC 307 Practicum in Teaching Methods
 - EDUC 391 Educational Psychology and Human Development
 - EDUC 401 Developmental Reading and Writing Instruction in the Elementary School
 - EDUC 406 Teaching in the Elementary School
- 2. Required Courses for Winter Term in First Year in Program:
 - EDUC 392 Education in a Multicultural Society
 - EDUC 403 Individualizing Reading and Writing Instruction in the Elementary Classroom
 - EDUC 431 Teaching of the Social Studies in the Elementary School
 - EDUC 307 Practicum in Teaching Methods
- 3. Required Courses for Fall Term in Second Year in Program:
 - EDUC 421 Teaching of Science in the Elementary School
 - EDUC 411 Teaching Elementary School Mathematics
 - EDUC 307 Practicum in Teaching Methods
- 4. Required Courses for Winter Term in Second Year in Program:
 - EDUC 301 Directed Teaching in the Elementary Grades
 - EDUC 303 Seminar: Problems and Principles of Elementary Education
 - EDUC 490 Special Topics Courses

Secondary Education

Winter cohort is for those who major in mathematics, the sciences, and world languages.

English and social studies majors may choose either fall or winter cohort. Eligibility to begin the program in fall or winter will be determined by progress toward completion of the major, minor and distribution courses; and by random assignment.

Fall cohort is for those who major in physical education and the other half of those who major in English and social studies.

- 1. Required Courses for First Semester in Program:
 - EDUC 307 Practicum in Teaching Methods
 - EDUC 392 Education in a Multicultural Society
 - EDUC 402 Reading and Writing in the Content Areas
- 2. Required Courses for Second Semester in Program: EDUC 307 Practicum 2
 - Methods for major (various course numbers)
 - EDUC 391 Educational Psychology and Human Development

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- 3. Required Courses for Third Semester in Program (Student Teaching):
 - EDUC 302 Student Teaching in the Secondary School
 - EDUC 304 Seminar: Problems and Principles of Secondary Education
 - EDUC 490 Special Topics Courses

For information on the prerequisites to student teaching, students should consult the School of Education website at: www.soe.umich.edu

Full-time student teaching is required.

Other Program Requirements

In addition to the requirements of the Teacher Education program, teacher candidates must comply with the following State of Michigan certificate requirements.

CPR and First Aid. Michigan Public Act 18 of 2003 requires all teacher candidates to be certified in CPR (Child and Adult) and First Aid prior to being recommended for teacher certification. The legislation stipulates that this training must be completed through the American Red Cross or American Heart Association.

Criminal Background Check and Fingerprinting. Michigan's "School Safety" legislation (2005) requires that all potential employees of public schools in the State of Michigan be fingerprinted and subjected to a criminal background check prior to hire. A teacher candidate can be denied initial certification, or certification can be delayed, if his or her background reveals a felony or certain enumerated misdemeanor convictions.

Michigan Test for Teacher Certification (MTTC). The MTTC Basic Skills and Subject Area tests are designed and implemented by the Michigan Department of Education and are meant to ensure that each certified teacher has the necessary basic skills and subject area knowledge to serve in Michigan schools.

Basic Skills Test: Candidates in our teacher education programs must take and pass all three sections (reading, math, and writing) of the Basic Skills test prior to being eligible to student teach.

Subject Area Tests: Before being recommended to the state for teacher certification, secondary teacher candidates must take and pass the subject area tests in their teaching major(s). As a secondary teacher candidate, you can expect to take at least three MTTC tests while in our program.

For further information, including registration materials, please visit the MTTC website: www.mttc.nesinc.com.

Academic Advising. To schedule an appointment with a School of Education academic advisor, please email soe.advising@umich.edu or call the Teacher Education office at (734) 615-1528. Please provide your name, UMID, phone number, and times you are generally available (for example, Fridays 11 a.m. – 3 p.m.) Advising appointments are available Monday – Friday, 9 a.m. – 5 p.m.

Prospective Students: All prospective students are encouraged to discuss their degree and certification interests with advisors in both LSA and the School of Education early in their degree program to ensure that they have a thorough understanding of both degree and teacher certification requirements. Program requirements are subject to change.

Current Students: To ensure timely completion of program, teacher certification students are required to complete an audit appointment with a School of Education certification advisor no later than the term of certification completion. The audit appointment will include a complete review of all coursework and other program requirements.

Teacher certification students are also encouraged to meet regularly (at least once a year) with a certification advisor throughout their time in the program.

Certificate Fee. The State of Michigan requires payment of a fee for the provisional teaching certificate. The fee must be paid before the certificate will be granted. For current Michigan Department of Education certificate fees, go to: www.michigan.gov/mde and search under "certification fee."

COURSES IN THE SCHOOL OF EDUCATION

Courses in the School of Education are listed in the *Schedule of Classes* under the School of Education. The following courses count as LSA courses for LSA degree credit.

EDUCATION D – CURRICULUM AND INSTRUCTION (EDCURINS)

EDCURINS 382 / ENVIRON 382. Introduction to Environmental Education for Sustainable Development

(4). May not be repeated for credit.

EDCURINS 421 / LATIN 421. Teaching of Latin Junior standing in Latin and permission of instructor. (3; 2 in the half-term). May not

be repeated for credit. F, W, Sp.

EDCURINS 431 / GERMAN 531. Teaching Methods

Senior standing; and candidate for a teaching certificate. (3). May not be repeated for credit. F.

EDCURINS 437 / RUSSIAN 410. Teaching of Russian

RUSSIAN 302 or 303. (Prerequisites enforced at registration.) (2). May not be repeated for credit.

EDUCATION (EDUC)

EDUC 390 / ELI 390 / LING 386 / RCSSCI 390. Community Service and Language, Education, and Culture

(1 - 3). (EXPERIENTIAL). May be elected three times for credit.

Theatre and Drama, see Music, Theatre & Dance

Undergraduate Research Opportunity Program

Undergraduate Research Opportunity Program (UROP)

1190 Undergraduate Science Building 204 Washtenaw Avenue (734) 615-9000 (phone) (734) 615-9971 (fax) www.lsa.umich.edu/urop e-mail: urop.info@umich.edu Sandra Gregerman, Director

The UROP program enables students to work one-on-one or with a small group of students with faculty members conducting research. Students will choose research projects by looking through a catalog of faculty research projects, and will then interview for the positions with the faculty researcher. Students spend 6-12 hours per week working on their research projects. Students can participate in the program for academic credit through UC 280 or they can be paid for their research if they qualify for work-study funds. Students participating for academic credit only (not work study) receive one credit for every three hours of work per week. Most students register for three credits which is a nine hour commitment per week. Students participating in the program are also required to attend bi-monthly research peer seminars, meet monthly with a peer advisor, read research-related articles (*e.g.*, research ethics, research in specific disciplines, research methods) and keep a research journal.

All first- and second-year undergraduates within the University of Michigan are eligible to apply to UROP. Applications for first year students will be sent out in May and accepted throughout the summer. Students are encouraged, however, to apply early. The dead-line for sophomore applications is March 15. Online applications can be found at www.lsa.umich.edu/urop and information will be mailed to students in February prior to the sophomore year. Selection is done on a rolling basis and determined by a student's level of interest in research, academic background, area of research interest, and availability of positions.

Michigan Research Community (MRC)

(a residential affiliate of UROP) 168 Mosher Jordan Residence Hall 200 Observatory Street (734) 936-6536 (phone) (734) 936-2197 (fax) www.lsa.umich.edu/mrc e-mail: discovermrc@umich.edu Christine Bass, Ph.D., Director

The Michigan Research Community is a residential affiliate of UROP. MRC offers first-year students all of the benefits of UROP, including a research partnership with a faculty member from one of many disciplines and colleges across campus, as well as a small diverse and supportive community to aid in the transition to college life. Approximately 150 students from a number of different disciplines and a range of cultural and national backgrounds reside in the MRC. MRC students live together in Mosher Jordan Residence Hall where they have access to unique research, academic, and extra-curricular programs and resources. Students in MRC are exposed to the wide array of research taking place on campus and beyond by enrolling in UC 104: Introduction to Research in the fall term. MRC research peer advisors also reside in the community and assist first-year students with their research project search as well as offer skill building workshops and bi-weekly research seminars in the winter term. A program board made up of second-year students organize intramural sports teams, social events, multicultural programming as well as community service opportunities. Applications for admission to the MRC are on the University Housing website.

University Courses

2242 LSA 1382 500 South State Street (734) 763-7139 (phone)

Not a concentration program

The University Courses Division is a small academic unit that is administered by the LSA Dean's Office and used to house undergraduate courses that do not readily fit under any specific departmental banner. Sponsored by the college rather than by individual departments or programs, these courses may be taught by members of the faculty in any academic unit on the Ann Arbor campus, including colleges outside of LSA. A number of non-LSA course offerings have been approved by the LSA Curriculum Committee for crosslisting in the UC Division, thus allowing LSA students completing those courses to earn LSA credits toward their degree.

The University Courses Division is also the home of courses for Michigan Learning Communities, the Undergraduate Research Opportunity Program, and other special initiatives in undergraduate education. In addition, the UC Division has been a place where experimental and interdisciplinary courses are developed. After a course has been offered successfully for a few terms, a home is ordinarily found in a traditional academic unit, and the UC listing is dropped.

First-Year Seminars. The Dean's Office administers the FYS Program. The UC Division houses several First-Year Seminars each term (taught by emeriti and non-LSA faculty). These unique low enrollment classes (maximum of 20 students) are open to all first-year students. They are intended to facilitate deeper learning through more active participation and increased opportunities for interaction between student and teacher as well as dialogue among students. Students not only experience a stimulating introduction to the intellectual life of the University through engaging subject matter; some may discover a subject they wish to pursue in further courses. It is hoped that students who take a seminar will find in it a sense of intellectual and social community that will ease the transition to a large university.

All First-Year Seminars can be used to complete part of the College's Area Distribution requirements: Humanities (UC 150); Social Sciences (UC 151); Natural Sciences (UC 152); and Interdisciplinary (UC 154).

UNIVERSITY COURSES (UC)

UC 101 / NAVSCI 102. Seapower and Maritime Affairs

(2). May not be repeated for credit.

UC 102. Michigan Community Scholars Program: The Student in the University Michigan Community Scholars Program participant. (1). May not be repeated for credit. F. Offered mandatory credit/no credit.

UC 103. Michigan Community Scholars Program: Academic Decision Making

Admission to the Michigan Community Scholars Program. (1). May not be repeated for credit. Offered mandatory credit/no credit.

UC 104. Introduction to Research

Participant in Michigan Research Community. (1). May not be repeated for credit. F.

UC 105. Health Sciences Scholars Program: Perspectives on Health and Health Care Restricted to students enrolled in the Health Sciences Scholars Program. (2). (ID). May not be repeated for credit.

UC 106. Perspectives on Health Care

Restricted to students enrolled in the Health Sciences Scholars Program. (2). (ID). May not be repeated for credit.

UC 107. Women in Science and Engineering Residence Program Seminar (1). May not be repeated for credit.

UC 122 / PSYCH 122 / SOC 122. Intergroup Dialogues

(2). May be repeated for a maximum of 4 credits.

UC 145 / CICS 101 / GEOG 145. Introduction to International Studies

(3). (SS). May not be repeated for credit. Meets the geography requirement for public

teacher certification in the School of Education.

UC 150. First-Year Humanities Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit.

UC 151. First-Year Social Science Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (SS). May not be repeated for credit.

UC 152. First-Year Natural Science Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (NS). (BS). May not be repeated for credit.

UC 154. First-Year Interdisciplinary Seminar

Enrollment restricted to first-year students, including those with sophomore standing. (3). (ID). May not be repeated for credit.

UC 163. Biotechnology and Human Values

First-year students only. (4). (NS). (BS). May not be repeated for credit.

UC 170. UC Special Topics

(1 - 3). May be elected twice for credit. Offered mandatory credit/no credit.

UC 174. Digital Research: Critical Concepts and Strategies

(1). May not be repeated for credit. No credit granted for students who have already taken UC 170: Digital Research, or UC 175-176, or 177. Offered mandatory credit/no credit.

UC 178. Global Understanding

Consent of instructor required. (3). May be elected twice for credit. May be elected more than once in the same term.

UC 200 / AMCULT 200 / COMM 200 / PSYCH 208 / SOC 200. The Academic Paradox (3). (ID). May not be repeated for credit.

UC 201 / AERO 201. U.S. Aviation History & Its Development into Air Power AERO 102/Permission of instructor. (1). May not be repeated for credit.

UC 202 / AERO 202. U.S. Aviation History & Its Development into Air Power Permission of instructor. (1). May not be repeated for credit.

UC 203 / MILSCI 201. Innovative Tactical Leadership

(1). May not be repeated for credit. Counts as credit toward LSA degree.

UC 204 / MILSCI 202. Leadership in Changing Environments

Permission of professor. (1). May not be repeated for credit. Counts as credit toward LSA degree.

UC 205 / NAVSCI 203. Leadership and Management

NAVSCI 101,102 OR PI. (3). May not be repeated for credit.

UC 210. Perspectives on Careers in Medicine and Health Care Consent of instructor required. (4). May not be repeated for credit.

UC 215 / SEAS 215. Contemporary Social Issues in Southeast Asia

(3). (SS). May not be repeated for credit.

UC 218 / SOC 218. Foundations of Intergroup Relations

(3). May not be repeated for credit.

UC 225. Undergraduate Internship

Consent of department required. (1). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

UC 255. Creative Expression Seminar

(1 - 3). (CE). May be elected twice for credit.

UC 261 / PSYCH 231. Brain, Learning, and Memory

Enrollment is restricted to first- and second year students. (4). (NS). (BS). May not be repeated for credit. May not be included in a concentration plan in Psychology (as a

social science), but may be included in a concentration plan in Brain, Behavior, and Cognitive Sciences.

UC 270. University Courses Special Topics

(1 - 3). May be elected twice for credit.

UC 275. Global Intercultural Experience for Undergraduates

Consent of instructor required. (1). (EXPERIENTIAL). May be elected twice for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. Offered mandatory credit/no credit.

UC 276. GIEU Leadership Seminar

Consent of instructor required. (2). (EXPERIENTIAL). May be elected twice for credit. Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections. Offered mandatory credit/no credit.

UC 280. Undergraduate Research

Consent of instructor required. First or second year standing. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 8 credits. A maximum of eight credits may be elected through lower-division UROP research courses (UC 280, 281, BIOPHYS 280, ENGR 280, MOVESCI 280, SPTMGMTC 280, PHYSED 280). Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term, the final grade is posted for both term's elections.

UC 285. Introduction to Intercultural Study

Consent of instructor required. (EXPERIENTIAL). May be elected four times for credit. Offered mandatory credit/no credit.

UC 286. Reflective Intercultural Study

Consent of instructor required. (EXPERIENTIAL). May be elected four times for credit. Offered mandatory credit/no credit.

UC 287. Integrative Intercultural Study

Consent of instructor required. (EXPERIENTIAL). May be elected four times for credit. Offered mandatory credit/no credit.

UC 299. Directed Study

Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

UC 300. College Practicum

Consent of instructor required. (1 - 4). (EXPERIENTIAL). May not be repeated for credit. Offered mandatory credit/no credit.

UC 301 / MILSCI 301. Leading Small Organizations I

Permission of Army OEP chair. (2). May not be repeated for credit. Counts for credit toward LSA degree.

UC 302 / MILSCI 302. Leading Small Organizations II

Permission of program chairman. (2). May not be repeated for credit. Counts as LSA credit toward LSA degree.

UC 304 / MUSEUMS 301. Museums and Society

Sophomore standing or above. (Prerequisites enforced at registration.) (3). (HU). May not be repeated for credit.

UC 309 / AERO 310. Air Force Leadership and Management

AERO 202/P.I. (3). May not be repeated for credit. Counts for credit toward LSA degree.

UC 310 / NAVSCI 310. Evolution of Warfare

(3). May not be repeated for credit. Counts for credit toward LSA degree.

UC 320 / PSYCH 310 / SOC 320. Processes of Intergroup Dialogues Facilitation Admission by application. At least junior standing and PSYCH 122 or SOC 122. (3). (*R&E*). May not be repeated for credit.

UC 321 / PSYCH 311 / SOC 321. Practicum in Facilitating Intergroup Dialogues PSYCH 310/SOC 320 and permission of instructor. (3). (EXPERIENTIAL). May not be repeated for credit.

UC 324 / PSYCH 324 / SOC 324. Advanced Practicum in Intergroup Relations Consent of instructor required. UC 320/PSYCH 310/SOC 320. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 6 credits.

UC 325. IGR Directed Study

UC 324. (1 - 4). (INDEPENDENT). May be elected six times for credit.

UC 370. UC Special Topics

(1 - 3). May be elected twice for credit.

UC 390. Disciplinary Study in a Second Language

Fourth-term language proficiency, and permission of instructor. (1). May be elected six times for credit. May be elected more than once in the same term.

UC 399. Directed Study

Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

UC 401 / MILSCI 401. Leadership and Management

PER.PROG.CHM. (2). May not be repeated for credit.

UC 402 / MILSCI 402. Military Professionalism and Professional Ethics (2). May not be repeated for credit.

UC 403 / NAVSCI 402. Leadership and Ethics

NAVSCI 203. Non-ROTC students need permission of instructor. (2). May not be repeated for credit.

UC 404 / MUSEUMS 401. Contemporary Issues in Museums

MUSEUMS 301 or MSP 601. (Prerequisites enforced at registration.) (3). May not be repeated for credit. Rackham credit requires additional work.

UC 406 / MUSMETH 406. Special Problems in Museum Methods Permission of instructor. (4; 2 in the half-term). May be elected twice for credit.

UC 409 / MUSEUMS 409, Practicum in Museums

Declared Minor in Museum Studies. (Prerequisites enforced at registration.) (3). (EX-PERIENTIAL). May be repeated for a maximum of 6 credits. May be elected more than once in the same term. Offered mandatory credit/no credit.

UC 410 / NAVSCI 410. Amphibious Warfare

(3). May not be repeated for credit. Counts for credit toward LSA degree.

UC 421. Field Practicum in a University Setting

Consent of instructor required. (2). (EXPERIENTIAL). (INDEPENDENT). May be repeated for a maximum of 4 credits. Offered mandatory credit/no credit.

UC 455. ICP Senior Seminar

Consent of department required. (3). May not be repeated for credit.

UC 470. UC Special Topics

(1 - 3). May be elected twice for credit. Rackham credit requires additional work.

UC 499. Directed Study Permission of instructor. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 6 credits.

UC 500 / BIOMEDE 500. Biomedical Engineering Seminar

(1). (BS). May not be repeated for credit. This course has a grading basis of "S" or "U".

Women in Science and Engineering

Women in Science and Engineering (WISE)

1140 Undergraduate Science Building 204 Washtenaw Avenue (734) 615-4455 (phone) (734) 615-4450 (fax) www.wise.umich.edu e-mail: umwise@umich.edu Cinda-Sue Davis, Ph.D., Director

The Women in Science and Engineering (WISE) Program aims to recruit and retain women in the sciences, mathematics and engineering majors at the University of Michigan. A nationally recognized model, WISE realizes its mission through programming at the middle school, high school, undergraduate and graduate levels. Activities include summer science and engineering camps and other programs for middle and high school students, the WISE residential program for freshmen, and lectures, workshops and networking dinners for graduate and undergraduate students. The WISE Program aims to identify barriers, real or perceived, that keep extremely talented women from pursing degrees in science, engineering and mathematics. To this end, WISE staff will meet with department faculty and administrators to help identify gaps in recruiting and retaining women, and to help plan programming to address those gaps. In addition to individual departments, WISE collaborates with ADVANCE, the Multicultural Engineering Program Office (MEPO), the Undergraduate Research Opportunity Program (UROP), Michigan Research Community (MRC), and student and professional groups to address equal opportunity issues at the University of Michigan.

Women in Science and Engineering Residence Program (WISE RP)

Mosher Jordan Residence Hall 168 Mosher Jordan 200 Observatory Street (734) 936-6536 (phone) (734) 936-2197 (fax) www.lsa.umich.edu/wiserp e-mail: wise-rp@umich.edu Christine Bass, Ph.D., Director

The Women in Science and Engineering Residence Program (WISE RP) is an academically supportive living-learning community for students who are interested in academic majors and careers in the sciences, technology, engineering and/or mathematics. WISE RP students live together in Mosher Jordan Residence Hall and have an abundance of academic and social opportunities available to them. The first-year seminar course, UC 107, lays the foundation for the WISE RP while the social, athletic, community service, and cultural activities allow for a well-rounded experience. In addition, each first-year student is paired with an upper-class peer mentor who can offer academic and social support as students find their way through their new surroundings. Finally, because WISE RP students take similar classes during their first year, the program offers facilitated study groups for most of the introductory science, math, and engineering courses.

Women's Studies

1122 Lane Hall, 1290 204 South State Street (734) 763-2047 (phone) (734) 647-4943 (fax) www.lsa.umich.edu/women Professor Elizabeth Cole, Chair

Professors

- Elizabeth Anderson (Philosophy) (John Rawls Collegiate Professor of Philosophy and Women's Studies; Arthur F. Thurnau Professor), Ethics, social and political philosophy, philosophy of the social sciences, feminist theory, epistemology
- Ruth Behar (Anthropology), Cultural Anthropology, Cultural Criticism, Ethnographic Writing, Life Stories, Feminist Ethnography, Visual Anthropology, Religion; Spain, Mexico, Cuba, U.S. Latinos; Cuban Jews, Sephardic Jews
- Carol Boyd (Nursing) (Deborah J. Oakley Collegiate Professor of Nursing and Women's Studies), *Women and substance abuse*
- Celeste Brusati (History of Art), Visual art and culture of the Netherlands from the fifteenth through the seventeenth centuries

- Kathleen Canning (History), Modern Germany, modern European women and gender, labor and social movements, welfare state, history of the body
- David Caron (Romance Languages and Literatures), *Queer Studies, AIDS, 20th- and 21st-century French literature and culture, Holocaust, and Jewish Studies*
- Mary Corcoran (Political Science, Public Policy, Social Work), *American Government and Politics, Public Policy and Administration, Research Methods, Poverty and Inequality*
- Lisa Disch (Political Science), *Contemporary continental political theory, Anglo-American and French feminist theory, political ecology, and theories of democracy*
- Jacqueline Eccles (Psychology) (Willburt McKeachie Collegiate Professor of Psychology, Education, and Women's Studies), *Family, schools and high-risk settings' effects on development; identity formation; gender role development*
- Leela Fernandes, *labor, gender, cultural politics, nationalism, human rights and globalization*
- Dena Goodman (History) (Lila Miller Collegiate Professor of History and Women's Studies), *Cultural and intellectual history of France: old regime, enlightenment, and French revolution (1600-1800)*

- Sandra Graham-Bermann (Psychology), Family resilience; dysfunctional sibling relationships; adaptation of children exposed to violence
- Linda Groat (Urban Planning), environmental meaning and the experience of place; and gender issues in architectural education
- Sandra Gunning (English), American Studies; 19th- and 20th-C. American Literature; African-American Literature; African diaspora studies; interdisciplinary approaches to literature; feminism and gender studies; travel writing
- David Halperin (English) (W.H. Auden Collegiate Professor of the History and Theory of Sexuality), *Ancient Greece and Rome; history of sexuality, lesbian/gay/queer studies*
- Anne Herrmann (English), *Feminist and queer theory; 20th-century comparative literature and cultural studies; autobiographical writings and creative non-fiction*
- June Howard (English) (Arthur F. Thurnau Professor of English, American Culture, and Women's Studies), *late 19th-century early* 20th-century American Literature and Culture
- Carol Jacobsen (Art and Design), Women's criminalization and censorship
- Timothy R.B. Johnson (Obstetrics and Gynecology) (Arthur F. Thurnau Professor; Bates Professor of Diseases of Women and Children), *Obstetrics and Gynecology, Maternal Fetal Medicine, Women's Health*
- Carol Karlsen (History), Representation of witches in the United States after the Salem-Witchcraft trials of 1692
- Deborah Keller-Cohen (Linguistics), Narrative, Discourse analysis, Language and Aging, Literacy in modern and colonial America
- Mary Kelley (History and American Culture) (Ruth Bordin Collegiate Professor of History, American Culture and Women's Studies), *issues of women and gender in 19th-century America*
- Joanne Leonard (Art & Design) (Diane M. Kirkpatrick and Griselda Pollack Distinguished University Professor of Women's Studies and Art), *photography, feminist criticism, and visual culture*
- Peggy McCracken (Romance Languages and Literatures), *Medieval French literature and culture; gender and sexuality in the Middle Ages*
- Jennifer Robertson (Anthropology), Sociocultural and historical anthropology: art, artificial life museums, and visual culture, biotechnology and bioethics, colonialism and imperialism, cultural history, ethnography, feminist theory, history of eugenics and bioethics, human-robot interface, mass/popular culture, race and ethnicity, sex/gender systems, sexual cultures, symbolic anthropology, urban Anthropology, women's studies
- Carolyn Sampselle (Nursing) (Carolyne K. Davis Collegiate Professor of Nursing), *Women's Health*
- Arlene W. Saxonhouse (Political Science) (Caroline Robbins Collegiate Professor of Political Science and Women's Studies), *Ancient and early modern political thought; women in the history of political thought; democratic theory*
- Susan Siegfried (History of Art), *Thematisation of gender, social spaces for viewing art, and theoretical models of interpretation*
- Sidonie Smith (English) (Martha Guernsey Colby Collegiate Professor of English and Women's Studies), *Autobiography studies, feminist theories, women's literature; Travel narratives, literature and memory, postcolonial literatures and theory*
- Pamela Smock (Sociology), Families, the causes and consequences of changes in families, social inequality, gender, single parentfamilies, marriage, divorce, cohabitation, quantitative and qualitative methods
- Abigail Stewart (Psychology) (Sandra Schwartz Tangri Distinguished University Professor of Psychology and Women's Studies), *Psychology of women; Personality development; Gender, race and generation*
- Hitomi Tonomura (History), *Premodern Japanese history, East Asian history*
- Valerie Traub (English), *Early modern literary and cultural studies, history of sexuality, gender and sexuality studies, gay / lesbian / queer studies, Shakespeare, early modern drama*

- Martha Vicinus (English) (Eliza M. Mosher Distinguished University Professor of English, History and Women's Studies), *Victorian women, Victorian studies, sexuality and British imperialism*
- Christina Whitman (Law) (Francis A. Allen Collegiate Professor of Law and Professor of Women's Studies), *civil rights litigation, constitutional law, and feminist jurisprudence*
- Patricia Yaeger (English) (Henry Simmons Frieze Collegiate Professor of English and Women's Studies), 20th-century American literature and visual arts, southern fiction, feminist theory, literary theory, social geography, trash in modern/postmodern ethnic American literature, and queering John Wayne

Associate Professors

- Naomi André (Residential College), *Music, especially 19th-century Italian opera. Gender and cultural studies, particularly surrounding the areas of voice, race/ethnicity, representation and identity*
- Renee Anspach (Sociology), Medical Sociology, Social Psychology, Sociology of Deviance, Sociology of Gender, Applied Sociology
- Rosario Ceballo (Psychology), *Poverty; community violence; parenting; academic achievement; infertility and reproductive health problems with a special focus on African American and Latino women and children*
- Elizabeth Cole (Psychology), Intersectionality; class, race and gender as social identities; qualitative methods; relationship between political attitudes and behaviors, particularly among African Americans and all women
- Lilia Cortina (Psychology), *Sexual harassment and assault;* workplace incivility; gender in organizations; violence against women
- Maria Cotera (American Culture), U.S. third World Feminist Theory; Latina/o Studies; 20th-century literature by women of color; history of anthropology; and folklore ethnic modernisms (U.S.)
- Amal Hassan Fadlalla (CAAS), *Fertility, sexuality, health, identity, poverty, and population and development, and the situation of such analyses in gender dynamics, social inequalities, cultural worldviews, and local and global political economies (Africa, the Middle East, and the Diaspora)*
- Fatma Müge Göçek (Sociology), *comparative analysis of gender issues in first and third worlds; impact on women of processes such as economic development, nationalism and religious movements*
- Nadine Hubbs (Music), Gender and sexuality in music, LGBTQ history, American music, modernism, class in the U.S.
- Petra Kuppers (English/Theatre & Drama), disability studies, performance studies, critical theory and poetics, medical humanities, and the general fields of arts and expression, arts and health, and arts and community building
- Edith Lewis (Social Work), Women of color, families of color, ethnoconscious interventions
- Karin Martin (Sociology), Gender, feminist theory, family, childhood and adolescence, social psychology, psychoanalytic sociology
- Jonathan Metzl (Psychiatry), *Student mental health, Pharmaceutical advertisements, History of medicine, Gender and health, Interdisciplinary issues*
- Christina Moreiras-Menor (Romance Languages and Literatures), Modern and contemporary Spain (including peripheral national communities such as Galicia, Catalonia and the Basque Country)
- Adela Pinch (English), English literature, 1700-1900; feminist studies
- Beth Reed (Social Work), Alcohol/other drugs and women, innovation and change in organizations and other social systems, forces that recreate injustice and ways to challenge these
- Patricia Simons (History of Art), *portraiture of women, the representations of the body, the construction of masculinity, the possibility of homoerotics in portraits of men, lesbian visibility in the Renaissance, bibliographic resources on gender and sexuality in the Italian Renaissance/Baroque period*
- Catherine Sanok (English), Medieval English literature and culture
- Ruth Tsoffar (Comparative Literature), Feminism, sexuality and gender in multicultural society; Colonialism, ethnicity, and natio-

nalism, poetry and poetics, Hebrew culture and literature, the politics of writing, reading, and culture in Israel and the Middle East, Biblical narrative, ethnography and folklore

- Elizabeth Wingrove (Political Science), *Feminist theory, political theory, social theory, historical sociology, early modern and modern intellectual history*
- Wang Zheng (IRWG), feminism in China, both in terms of its historical development and its contemporary activism, and changing gender discourses in China's socioeconomic, political and cultural transformations of the past century

Assistant Professors

- Terri Conley (Psychology), *Gender differences in sexuality, close relationships, LGBQ issues, sexual risk*
- Lisa Harris (Obstetrics and Gynecology), History of Reproduction/Reproductive medicine (especially contraception, abortion, miscarriage, assisted reproductive technologies); contemporary politics of abortion and contraception; ethics in obstetrics and gynecology; feminist analysis of issues in women's reproductive health; Clinical: Obstetrics and Gynecology, with focus on family planning, and miscarriage management
- Anna Kirkland (Political Science), *Law and society, antidiscrimination law; gender and sexuality in contemporary U.S. law; politics of rights claiming; law and identity*
- Lisa Kane Low (Nursing), Care practices during pregnancy and childbirth; social cultural influences on choices related to childbirth such as the use of Doulas, Midwives, and birth sites; influences of social, life stressors on pregnancy outcomes; application of Global Safemotherhood Health Policy in local low-resource communities, particularly Latin America
- Victor Román Mendoza (English), queer of color critique, queer studies, critical race theory, transnational feminist and gender studies, postcolonial studies, cultures of U.S. imperialism, Asian American literature and culture, ethnic American literature and culture, visual cultures, modernisms
- Nadine Naber (American Culture), Arab American Studies; gender and sexuality; post-colonial theory; transnational feminism; women of color feminism
- Gayle Rubin (Anthropology), Sexual populations and geographies, sexological theory, durable inequalities, gay/lesbian ethnography, racial taxonomies, deindustrialization and urban reconstruction
- Anjel Vahratian (Obstetrics and Gynecology), *Influence of maternal preconceptional health, with a focus on maternal adiposity, on pregnancy complications and postpartum physical and emotional health status; Role of infertility treatment on maternal mental health; women's health from a life course perspective; and conducting longitudinal studies during the perinatal period*
- Sari van Anders (Psychology), Social neuroendocrinology, gender/ sex, sexuality, evolution, feminist science practice

Lecturers

- Nesha Haniff (CAAS), *empowerment pedagogies and marginalized populations (centered on HIV, gender and gay identities)*
- Jane Hassinger, *gender and violence, trauma, mental health, and the gendering of organizational life and professional practice*
- Emily Lawsin (American Culture), *Filipina/o American history, literature, and communities; oral history, public history, creative writing, spoken word performance poetry, Asian American Studies, community service-learning, pinay power pedagogy, ethnic studies online composition*

Term Professor

Esther Newton (American Culture), American Culture, gender and sexuality, LGBT Studies

Professors Emeritae Patricia Gurin, Sonya Rose, Carroll Smith-Rosenberg, Rosemary Sarri

Women's Studies offers students the opportunity to study the systems of gender, politics, and representation that shape women's lives. As a discipline, Women's Studies asks:

- How does being a woman affect one's participation in the family, economy, politics, art, and literature?
- How do language, belief, and visual representation convey meaning about women's and men's status in society?
- How has that status changed historically?
- How does the experience of women vary by class, race, nationality, and sexual orientation?

Questions like these have produced an extensive body of scholarship that puts gender at the center of analysis.

The Women's Studies department is a diverse intellectual community dedicated to excellence through feminist research, teaching, and activism. It seeks to build interdisciplinary collaborations among faculty and students that bridge gender, ethnic, economic, and national divides; create new knowledge about women, gender, race, and sexuality; challenge unequal distributions of power; and improve the lives of all women and men.

Dorothy Gies McGuigan Prize. This prize is awarded annually for the best graduate and the best undergraduate essay on women. The competition is open to all University of Michigan students.

Special Departmental Resources. *Michigan Feminist Studies*, a journal edited by graduate students, offers a forum for research. *Lectures and Colloquia* by distinguished scholars and feminist activists are offered throughout the academic year. *Women's Studies Reading and Resource Room* houses journals and texts available to all. *Lane Hall Exhibit Space* showcases art by women and/or related gender issues.

Women's Studies students also benefit from the Institute for Research on Women and Gender (IRWG) which provides stimulation, coordination, and support for research on women and gender at the University of Michigan.

Women's Studies

May be elected as a departmental concentration program

Goals of the Concentration Program:

- 1. To provide concentrators with an understanding of the interdisciplinary scholarship on women, gender, and sexuality, and to train them in interdisciplinary methods.
- 2. To offer theoretical and practical approaches to feminist thinking across the disciplines.
- To encourage comparative thinking about coursework that explores the multicultural and global nature of feminist scholarship.
- 4. To train concentrators to think analytically by teaching them to read and write critically.
- 5. To provide supporting skills and context for the study of women through the cognate requirement.
- 6. To encourage intellectual and academic breadth through the cognate requirement.

Prerequisite to Concentration. WOMENSTD 240.

Concentration Program. 33 credits (at least 27 must be at the 300-level or above) distributed as follows:

- 1. *Courses in Women's Studies:* Concentrators must complete areas A through E below.
 - A. Feminist Theory: WOMENSTD 330 / AMCULT 341. Feminist Thought.

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- B. **Thematic Areas.** One course from each of three of the following four areas (only one course may be double-counted to meet these four thematic are course requirements):
 - (1).Lesbian, Gay, Bisexual, Transgender, Queer and Sexuality Studies
 - (2). Gender, Race, and Ethnicity in the U.S.
 - (3). Gender in a Global Context
 - (4). Gender, Culture, and Representation
- C. Practice Course. One course chosen from: WOMENSTD 350. Women and the Community.
 WOMENSTD 420. Group Facilitation in Women's Studies.
 WOMENSTD 425. Feminist Practice of Oral History.
 SOC 389, Project Community: *Gender and Sexuality* section
- D. Electives: Two WOMENSTD courses (6 credit minimum).
- E. **Senior Seminar:** WOMENSTD 440. Issues and Controversies in the New Scholarship on Women.
- Cognates: Two upper-level courses, neither in WOMENSTD nor cross-listed, are required. In order to ensure that the interdisciplinary Women's Studies concentration is complemented by training in a single discipline, these courses will normally be in the same department. Cognate courses should not be courses on women but should provide supporting skills or contexts for the study of women.

Areas of the Women's Studies concentration

LGBTQ (Lesbian, Gay, Bisexual, Transgender, and Queer) and Sexuality Studies offers an interdisciplinary approach to examining sexuality in light of religious beliefs, legal codes, medical constructions and social movements, and recognizes these as historically variable and culturally specific. It acquaints students with the history and anthropology of sexuality and contributions made by scholarship in the social sciences and feminist and queer theory to understanding the formation of sexual identities.

Gender, Race, and Ethnicity in the U.S. examines the intersection of gender, race, and ethnicity in order to consider differences among women and men, as well as the impact of multiple categories of identity on experience and on the formation and contestation of gender itself. Interracial and interethnic relations, the mutual influence of social movements, and racialized genders are also explored. Although the U.S. is the primary focus, consideration of various diasporas encourages analysis of the links between communities across national borders.

Gender, Culture and Representation explores ways in which ideas and meanings about women and gender are produced culturally and historically. It positions students as readers, viewers, and interpreters of cultures and cultural artifacts, especially in the domains of literature, philosophy, the visual and performing arts, mass media (including film), and their histories. Courses might explore a particular historical topic from a feminist perspective. Others might introduce students to feminist analyses of past and/or contemporary cultural forms and encourage them to consider processes of viewing, writing, and producing knowledge.

Gender in the Global Context offers a comparative cross-cultural perspective on the construction and meaning of gender, race, class, and sexuality. It examines current forces of globalization and empire, the histories of imperialism and colonialism, and postcolonial resistance and theory. Courses decenter the U.S. while placing it in a geopolitical context, including global and transnational feminisms.

Study Abroad. The University of Michigan Women's Studies department encourages students to study abroad in order to enhance their education and gain international perspectives on women's issues and feminism. Students routinely look back on their time spent abroad as valuable aspects of their undergraduate career. There are many excellent study abroad opportunities offering students a variety of possible experiences: among them cultural immersion, field work, intensive language learning, independent study, participation in another educational system.

Planning early for study abroad is important, as is research into study abroad possibilities. The Center for Global and Intercultural Study is committed to working with students to help them find the right study abroad program. During the academic year there are daily information sessions on how to study abroad. These info sessions are held every M-F from 5-6 pm in the Modern Languages Building (MLB), Room B108 (basement) and are led by peer advisors. Learn about a range of U-M sponsored programs, how to research/find a program, how to apply for certain programs, and about scholarships and financial aid.

The Women's Studies concentration advisors invite students to make an appointment to discuss how specific study abroad options would fit into Women's Studies concentration and academic minor requirements. Advising appointments are make online. To make an advising appointment, please see the bottom left hand corner of the Women's Studies website main page: www.lsa.umich.edu/women.

Advising. Advising appointments are make online. To make an advising appointment, please see the bottom left hand corner of the Women's Studies website main page: www.lsa.umich.edu/women.

Honors Concentration: Summary. The Women's Studies Honors Program provides an opportunity for concentrators to complete a comprehensive, original independent project under the guidance of a faculty mentor as the culmination to their undergraduate studies. Students should choose topics on which they have already done some academic study. Those interested in pursuing Honors should begin to consider it in their sophomore year and discuss their interests with a concentration advisor. Students learn methodology in WOMENSTD 389 (the Junior Honors Seminar) during the winter term of their junior year. The thesis is researched and written in the second term of the student's junior year and in their senior year. The Director of Undergraduate Studies (DUS) serves as the Honors Concentration Advisor in Women's Studies. Honors applications are due December 1 of the student's junior year.

Eligibility. Women's Studies concentrators who have maintained an overall GPA of at least 3.4 and a 3.5 GPA in Women's Studies (including the pre-requisite) may apply for an honors concentration. Applicants must have completed or plan to complete WOMENSTD 240 (Introduction to Women's Studies) and WOMENSTD 330 (Feminist Thought) by the end of their junior year and applicants must demonstrate both the interest and capacity to carry out the comprehensive independent work required to complete an Honors thesis.

Women's Studies Academic Minors

An academic minor in Women's Studies is not open to students concentrating in Women's Studies

Students wishing to pursue an academic minor in Women's Studies must develop a specific plan for its completion in consultation with the department's designated advisor. Appointments may be scheduled at the department office in 1122 Lane Hall, (734) 763-2047.

Gender and Health

This academic minor allows students to develop a minor concentration through courses that focus on gender and health across a variety of disciplinary perspectives. At the same time, this academic minor is designed to focus students' studies of gender and health from a feminist perspective. The academic minor provides an opportunity for students to develop their skills in critical analysis as they explore how the social category of gender and conceptualizations of health, health care and health policy intersect. Coursework on a range of topics allows students to engage critically with the biomedical model of health in order to broaden and deepen their understanding of what constitutes health by exploring, for example, the relationship between health and disease. In all courses students will be challenged to consider the implications of a critical gender analysis of health for health care delivery, the health care professions, and health policy domestically and transnationally.

Prerequisites to the Academic Minor: None.

Academic Minor Program: Five courses totaling at least 15 credits, to be chosen from the following categories as stated:

- 1. Foundational Course: WOMENSTD 220/NURS 220 (Perspectives in Women's Health)
- Electives: Four electives from the listing below (at least two courses must be upper-level courses, with at least one at the 400-level). One of these courses must be an upper-level seminar and one must be from a transnational, global, or historical perspective as indicated below. (A single course may satisfy more than one of these requirements).

WOMENSTD 300. Men's Health WOMENSTD 320. Gender and Mental Health WOMENSTD 324, Childbirth and Culture WOMENSTD 328. Women, Agency and Sexual Safety WOMENSTD 342. Special Topics in Gender and Health WOMENSTD 350. Women and the Community WOMENSTD 365. Global Perspectives on Gender, Health, and Reproduction WOMENSTD 400. Women's Reproductive Health WOMENSTD 402. Gender and Health Policy WOMENSTD 407. Intersexualities WOMENSTD 412. Reproductive Health Policy in a Global Context WOMENSTD 432. Advanced Topics in Gender and Health WOMENSTD 443. Pedagogy of Empowerment: Activism in Race, Gender, and Health. WOMENSTD 498. Gender and the Individual WOMENSTD 499. Psychology of Women

Upper-Level Seminars: WOMENSTD, 328, 342, 365, 407, 412, 443,

Courses with a transnational, global, historical perspective: WOMENSTD 324, 328, 365, 412.

Gender, Race, and Ethnicity

This academic minor is designed to introduce students to a range of feminist scholarship on the intersection of gender with race and ethnicity. Required and elective courses provide students with the opportunity to explore the gendered dimensions of ethnic and racial identifications and power relations. Courses focus on the ways in which gender, race and ethnicity are mutually constituted and experienced in different geographical, social, institutional, and historical locations, and how knowledge, politics, and discourse are constructed differently from different subject positions.

Prerequisites to the Academic Minor: None.

Academic Minor Program: Five courses totaling at least 16 credits, to be chosen from the following categories as stated:

- 1. Foundational Course: WOMENSTD 240 (Introduction to Women's Studies)
- 2. **Feminist Theory:** One course chosen from: WOMENSTD 330 (Feminist Thought) or 422 (Feminist Political Theory) or 455 (Feminist Theory in Anthropology)
- 3. **Electives:** Three electives (9 credits) that focus on women in specific racial and ethnic groups (At least two courses must be upper-level courses, with at least one at the 400-level), chosen from:

WOMENSTD 235. Harems to Terrorists: Representing the Modern Middle East in Hollywood Cinema

WOMENSTD 243. Latinas in the U.S.

WOMENSTD 293. 20th-Century Writing by Women of Color

WOMENSTD 304. Gender and Immigration WOMENSTD 306. Women of Color and Feminism WOMENSTD 321. Women's Lives in 20th Century China WOMENSTD 329. Native American Feminism WOMENSTD 336. Black Women in America WOMENSTD 337. Black Women in the U.S., WOMENSTD 343. Special Topics in Gender and Ethnicity in the U.S. WOMENSTD 354. Race and Identity in Music WOMENSTD 357. Feminist Practices in a Global Context WOMENSTD 363. Asian Pacific American Women WOMENSTD 365. Global Perspectives on Gender, Health, and Reproduction WOMENSTD 368. Women and War in the Middle East WOMENSTD 378. Violence Against Women of Color WOMENSTD 427, African Women WOMENSTD 433. Advanced Topics in Gender, Race and Ethnicity in the U.S. WOMENSTD 443. Pedagogy of Empowerment: Activism in Race, Gender and Health WOMENSTD 492. Women and Islam WOMENSTD 496, Gender and Representation in the Modern Middle East.

Students may also include other special topics WOMENSTD courses on specific racial and ethnic groups approved by the Women's Studies department.

Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) and Sexuality Studies

This academic minor is designed to introduce students to the field of lesbian, gay, bisexual, transgender, queer, and sexuality studies. Required and elective courses provide students with the opportunity to explore how various practices, institutions and beliefs intersect with sexualities and sexed bodies, in a range of cultures, geographies, and histories. Students will have the opportunity to rely upon courses, representing an interdisciplinary array of scholarship, in pursuing the study of sexuality and sexual identities.

Prerequisites to the Academic Minor: None.

Academic Minor Program: Five courses totaling at least 15 credits, to be chosen from the following categories as stated:

- 1. **Foundational Course:** WOMENSTD 245 (Introduction to Lesbian, Gay, Bisexual and Transgender Studies) *or* WOMENSTD 295 (Sexuality in Western Culture).
- Electives: Four electives (12 credits) that focus on LGBT issues. At least two courses must be at the 300 level or above, with at least one at the 400 level.

WOMENSTD 245. (when not taken as the foundational course) WOMENSTD 295. (when not taken as the foundational course) WOMENSTD 308. Law and the Politics of Sexuality WOMENSTD 327. History of Sexuality WOMENSTD 340. Special Topics in LGBTQ Studies WOMENSTD 348. Sociology of Sexuality WOMENSTD 390. Homophobia in the Black World WOMENSTD 407. Intersexualities WOMENSTD 411. Rednecks, Queers, and Country Music: Identity and Social Status in Popular Culture WOMENSTD 428. Sex Panics in the U.S. and UK WOMENSTD 431. Advanced Topics in LGBTQS Studies WOMENSTD 446. Sex in the City: Urban Geography and Sexual Locations WOMENSTD 450. Popular Music, Gender, and Sexuality WOMENSTD 470. Gender and Sexuality in India WOMENSTD 471. Gender and Sexuality in Pre-Modern Islam

Other courses with over half their content devoted to LGBTQ issues may be approved for the academic minor by the Women's Studies Undergraduate Committee, and these will be listed on a special section of the Women's Studies web page.

COURSES IN WOMEN'S STUDIES (WOMENSTD)

WOMENSTD 100. Gender and Women's Lives in U.S. Society (2). May not be repeated for credit. Offered mandatory credit/no credit.

WOMENSTD 150. Humanities Seminars on Women and Gender

Enrollment restricted to first-year students, including those with sophomore standing. (3). (HU). May not be repeated for credit.

WOMENSTD 151. Social Science Seminars on Women and Gender Enrollment restricted to first-year students, including those with sophomore standing. (3). (SS). May not be repeated for credit.

WOMENSTD 201. Gender and Careers (3). May not be repeated for credit.

WOMENSTD 211 / HISTART 211. Gender and Popular Culture

(4). (HU). May not be repeated for credit. (Gender, Culture, and Representation).

WOMENSTD 220 / NURS 220. Perspectives in Women's Health

(3). (SS). (R&E). May not be repeated for credit. (Gender and Health).

WOMENSTD 225 / PSYCH 225. Psychology of Human Sexuality (3). May not be repeated for credit.

WOMENSTD 235 / AMCULT 235. From Harems to Terrorists: Representing the Middle East in Hollywood Cinema

(4). (HU). (R&E). May not be repeated for credit.

WOMENSTD 240 / AMCULT 240. Introduction to Women's Studies

(4; 3 in the half-term). (HU). (R&E). May not be repeated for credit.

WOMENSTD 243 / AMCULT 243. Introduction to Study of Latinas in the U.S. (3). (HU). May not be repeated for credit.

WOMENSTD 245. Introduction to Lesbian, Gay, Bisexual and Transgender and Queer Studies

(4). (ID). May not be repeated for credit. (LGBTQ and Sexuality Studies).

WOMENSTD 253. Special Topics

(3 - 4; 3 in the half-term). May be repeated for a maximum of 7 credits. A maximum of seven credits of WOMENSTD 252 and 253 may be counted toward graduation.

WOMENSTD 254 / HISTART 254. Introduction to Gender and the Arts (3). (HU). May not be repeated for credit.

WOMENSTD 257. Special Topics in the Social Sciences (3 - 4). (SS). May be elected twice for credit.

WOMENSTD 270. Gender and the Law (4). (SS). May not be repeated for credit.

WOMENSTD 293 / AMCULT 293. 20th Century Writing by Women of Color (3). (HU). May not be repeated for credit.

WOMENSTD 295 / AMCULT 295. Sexuality in Western Culture (4). (SS). May not be repeated for credit.

WOMENSTD 300. Men's Health

(3). (ID). May not be repeated for credit. (Gender and Health).

WOMENSTD 301 / ASIAN 301. Writing Japanese Women Knowledge of Japanese is not required. (3). (HU). May not be repeated for credit.

WOMENSTD 315 / ENGLISH 315. Women and Literature (3; 2 in the half-term). (HU). May be repeated for a maximum of 6 credits.

WOMENSTD 320. Gender and Mental Health One course in WOMENSTD or PSYCH. (3). May not be repeated for credit.

WOMENSTD 323 / CAAS 323 / HISTORY 388. Black Feminist Thought and Practice (3). May not be repeated for credit.

WOMENSTD 324 / ANTHRCUL 325. Childbirth & Culture

Sophomore standing. (4). (SS). May not be repeated for credit. (Gender and Health). WOMENSTD 326 / ANTHRCUL 326. The Politics of Health and Social Suffering

One course in WOMENSTD or ANTHRCUL. (3). (SS). May not be repeated for credit.

WOMENSTD 327 / HISTORY 327. The History of Sexuality (4; 3 in the half-term). (HU). May not be repeated for credit.

WOMENSTD 328 / CAAS 328. Women, Agency and Sexual Safety One course in WOMENSTD or CAAS. (3). May not be repeated for credit.

WOMENSTD 329 / AMCULT 329. Native American Feminisms One course in WOMENSTD and AMCULT. (3). May not be repeated for credit. (Gender, Race, and Ethnicity in the U.S.).

WOMENSTD 330 / AMCULT 341. Feminist Thought AMCULT 240 or WOMENSTD 240, and one additional WOMENSTD course. (3). May not be repeated for credit.

WOMENSTD 331. Advanced Gender and the Law

WOMENSTD 270 or WOMENSTD 308 with a minimum grade of C. (Prerequisites enforced at registration.) (3). (SS). May not be repeated for credit.

WOMENSTD 334 / HISTART 334. Women in the Visual Arts: Images and Image-Makers

One course in Women's Studies or History of Art. (3). (HU). May not be repeated for credit. (Gender, Culture, and Representation).

WOMENSTD 336 / CAAS 336 / HISTORY 336. Black Women in America CAAS 201. (3). (SS). May not be repeated for credit. (Gender in the Discipline). WOMENSTD 337 / CAAS 337 / HISTORY 337. Black Women in the United States, Part I: From the American Revolution through the Women's Era CAAS 201. (4). May not be repeated for credit.

WOMENSTD 341. Special Topics in LGBTQ Studies

WOMENSTD 240 or 245. (3 - 4). May be elected twice for credit. May be elected more than once in the same term.

WOMENSTD 342. Special Topics in Gender and Health

WOMENSTD 220 or 240. (3 - 4). May be elected twice for credit. May be elected more than once in the same term. (Gender and Health).

WOMENSTD 343. Special Topics in Gender, Race, and Ethnicity in the U.S. WOMENSTD 240. (3 - 4). May be elected twice for credit. May be elected more than once in the same term. (Gender, Race, and Ethnicity in the U.S.).

WOMENSTD 344. Special Topics in Gender, Culture, and Representation WOMENSTD 240. (3 - 4). May be elected twice for credit. May be elected more than once in the same term. (Gender, Culture, and Representation).

WOMENSTD 345. Special Topics in Gender in a Global Context WOMENSTD 240. (3 - 4). May be elected twice for credit. May be elected more than

WOMENSTD 348 / SOC 345. Sociology of Sexuality

One introductory course in Sociology. (4; 3 in the half-term). May not be repeated for credit.

be repeated for credit. (Practice Course). F.

WOMENSTD 354 / CAAS 354 / HONORS 354 / RCHUMS 354. Race and Identity in Music

(3). (HU). (R&E). May not be repeated for credit.

WOMENSTD 357. Feminist Practices in a Global Context

One course in Women's Studies. (3). (SS). May not be repeated for credit. WOMENSTD 360 / AMCULT 342 / HISTORY 368. History of the Family in the U.S.

(4; 3 in the half-term). (ID). May not be repeated for credit

WOMENSTD 363 / AMCULT 363. Asian/Pacific American Women (3). May not be repeated for credit. (Gender, Race, and Ethnicity in the U.S.).

WOMENSTD 365 / CAAS 365. Global Perspectives on Gender, Health, and Reproduction

One course in either Women's Studies or CAAS. (3). (SS). May not be repeated for credit.

WOMENSTD 368 / AAPTIS 368 / AMCULT 368. Women and War in the Middle East (3). May not be repeated for credit.

WOMENSTD 370 / HISTORY 370. Women in American History to 1870 (3). May not be repeated for credit.

WOMENSTD 371 / AMCULT 371 / HISTORY 371. Women in American History Since 1870

(4). (R&E). May not be repeated for credit.

WOMENSTD 372 / HISTORY 372. Women and Gender in European History (3). May not be repeated for credit.

WOMENSTD 375 / HISTORY 375. A History of Witchcraft: The 1692 Salem Trials in **Historical and Cross-Cultural Perspective** (4). (HU). May not be repeated for credit.

WOMENSTD 376 / JUDAIC 376. Women and the Bible

(3). (HU). May not be repeated for credit. (Gender, Culture, and Representation). WOMENSTD 380. Special Topics

WOMENSTD 240. (1 - 4). May be repeated for a maximum of 7 credits. May be elected more than once in the same term.

WOMENSTD 384. Independent Research

Consent of department required. WOMENSTD 240 and one additional Women's Studies course. (1 - 3). (INDEPENDENT). May be elected six times for credit.

WOMENSTD 385. Directed Reading

Consent of instructor required. WOMENSTD 240, and one additional Women's Studies course. (1 - 3). (INDEPENDENT). May be repeated for a maximum of 9 credits. (Reading/Research Course).

WOMENSTD 389. Junior Honors Seminar

Consent of department required. (3). May not be repeated for credit.

WOMENSTD 390 / CAAS 390. Homophobia in the Black World One course in WOMENSTD or CAAS. (3). May not be repeated for credit.

WOMENSTD 400. Women's Reproductive Health

Upperclass standing. (3). May not be repeated for credit. (Gender and Health). W. WOMENSTD 402. Gender and Health Policy

One course in Women's Studies. (3). May not be repeated for credit. Rackham credit requires additional work.

WOMENSTD 407. Intersexualities

One course in WOMENSTD. (3). May not be repeated for credit.

once in the same term. (Gender in a Global Context).

WOMENSTD 350. Women and the Community

WOMENSTD 240 or AMCULT 240. (4; 3 - 4 in the half-term). (EXPERIENTIAL). May not

One course in Women's Studies or American Culture. (3). May not be repeated for credit.

WOMENSTD 412. Reproductive Health Policy in a Global Context

WOMENSTD 220. (3). May not be repeated for credit. Rackham credit requires additional work.

WOMENSTD 414 / ENGLISH 415. Studies in Women and Literature (3). May not be repeated for credit.

WOMENSTD 415 / HISTART 415. Studies in Gender and the Arts

Upperclass standing, and one course in Women's Studies or History of Art. (3). May be repeated for a maximum of 9 credits. (Gender, Culture, and Representation).

WOMENSTD 419 / PSYCH 411. Gender and Group Process in a Multicultural Context

One course in Women's Studies or Psychology. WOMENSTD 240 is recommended. (3). May not be repeated for credit. (Gender, Race, and Ethnicity in the U.S.).

WOMENSTD 420. Group Facilitation in Women's Studies

Consent of instructor required. WOMENSTD 240 and permission of instructor. (3). May not be repeated for credit. (Practice Course).

WOMENSTD 422 / POLSCI 401. Feminist Political Theory

Junior standing. (3). May not be repeated for credit.

WOMENSTD 425 / AMCULT 425. Feminist Practice of Oral History

One course in WOMENSTD or AMCULT. (3). May not be repeated for credit. Rackham credit requires additional work.

WOMENSTD 427 / ANTHRCUL 427 / CAAS 427. African Women

One course in African Studies, Anthropology, or Women's Studies. CAAS 200 recommended. Permission of instructor. (3). May not be repeated for credit. (Gender in a Global Context).

WOMENSTD 428 / ANTHRCUL 428 / RCSSCI 428. Sex Panics in the US and UK since 1890

One course in WOMENSTD or ANTHRCUL or RCSSCI, SOC, or HISTORY. (3). May not be repeated for credit.

WOMENSTD 431. Advanced Topics in LGBTQ Studies

WOMENSTD 245 or 295. (3 - 4). May be elected twice for credit. May be elected more than once in the same term. Rackham credit reauires additional work.

WOMENSTD 432. Advanced Topics in Gender and Health

WOMENSTD 220. (3 - 4). May be elected twice for credit. Rackham credit requires additional work.

WOMENSTD 433. Advanced Topics in Gender, Race and Ethnicity in the U.S.

WOMENSTD 240. (3 - 4). May be elected twice for credit. May be elected more than once in the same term. Rackham credit requires additional work.

WOMENSTD 434. Advanced Topics in Gender, Culture, and Representation

WOMENSTD 240. (3 - 4). May be elected twice for credit. Rackham credit requires additional work.

WOMENSTD 435. Advanced Topics in Gender in a Global Context

WOMENSTD 240. (3 - 4). May be elected twice for credit. Rackham credit requires additional work.

WOMENSTD 436 / ANTHRCUL 436. Human Rights, Gender and Culture

One course in WOMENSTD or ANTHRCUL. (3). May not be repeated for credit. Rackham credit requires additional work.

WOMENSTD 440. Issues and Controversies in the New Scholarship on Women

WOMENSTD 240 and 330. (3). May not be repeated for credit. (Senior Seminar).

WOMENSTD 441. Senior Honors Seminar I

Consent of department required. (1). May not be repeated for credit. Offered mandatory credit/no credit.

WOMENSTD 442. Senior Honors Seminar II

Consent of department required. (1). May not be repeated for credit. Offered mandatory credit/no credit.

WOMENSTD 443 / CAAS 443. Pedagogy of Empowerment: Activism in Race, Gender, and Health

WOMENSTD 240 or CAAS 201. (3). May not be repeated for credit. (Gender and Health).

WOMENSTD 446 / ANTHRCUL 446. Sex and the City: Urban Geography and Sexual Locations

At least one course in Anthropology, History, Women's Studies, Sociology, LGBTQ Studies, or Urban Studies/Urban Planning. (3). May not be repeated for credit.

WOMENSTD 447 / SOC 447. Sociology of Gender

One introductory course in sociology or women's studies. (3). May not be repeated for credit.

WOMENSTD 448 / HISTORY 448. Gender and the Family in China

(3). May not be repeated for credit. Rackham credit requires additional work. WOMENSTD 461 / SAC 461. Explorations in Feminist Film Theory

Junior standing and WOMENSTD 240. (3). May not be repeated for credit. (Gender, Culture, and Representation).

WOMENSTD 471 / AAPTIS 495 / HISTORY 429 / RELIGION 496. Gender and Sexuality in Pre-Modern Islam

Students should preferably have had one course in Islamic Studies. (3). May not be repeated for credit. Taught in English. (Gender in a Global Context).

WOMENSTD 477. Field Study in Global Feminist Practice

Consent of instructor required. One course in WOMENSTD. (1 - 4). (EXPERIENTIAL). May be repeated for a maximum of 7 credits. Offered mandatory credit/no credit.

WOMENSTD 482. Special Topics Minicourse

One course in Women's Studies. (1 - 2). May be repeated for a maximum of 7 credits. A maximum of 7 credits of WOMENSTD 482 and 483 may be counted toward graduation.

WOMENSTD 483. Special Topics

(3 - 4; 3 in the half-term). May be repeated for a maximum of 7 credits. May be elected more than once in the same term. A maximum of 7 credits of WOMENSTD 482 and 483 may be counted toward graduation.

WOMENSTD 486 / PHIL 486. Topics in Feminist Philosophy

Two courses in either Philosophy or Women's Studies or permission of instructor. (3). May not be repeated for credit. (Gender, Culture, and Representation).

WOMENSTD 490. Honors Thesis

Consent of instructor required. Senior Honors Women's Studies concentrators. (3). (INDEPENDENT). May not be repeated for credit. Credit is granted for a combined total of six credits of WOMENSTD 490 and 491. (Reading/Research Course). Continuing Course. Y grade can be reported at end of the first-term to indicate work in progress. At the end of the second term of WOMENSTD 491, the final grade is posted for both term's elections. F, W, Sp, Su.

WOMENSTD 491. Honors Thesis

Consent of instructor required. Senior Honors Women's Studies concentrators. Permission of instructor. (3). (INDEPENDENT). May not be repeated for credit. Credit is granted for a combined total of six credits of WOMENSTD 490 and 491. (Reading/Research Course). F, W, Sp, Su.

WOMENSTD 492 / REES 490 / SOC 490. Women and Islam: A Sociological Perspective

(3). May not be repeated for credit. (Gender in a Global Context).

WOMENSTD 498 / PSYCH 498. Gender and the Individual

One of the following: PSYCH 111, 112, 114, or 115; or a WOMENSTD course. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

WOMENSTD 499 / PSYCH 499. Psychology of Women

One of the following: PSYCH 111, 112, 114, or 115; or a WOMENSTD course. (Prerequisites enforced at registration.) (3). May not be repeated for credit.

WOMEN'S STUDIES / 293

Writing Center (See Sweetland Writing Center)

Military Officer Education Programs

The University in cooperation with the armed services of the United States provides an opportunity for all eligible male and female students to earn a commission in any of the three services (Army; Navy, including Marine Corps; and Air Force) upon completion of the degree requirements. This opportunity is available through enrollment in the Military Officer Education Program (MOEP) which is nationally known as the Reserve Officers Training Corps (ROTC).

All three Officer Education Programs (Army, Navy, and Air Force) offer the same general program options, financial benefits, and scholarship opportunities. Minor variations, however, do exist among the programs, and students should note the specifics under each program. Program changes occur throughout the year; interested students should contact the specific Officer Education Program for the current rules.

Four-Year, Three-Year, and Two-Year Program Option. Three programs are available. Students may enroll in either program, subject to approval by the program chair. With permission, sophomore students may join by compressing (taking the freshman and sophomore courses at the same time) thus completing the four-year program option in three years.

The *four-year program* includes eight terms of course work elected for a total of 12 to 20 credits depending on the particular Officer Education Program. The first four terms elected during the freshman and sophomore years comprise the *basic* course of study. No military obligation is incurred by non-scholarship students attending the basic course, and a student may withdraw from the program at any time prior to the junior year. The last four terms of course work elected during the junior and senior years constitute the *advanced* course of study. Depending upon the individual Officer Education Program, there is also a summer field experience of varying length which serves as a preparation for the advanced program. A student enrolling for the last three years of the program assumes a contractual obligation to complete the program, accept a commission, and discharge the military service obligation to the respective service. The *two-year program* consists of the advanced course of study of the junior and senior years preceded by a five-week summer basic camp or field training session which replaces the freshman and sophomore basic courses taught on campus. Upon completion of summer field training, students enroll in the advanced courses and assume the same obligations as those assumed by students enrolled in the second half of the four-year program.

Financial Benefits. All students enrolled in the advanced third- and fourth-year Officer Education Program, whether or not on scholarship, receive a minimum monthly stipend of \$450 (\$350 Navy) for juniors and \$500 (\$400 Navy) for seniors for the academic year. Uniforms and the necessary equipment are furnished to all students. In addition, pay and travel allowances are provided for attendance at summer field training courses including the five-week field course preceding the two-year program.

Scholarships. In addition to the financial benefits provided for all students in the advanced program, two-, three-, and four-year scholarships are awarded on a competitive basis by each of the Officer Education Programs. These scholarships provide up to full tuition, some laboratory fees, and funds for books in addition to the minimum monthly stipend. Students awarded a four-year scholarship beginning in the freshman year or a three-year scholarship beginning in the sophomore year receive the monthly stipend while still in the basic (first or second year) program.

Course Election by Non-Program Students. Officer Education Program courses are also open by permission of the instructor to University students not enrolled in the program.

Credit toward graduation from LSA. The College of Literature, Science, and the Arts does not grant credit toward graduation for any courses offered through the Officer Education Program except for those courses which are cross-listed in other academic units (effective September 1, 1971) or courses that have a University Course cross-listing. These latter courses count as non-LSA course work if the cross-listed offering falls outside LSA academic departments or programs.

Air Force Officer Education Program

154 North Hall 1105 North University Avenue (734) 764-2403 (phone) (734) 647-4099 (fax) www.umich.edu/~det390 e-mail: afrotc@umich.edu Lieutenant Colonel Lisa Franz, Chair

Not a concentration program

Instructors: Lt Col Franz, Major Liscombe, Capt Welch, Capt Nichols

Students who enroll as cadets in the Air Force Officer Education Program and who successfully complete the program and receive a University degree are commissioned as Second Lieutenants in the United States Air Force.

Career Opportunities. In addition to being pilots and navigators, men and women can serve in a wide range of technical fields such as meteorology, research and development, communications and electronics, engineering, transportation, logistics, and intelligence as well as in numerous managerial and training fields such as administrative services, accounting and finance, personnel, statistics, manpower management, education and training, investigation, and information services. Advanced education or technical training for these career areas may be obtained on active duty at Air Force expense.

Four-Year and Three-Year Programs. Students may choose either of the two program options described in the general introduction to the Military Officer Education Programs. Both program options include a summer four-week field training course at an Air Force base between the sophomore and junior years. Students electing to take the three-year program will be required to take the basic course sequence in one year instead of two years.

Financial Benefits and Scholarships. For a detailed description of the available financial benefits and scholarships, read the appropriate sections in the general introduction to the Military Officer Education Programs.

Course of Study. Students enroll in one course in Air Force during each term of participation in the program for a total of 16 credits distributed as follows:

Basic course sequence (first and second years): AERO 101, 102, 201, 202 (4 credits).

Advanced course sequence (third and fourth years): AERO 310, 311, 410, 411 (12 credits).

These course sequences attempt to develop an understanding of the global mission and organization of the United States Air Force, the historical development of air power and its support of national objectives, concepts of leadership, management responsibilities and skills, national defense policy, and the role of the military officer in our society.

Military Obligation. After being commissioned, graduates of the program will be called to active duty with the Air Force in a field usually related to their academic degree program. The period of service is four years for non-flying officers, six years for navigators and air battle managers after completion of their training, and ten years for pilots after completion of flight training.

COURSES IN AIR FORCE (AERO)

AERO 101. Air Force Today I (1). May not be repeated for credit. Not for credit toward LSA degree. F. AERO 102. Air Force Today II (1). May not be repeated for credit. Not for credit toward LSA degree.

Army Officer Education Program

212 North Hall 1105 North University Avenue (734) 764-2400 (phone) (734) 647-3032 (fax) www.umich.edu/~armyrotc e-mail: AOEPROO@umich.edu Lieutenant Colonel Jan Malaikal, Chair

Not a concentration program

Instructors: Lieutenant Colonel Malaikal, Lieutenant Colonel Doyle, Lieutenant Colonel Dankworth, SFC(R) Stevenson

Students enrolled in the Army Officer Education Program, upon graduation from the University and successful completion of the program, receive a commission as second lieutenant in the United States Army Reserve, the Army National Guard, or in the Regular Army. Many students enroll for the first two years to sample career opportunities. No military obligation is incurred for the first two years, unless students are on scholarship.

Career Opportunities. Graduates of the program may choose a career in the Regular Army, a limited period of active service, or part-time service in the Army Reserve or National Guard. Service in the Army's sixteen branches provides an opportunity to utilize the education provided by many of the concentration programs, and Army officer experience is applicable to a broad spectrum of civilian occupations.

Four-Year, Three-Year, and Two-Year Programs. Students may choose either of the two program options described in the general introduction to the Military Officer Education Programs. Students may take the freshman and sophomore courses at the same time to complete the four-year program in three years. All program includes a four-week summer leadership course at Fort Lewis, Washington, which is taken as part of the advanced course sequence between the junior and senior years.

Students who intend to enroll in the two-year program should contact the chair by January 15 of their sophomore year in order to be scheduled for attendance at a four-week summer training program conducted at Fort Knox, Kentucky. The summer training prepares the student for enrollment in the program in the following fall term. Two-year candidates must have a total of two years of school remaining at the undergraduate and/or graduate level. Students with prior military service (or prior ROTC training) may enroll in the program with advanced standing, subject to the chair's evaluation of prior service or training.

Financial Benefits and Scholarships. For a detailed description of the available financial benefits and scholarships, read the appropriate sections in the general introduction to the Military Officer Education Program. The two-, three-, and four-year scholarships are available at the University of Michigan. Currently over 50 percent of the students enrolled in Army ROTC have an Army scholarship. Scholarships are valued in excess of \$30,000 annually.

AERO 201 / UC 201. U.S. Aviation History & Its Development into Air Power AERO 102/Permission of instructor. (1). May not be repeated for credit.

AERO 202 / UC 202. U.S. Aviation History & Its Development into Air Power Permission of instructor. (1). May not be repeated for credit.

AERO 310 / UC 309. Air Force Leadership and Management AERO 202/P.I. (3). May not be repeated for credit. F.

AERO 311. Management&Af Appl AERO 310. (3). May not be repeated for credit. Not for credit toward LSA degree.

AERO 410. American Society I

AERO 311/Permission of instructor. (3). May not be repeated for credit. Not for credit toward LSA degree. F.

AERO 411. American Society II

AERO 410. (3). May not be repeated for credit. Not for credit toward LSA degree.

Course of Study. Students enroll in one course in Military Science during each term of participation in the program for a total of 12 credits distributed as follows:

Basic course sequence (first and second years): MILSCI 101, 102, 201, 202 (4 credits).

Advanced course sequence (third and fourth years): MILSCI 301, 302, 401, 402 (8 credits).

The complete course of instruction includes professional ethics, military writing, principles of military leadership, staff management, small unit leadership, military justice, and Geneva Convention. In addition to these courses, cadets also attend a ninety minute military arts laboratory per week each term.

Simultaneous Membership Program. Students who are nonscholarship holders may choose to join a Reserve or National Guard unit of their choice while enrolled at the University. The students then train as officer candidates, gaining valuable leadership training as a member of the Reserve Forces and can collect over \$1,000 per month in addition to the monthly stipend to all contracted ROTC cadets.

Branch Assignments. In their last year prior to commissioning, cadets are classified for branch assignments to one of the following 16 branches of the Army in accordance with their preference, aptitude, academic background, and the needs of the Army: Aviation, Armor, Field Artillery, Air Defense Artillery, Adjutant General's Corps, Military Intelligence, Corps of Engineers, Finance Corps, Infantry, Medical Service Corps, Military Police Corps, Ordnance Corps, Quartermaster Corps, Signal Corps, Transportation Corps, Chemical Corps, and Army Nurse Corps.

Military Obligation. Non-scholarship students may apply for duty assignments in the Active Army, Army Reserve or National Guard with a commitment of three years. Scholarship students are committed to four years Active Army, Army Reserve or National Guard.

COURSES IN MILITARY SCIENCE (MILSCI)

MILSCI 101. Intro Officership

(1). May not be repeated for credit. Not for credit toward LSA degree. MILSCI 102. Intro Leadership

(1). May not be repeated for credit. Not for credit toward LSA degree.

MILSCI 201 / UC 203. Innovative Tactical Leadership

(1). May not be repeated for credit.

MILSCI 202 / UC 204. Leadership in Changing Environments Permission of professor. (1). May not be repeated for credit.

MILSCI 301 / UC 301. Leading Small Organizations I Permission of Army OEP chair. (2). May not be repeated for credit.

MILSCI 302 / UC 302. Leading Small Organizations II Permission of program chairman. (2). May not be repeated for credit.

MILSCI 401 / UC 401. Leadership and Management PER.PROG.CHM. (2). May not be repeated for credit.

MILSCI 402 / UC 402. Military Professionalism and Professional Ethics (2). May not be repeated for credit.

MILSCI 499. Independent Study-Directed Readings Consent of instructor required. (1 - 4). (INDEPENDENT). May be repeated for a maximum of 8 credits. Not for credit toward LSA degree.

Naval Officer Education Program

100 North Hall 1105 North University Avenue (734) 764-1498 (phone) (734) 764-3318 (fax) www.umich.edu/~umnrotc e-mail: navyrotc@umich.edu Captain Richard E. Vanden Heuvel, Chair

Not a concentration program

Instructors: Captain Vanden Heuvel, Commander Gavin, Commander Gordon, Captain Sapp (USMC), Lieutenant La Fave, Lieutenant Doman, Lieutenant Junior Grade Scott, Gunnery Sergeant Flores (USMC)

Students enrolled as midshipmen in the Navy Officer Education Program who successfully complete the program and receive a university degree are commissioned as officers in the Navy or Marine Corps.

Career Opportunities. Graduates of the program have a wide range of job and career opportunities as commissioned officers in the Navy or Marine Corps. Navy officers may choose duty in surface ships, aviation, submarines, or nursing. Marine Corps officers may choose aviation, infantry, armor, artillery, and a wide variety of other specialties. After graduation, all commissioned officers receive additional training in their chosen specialties.

Four-Year, Three-Year, and Two-Year Programs. Students can find detailed information about these program options at https://www.nrotc.navy.mil

Financial Benefits and Scholarships. A detailed description of the available financial benefits and scholarships can be found in the appropriate sections in the general introduction to the Military Officer Education Programs. Each year the Navy awards four-year scholarships for study at the University of Michigan to approximately 25 students chosen on the basis of selections made by a national committee which convenes weekly October through March. Three-year scholarships are available to college students who complete their freshman year and two-year scholarships are also available to college students who complete their sophomore year or third year in a

five-year curriculum. The two-year scholarship covers the final two years of college. The scholarships are awarded to students who have displayed exceptional academic potential. Criteria for eligibility vary between the several programs offered. Students not awarded a scholarship can enroll in the College Program. They will participate in all NROTC classes and activities and be eligible to re-apply for a scholarship at a later date. Details are available from the program chair.

Course of Study. Normally, students enroll in eight Naval Science courses during their participation in the program. In addition, all students are required to complete a specific core of college courses including calculus and physics. Scholarship students also participate in three-to-six week summer training exercises after their freshman and sophomore years, and all midshipmen participate in a similar training exercise upon completion of their junior year.

Military Obligation. Depending upon the program in which they are enrolled, and the warfare specialty they choose, graduates' service obligation vary from four to eight years.

COURSES IN NAVAL SCIENCE (NAVSCI)

NAVSCI 101. Introduction to Naval Science (2). May not be repeated for credit. Not for credit toward LSA degree. F.

NAVSCI 102 / UC 101. Seapower and Maritime Affairs (2). May not be repeated for credit.

NAVSCI 201 / NAVARCH 102. Introduction to Ship Systems (3). (BS). May not be repeated for credit. (non-LSA).

NAVSCI 202 / EECS 250. Electronic Sensing Systems

Prior or concurrent enrollment in PHYSICS 240 (or 260) or EECS 230. (3). (BS). May not be repeated for credit. W. (non-LSA).

NAVSCI 203 / UC 205. Leadership and Management

NAVSCI 101,102 OR PI. (3). May not be repeated for credit.

NAVSCI 301 / ASTRO 261. Navigation (3). (BS). May not be repeated for credit. F.

NAVSCI 302. Naval Operations

N S 301. (3). May not be repeated for credit. Not for credit toward LSA degree.

NAVSCI 310 / UC 310. Evolution of Warfare (3). May not be repeated for credit.

NAVSCI 402 / UC 403. Leadership and Ethics

NAVSCI 203. Non-ROTC students need permission of instructor. (2). May not be repeated for credit.

NAVSCI 410 / UC 410. Amphibious Warfare

(3). May not be repeated for credit.

Chapter VII: Admissions and General Information

Office of Undergraduate Admissions

1220 Student Activities Building 515 East Jefferson Street University of Michigan Ann Arbor, Michigan 48109-1316 (734) 764-7433 (phone) (734) 936-0740 (fax) www.admissions.umich.edu

Students are admitted to the College by the Office of Undergraduate Admissions from whom appropriate forms and instructions are available. The Associate Vice Provost and Executive Director of Undergraduate Admissions welcomes prospective first-year students who wish to participate in a group information session prior to submitting an application.

Application Fee. A non-refundable application fee is required of all who seek degree admission to the University. The application fee in 2009-10 was:

- \$40 (U.S. mailing address)
- \$55 (International mailing address)
- \$75 for dual applicants to:
 - Music, Theatre & Dance (MT&D)/LSA or MT&D/RC;
 - MT&D/Art & Design (A&D);
 - InterArts Performance Program (MT&D/A&D)

This fee is not required of applicants seeking readmission, of students requesting cross-campus transfers, or of new transfer applications from UM–Dearborn or UM–Flint.

Enrollment Deposit. A newly-admitted student is required to pay a two hundred dollar non-refundable enrollment deposit in accordance with instructions provided by the Office of Undergraduate Admissions. Upon enrollment, this deposit is applied toward the tuition and fees for the term for which a student is admitted. Failure to enroll for *that* term of admission results in forfeiture of the entire two hundred dollar deposit.

Questions and correspondence concerning the enrollment deposit should be directed to the address listed above.

First-Year Students

Prospective first-year students may apply online or request a paper application. Applications are invited from high school students who have begun their senior year as well as from high school graduates. Early application submission allows admissions officials to inform students of the probability of admission and to call attention to any unmet requirements. For all students whose completed applications are postmarked by November 1st, we will guarantee that a decision will be released by the end of December. Students whose applications are complete after the Early Response deadline will receive decisions on a rolling basis. Our final deadline for applications will continue to be February 1st (applications must be postmarked by this date). Students who desire admission for other terms should obtain information about application deadlines from the Office of Undergraduate Admissions.

If you are thinking about applying, it is important you have a clear understanding of the admissions criteria. Admission is based on the strength of an applicant's high school background, including the degree of difficulty of courses selected, the record of academic achievement, special or unique accomplishments both in and out of the classroom, and the ACT with writing or SAT scores.

In general, applicants' credentials should include a "B" average or better (beyond the ninth grade) in a rigorous and appropriate college preparatory program and standardized test scores comparable to freshmen pursuing similar programs in the University. Decisions are made on an individual basis. No specific class rank, grade point average, test score, or other qualifications by itself will assure admission.

www.admissions.umich.edu/prospective/prospectivefreshmen/appreview.php

The University does not offer probationary admission. To be admitted at the freshmen level, an applicant must be at least 16 years old and a graduate of an accredited secondary school. Home-schooled students and graduates of unaccredited schools may be required to submit the results of additional nationally normed tests such as the SAT Subject Examinations. For older students, the results of the General Education Development (GED) test may be presented in place of a high school diploma.

The College of Literature, Science, and the Arts and several professional schools and colleges of the University of Michigan *(i.e.,* Taubman College of Architecture + Urban Planning, Stephen M. Ross School of Business, School of Education, School of Information, College of Pharmacy, School of Social Work) have developed a *preferred admissions program* for a limited number of highly qualified entering freshmen that guarantees admission to specific professional programs. The Preferred Admissions Programs are described below. Further information about the preferred admissions program is available from the Office of Undergraduate Admissions website.

International Students

Prospective applicants with international academic experience are urged to read the specific information for International students on the web at www.admissions.umich.edu/intl or request the brochure entitled "International Admissions Information" from the Office of Undergraduate Admissions. This information lists minimum academic requirements in terms of international educational systems, describes procedures for documentation of English language proficiency, and instructs applicants regarding the procedures for obtaining a student visa for study in the U.S.

Transfer Students

Students with competitive records of scholarship in other colleges and universities or from the UM–Dearborn or UM–Flint campuses who wish to continue their academic work in the College of Literature, Science, and the Arts should read the specific transfer information on the web at www.admissions.umich.edu/transfers. An official transcript from each institution attended, as well as a final transcript from the high school from which the student was graduated, must be submitted as part of the application process. GED scores are acceptable.

Readmission to the College

The College of Literature, Science, and the Arts allows readmission of a student previously enrolled if the student left in good academic standing. Students who have been away for less than two years contact the Office of the Registrar, 500 South State Street, to obtain an appointment for registration. Students who have been absent from the College for more than two full years (24 months) must apply for readmission by submitting an *Application for Readmission* which is available from the Office of Academic Advising, 1255 Angell Hall and on the LSA website (www.lsa.umich.edu). Students also must meet with an academic advisor. International students on temporary U.S. visa status (F-1 or J-1) who have missed a full year must apply for readmission by submitting an Application for Readmission which is available from the Office of Academic Advising (address provided above).

If a student has done academic work out-of-residence since leaving the College, an official transcript of that work should be submitted to the Office of Undergraduate Admissions.

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Students suspended from the College for reasons of unsatisfactory academic performance must obtain permission to register from the Academic Standards Board. In these cases, the readmission decision rests entirely with the Academic Standards Board. Such students must make an appointment with a member of the Academic Standards Board at least eight weeks prior to the desired readmission term to discuss readmission to the College. Petitions requesting reinstatement should be received by the Academic Standards Board at least six weeks prior to the beginning of the term in question.

Cross-Campus Transfer Students

Applications from students enrolled in another school or college of the University of Michigan (Ann Arbor) are considered cross-campus transfer applications. Students enrolled in another UM–Ann Arbor school or college who are interested in transferring to LSA should attend a "Transferring to LSA Information Session." Contact the Newnan LSA Advising Center, 1255 Angell Hall, (734) 764-0332, for times and locations. After attending an information session, the student is eligible to schedule an appointment with an LSA advisor to discuss his/her interest in LSA and to complete a short application that will require the advisor's stamped approval. Then the application is submitted to the Office of Undergraduate Admissions (OUA) in the Student Activities Building. International students on temporary U.S. visa status (F-1 or J-1) must also complete additional admissions documents through:

The International Center 603 East Madison Ann Arbor MI 48109-1370 (734) 764-9310 (phone) (734) 647-2181 (fax) icenter@umich.edu

Students may not make a cross-campus transfer to LSA until they have completed two full terms in their original school or college. The application may be submitted during the second term of enrollment. The GPA of the last term before transfer and the cumulative GPA must both be above 2.0 in order for a student to be eligible to transfer into LSA. Students who wish to make a cross-campus transfer after the freshman year should discuss their plans with an academic advisor; the advisor will assist in selecting an appropriate academic program for the second term of the freshman year. Cross-campus transfer students may receive credit for a maximum of 90 credits from the previous college or school. LSA residency requires that a student earn 30 credits in the College of Literature, Science, and the Arts.

Intra-Unit Transfer: Students who wish to transfer from the College of Literature, Science, and the Arts to the Residential College or vice versa should contact the RC Academic Services Office for information about intra-college transfer procedures. In these cases, the Office of Undergraduate Admissions is not involved.

Second Bachelor's Degree

Individuals with a bachelor's degree who want to earn a second degree must obtain permission from the Office of Undergraduate Admissions. Normally, at least two calendar years must transpire between the awarding of the first baccalaureate degree and the beginning of the second baccalaureate degree program. Applicants must pursue an academic program significantly different from that of the first baccalaureate degree. Except in the case of joint degrees (see Chapter V), the College does not award concurrent bachelor's degrees. For graduates of schools and colleges on the Ann Arbor campus, the two baccalaureate degrees should be different (for example, not two Bachelor of Arts or two Bachelor of Science degrees). The second degree program cannot be a BGS degree, and students whose first degree is the BGS degree are ineligible for a second Bachelor's degree. Applicants who already have an LSA degree must earn at least 30 credits in residence in LSA beyond the credits required for the first degree, with at least 15 in the new field of concentration. Graduates of another Ann Arbor unit must earn at least 30 credits while registered in LSA. The second program must include a minimum of 100 LSA credits. To be considered for admission to a second baccalaureate degree program, all applicants who have a baccalaureate degree from the Ann Arbor campus of the University of Michigan must have a 2.0 minimum grade point average.

Applicants whose first degree comes from any other institution (including UM–Dearborn and UM–Flint) will be required to complete at least 60 credits in residence at the Ann Arbor campus. The student must be registered in LSA for at least 30 credits beyond the credits required for the first degree. The second degree program must include a minimum of 100 LSA credits. To be considered for admission to a second baccalaureate degree program, applicants must have the same minimum grade point average as the College requires for students who transfer from other institutions.

Second Concentration After Graduation. Students may complete a second concentration any time after graduation by registering as a non-degree candidate through the Admissions office. Once the concentration requirements are complete, their departmental advisor must submit an on-line Concentration Release form to the Academic Auditors so the second concentration can be added to the student's transcript. Students may not complete an academic minor after graduation, or change an academic minor into a concentration. They also may not change their degree *(e.g., A.B. to B.S.)* after graduation.

Dual Registration

Students who wish to enroll simultaneously in LSA and another division, school, college, or university, must request permission from the Academic Standards Board in advance of registration. Qualified seniors who are interested in the Concurrent Undergraduate-Graduate Studies (CUGS) Program should read that section in *Chapter V*.

Non-degree Status

Non-degree status offers the opportunity to elect courses in the College to meet personal objectives without enrollment in a degree program. Consideration for admission as a non-degree student is determined by (1) certified good academic standing at another college or university and eligibility to return or (2) successful completion of a college degree. Interested students should submit the *Non-Degree LSA Application* which is available from the Office of Undergraduate Admissions. Applicants may also be asked to submit an official transcript of their college work. High school graduates not entering U-M in the fall as freshmen may be considered for non-degree admission for summer term only.

A student who has a degree from any unit of the University of Michigan is eligible to apply for non-degree status. Non-degree status is not intended to accommodate qualified degree applicants who apply after the deadline or after enrollment limits for a particular term have been reached. Nor is non-degree status intended to accommodate high school students who wish to elect college-level courses unless they meet the conditions for dual enrollment as defined by LSA and implemented by the Office of Undergraduate Admissions.

Students dismissed from the College for unsatisfactory academic performance may not enroll as non-degree students. No student having an academic stop in any unit of the University as a degree-seeking student may be admitted to non-degree status without receiving special permission from the Office of Undergraduate Admissions

The Office of Undergraduate Admissions grants admission as applications are received. *If non-degree status is granted, the student may register for courses only on or after the first day of classes of the term for which admission has been granted.* This is to ensure that degree-seeking students have first priority in electing courses. Nondegree students may register for any course so long as it is open or an *Electronic Override* can be obtained.

The Registrar's Office maintains an official transcript of all courses elected by each non-degree student. Non-degree students are subject to the same policies that apply to degree-seeking students. They are expected to maintain a minimum 2.0 gpa to be eligible for continued enrollment.

If non-degree students plan to seek a degree from the College, they should discuss their interests with an admissions counselor and an academic advisor. Non-degree status is not changed to degree status except by formal application through the Office of Undergraduate Admissions. Successful completion of work elected as a non-degree student is considered but does not ensure admission as a degree student. If admission as a degree student is granted, credit earned during enrollment as a non-degree student may be applied toward a degree. It is considered in-residence credit (see *Residence Policy* in *Chapter IV*) and earns honor points.

Non-degree students who would like to discuss their academic plans are encouraged to contact the LSA Academic Advising Center. Since academic advisors do not have access to academic records for nondegree students, a copy of any relevant transcripts (or other materials) should be brought to the advising appointment.

Preferred Admissions

The College of Literature, Science, and the Arts and several professional schools and colleges of the University of Michigan have developed a program for a limited number of highly qualified entering first-year students that guarantees admission to specific professional programs.

www.admissions.umich.edu/prospective/prospectivefreshmen/choosing.html

Admission to one of six U-M professional or graduate schools or colleges is guaranteed to a limited number of highly-qualified freshman students who maintain a specified level of academic achievement during their undergraduate years. The purpose is to encourage greater freedom and diversity of course selection, and to prevent students from feeling pressured to take a narrowly structured preprofessional undergraduate program. Achievement expectations during the pre-professional years are explained in the invitation to the program. Most selections are made by early April.

Presently, the participating professional schools and colleges include the Taubman College of Architecture and Urban Planning, the Stephen M. Ross School of Business, the School of Education, the School of Information, the College of Pharmacy, and the School of Social Work.

First-year applicants to the College of Literature, Science, and the Arts must indicate their interest in preferred admissions on the *Application Form* obtained from the Office of Undergraduate Admissions. A letter stating your reasons for desiring admission to the program must accompany the application for all programs except the Stephen M. Ross School of Business. For the Stephen M. Ross School of Business, you must answer the Ross Preferred Admission essay question. Transfer students to the University are **not** eligible for preferred admissions.

Admission to the Program

Once admitted to the College of Literature, Science, and the Arts, students will be considered for a specific preferred admissions program in Architecture, Business, Education, Information, Pharmacy, and Social Work on the basis of (1) academic qualifications, and (2) preferred admissions option as indicated on the application for admission. The professional school will send qualified students information regarding the program and any additional requirements.

Consideration for a preferred admissions program will not affect the admissions decision, either positively or negatively, to the College of Literature, Science, and the Arts or regular admission to the professional program at a later date.

The preferred admissions programs currently in effect are described below:

Architecture

www.arch.umich.edu e-mail: arch@umich.edu

The College of Literature, Science, and the Arts and Taubman College of Architecture and Urban Planning have developed a program directed toward a limited number of highly-qualified entering freshmen who are interested in transferring to the Architecture Program during their junior year to obtain the Bachelor of Science degree. Candidates for preferred admission must have (1) a high school GPA of at least 3.5 (University of Michigan calculated) and (2) a total score of 1300 on the math and critical reading sections of the SAT I or ACT composite of 29.

The architecture program is a four-year program: two years of liberal arts; two years undergraduate architecture, leading to a preprofessional B.S. degree. Students may then choose to pursue the two-year Master of Architecture Professional degree. Preferred Admissions does not guarantee acceptance to the two-year graduate program.

Students accepted for the preferred admissions program are guaranteed admission to Year 3 of the Architecture Program, provided they maintain an overall GPA of 3.0 during their freshman and sophomore years and complete the program requirements specified for Years 1 and 2 (a minimum of 60 credit hours), including studio art, English, mathematics, and physics.

During the sophomore year students must submit a cross-campus application, statement of purpose, and all required credentials for admission to the architecture program in the fall term of the junior year. Students are required to include a portfolio of their graphic work.

Freshman applicants to the College of Literature, Science and the Arts should indicate their interest in preferred admission on the *Application Form* obtained from the Office of Undergraduate Admissions. Transfer students to the University are not eligible for preferred admissions.

ARCHITECTURE PROGRAM REQUIREMENTS: YEARS 1 AND 2

A student must complete a minimum of 60 credit hours in Year 1 and 2 including the following courses.

- *PRE-ARCHITECTURE/ART.* Two studio courses (6 credit hours) in basic drawing and design. Appropriate architecture courses include ARCH 201, ARCH 202, and ARCH 218.
- *ENGLISH.* One course (4 credit hours) in English composition. ENGLISH 124 or 125.
- MATHEMATICS. One course (4 credit hours) in analytic geometry and calculus – functions and graphs, limits, derivatives, differentiation of algebraic and trigonometric functions, integration and the definite integral. MATH 115.
- *PHYSICS.* Two terms of physics, lecture plus lab (8 credit hours minimum) – laws of motion, force, energy and power, gas laws, heat, wave motion, sound, electricity and magnetism, light and optics. PHYSICS 125/127 and 126/128, or PHYSICS 140/141 and 240/241.

In addition to the courses required for admission to Year 3, a student must complete the following liberal arts distribution requirements in order to receive the B.S. degree. Each student is strongly encouraged to complete as much of this work as possible in Years 1 and 2. Classification of a course as Humanities, Natural Science or Social Science is consistent with LSA policy, except that foreign language courses are considered as humanities and mathematics courses are considered as natural science. **Taubman College does not accept on-line courses**.

- COMPUTER SCIENCE. One course (3 credit hours) in computer programming, or computer-aided design or drafting. U-M computer courses include ARCH 211, ARCH 421, and ENGIN 101.
- *HUMANITIES.* Two courses (6 credit hours) typically selected from classical studies, English, foreign language, history of art, musicology, philosophy, religion or speech.
- NATURAL SCIENCES. One course (3 credit hours) typically selected from biological anthropology, astronomy, biology, chemistry, ecology, geography, geology, mathematics (beyond MATH 115), or physiology. Students who have not taken a chemistry course in high school must elect chemistry.
- SOCIAL SCIENCES. Two courses (6 credit hours) typically selected from cultural anthropology, communication, economics, geography, history, political science, psychology, or sociology.

Courses taken to satisfy junior year admissions and Bachelor of Science degree requirements may not be taken pass/fail.

Beyond the course and distribution requirements specified above, a student may take other courses as open electives to earn a total of at least 60 credit hours. Since the emphasis in Years 1 and 2 is on liberal arts, not more than 7 credits in non-academic or technical areas can be applied toward the 60 credit hour requirement.

UNDERGRADUATE PRE-ARCHITECTURE COURSE OFFERINGS. A series of courses is offered at the undergraduate level at the University of Michigan designed specifically for students considering entering the Architecture Program their junior year. ARCH 211 introduces students to digital design tools and drawing and image manipulation software. ARCH 212 provides a general view and understanding of the profession and discipline of architecture. This course examines visual, cultural, historical, and philosophical aspects of the man-made environment. ARCH 313 and 323 are a two-part course series surveying the history of Architecture from antiquity to the present. Studio courses ARCH 201, ARCH 202, and ARCH 218 provide students with drawing and visual design skills primarily used in architecture and related fields. These three courses can also be taken to complete the Pre-Architecture/Art requirement for Year 3 admission.

Business

Preferred Admissions to the Ross School of Business is offered to a limited number of students each year. These students will apply either to LSA, the College of Engineering, the School of Music, Theatre & Dance, or the School of Art & Design as high school seniors and, if accepted into the Ross program, will be given a set of requirements to meet during their freshman year. If the student meets those requirements, then he or she will automatically be transferred into the Ross School of Business at the end of their freshman year.

Freshman applicants to the College of Literature, Science, and the Arts, the College of Engineering, or the School of Music, Theatre & Dance should indicate their interest in preferred admission on the Application Form obtained from the Office of Undergraduate Admissions. For more information about the Ross School of Business Bachelor of Business Administration program, please see the Business Administration section under the Liberal Arts Study for Professional Undergraduate Programs in this *Bulletin* or visit www.bus.umich.edu/bba.

Education

The School of Education cooperates with the College of Literature, Science, and the Arts (LSA) to offer an opportunity to entering freshmen to plan for admission to the teacher certification program during their junior year. Entering freshmen who are admitted to the School of Education preferred admissions program will participate in a variety of carefully structured formal and informal opportunities in their first two years at U-M. Students admitted to LSA will be considered for the preferred admissions program based on their academic qualifications and their written preferred admissions essay to the university. Once admitted to the preferred admissions program, students must meet the following requirements prior to their junior year:

- 1. Maintain a 3.0 GPA
- 2. Engage in and accumulate evidence of significant and varied experiences working with young people
- 3. Complete EDUC 118 (minimum 3.0 GPA)
- 4. Earn a minimum of 54 credits
- 5. Meet with a School of Education advisor each academic term

Information

The School of Information (SI) admits a limited number of students each year to the preferred admissions program leading to admission to its graduate program. SI offers a Master of Science in Information (MSI) with specialization options in Archives and Records Management; Human-Computer Interaction; Incentive-Centered Design; Information Analysis and Retrieval; Information Policy; Library and Information Services; Preservation of Information; School Library Media; and Social Computing. SI also offers a "self-tailored" MSI degree without a particular specialization. See the SI Web site at www.si.umich.edu for more information on degree specializations. Students with a high school GPA of 3.5 and minimum total SAT of 1200 or ACT composite of 29 may be considered.

Undergraduates should embark upon a diversified curriculum giving background in the humanities, social sciences, and the natural sciences. While there are no required courses for admission to the School at this time, course work in mathematics, computers, economics, and statistics is very helpful. As with any student, a "B" average in both the major field of study and in other undergraduate work must be maintained. During the senior year the Graduate Record Exam (GRE) should be taken and a formal application to the School made.

Pharmacy

The College of Pharmacy cooperates with the College of Literature, Science, and the Arts (LSA) in a program to guarantee admission to the Pharm.D. program to a limited number of highly qualified entering freshmen. Since many students feel compelled to take a narrowly structured pre-pharmacy program to enhance their qualifications for the Pharm.D. program, the preferred admission program gives already qualified students the freedom to choose more diverse courses during their pre-pharmacy study.

Students admitted to the College of LSA will be considered for the preferred admission program in pharmacy based on their academic qualifications and their desire, expressed on their application to the College of LSA, to enter the field of pharmacy. Students are considered competitive for the program if they score 29 or better on the ACT or 1280 or better on the SAT. The College of Pharmacy Admissions Committee will select students for the program in March.

Students must submit their regular University admission application by the deadline specified by the Admissions Office to be considered for this program (contact the Admissions Office directly for the date). Failure to be selected for the preferred admission program does not jeopardize a student's admission to the College of LSA or the opportunity to apply for regular admission to the Pharm.D. program later.

Once admitted to the preferred admission program, students must complete all prerequisite courses and maintain B grades in all prepharmacy course work. In addition, they must confirm their intention to enter the Pharm.D. program by submitting a PharmCAS application and required credentials, including PCAT scores, when they wish to transfer to the College of Pharmacy. In addition, at least one year of heath care experience is required.

While enrolled in the College of LSA, students in the preferred admission program must use the counseling and academic advising services of both the College of Pharmacy and LSA.

pharmacy.umich.edu/pharmacy/preferred_admission_program

Social Work

www.ssw.umich.edu email: ssw.msw.info@umich.edu

The School of Social Work will admit a limited number of students each year to the Preferred Admissions Program leading to a Master of Social Work (MSW). Applicants with at least a 3.5 high school grade point average or a minimum SAT of 980 or ACT composite of 21 may be considered for admission to the program.

Preferred Admission Program students must maintain a "B" average in undergraduate course work and elect a minimum of 20 credits in liberal arts courses (anthropology, economics, history, political science, psychology, sociology) as well as course content dealing with the biological determinants of behavior. Such course content may be covered in psychology, biology, human sexuality, human development and/or anthropology courses.

In the senior year students may elect graduate (500-level) courses in the School of Social Work. If these courses are used for the undergraduate degree and a "B" is obtained these courses may be used as exemptions for the required courses toward the Master of Social Work degree (this does not reduce the 60 credit hour degree requirement). If these courses are not applied toward an undergraduate degree, they may be transferred to the School of Social Work.

It is also required that students enroll in Psychology Outreach courses, Project Community courses, and/or volunteer with SOS Community Crisis Center, Ozone House or other such programs to test their interest and their beginning understanding of the helping process.

A formal MSW program application with all required supporting documents must be submitted by the specified priority deadline (March 1) for the fall term of proposed enrollment in the MSW Program as evidence that the criteria agreed upon have been met. During the period of enrollment in LSA, Social Work advisors will be available to meet with Preferred Admission Program participants. For information on the School of Social Work and the MSW program:

General Information for All Admitted Students

Orientation

The Office of New Student Programs provides an Orientation program that assists students in making their entry into the University as smooth as possible. Orientation offers students the opportunity to talk with an academic advisor, plan a course of study, register for classes, meet new friends, and obtain assistance as they become familiar with the University and its resources. These programs, offered prior to each academic term, serve students admitted to most schools and colleges of the University of Michigan. All new first-year and transfer students, including transfer students from the University of Michigan–Dearborn and the University of Michigan–Flint, are required to participate in Orientation in order to register for classes.

All first-year students admitted for the fall term are expected to participate in a three-day Orientation session on campus during the summer. Transfer students admitted for the fall term are expected to attend a one-day orientation session during the summer. The Office of New Student Programs sends complete information about these programs to students admitted for the fall term beginning in April and to students admitted for other terms about four weeks before the term begins.

The Office of New Student Programs (ONSP) is a central point for new students to receive information about the University. It is here to serve you and answer all of your questions.

Please feel free to contact them anytime at (734) 764-6413, or via e-mail at onsp@umich.edu. The office is located at 1100 LSA Building, or on the web at www.onsp.umich.edu.

MCARD, UMID, Uniqname, and passwords

What's a Uniqname?

Your uniqname is your University of Michigan computing ID and will be part of your permanent e-mail address. (Your U-M e-mail address will be youruniqname@umich.edu.) That means it is public information, and it will be with you as long as you are affiliated with the University, even after graduation. It will be shared with your professors, colleagues, prospective employers, friends and family. It is costly and difficult to change, so choose your uniqname wisely.

Your uniqname is your key to your Basic Computing Package and important University services such as financial aid, housing, course selection, and other student business transactions. Be sure to remember your uniqname and password because you will need them to complete a wide variety of business at the University and, ultimately, to register for classes.

It is important that no one, including a parent or guardian, sets up your uniqname and password for you. When you are issued your uniqname and password, you agree to abide by the U-M Proper Use Policy, violations of which can result in serious disciplinary action.

U-M Expects Students to Conduct Business Electronically

At the University of Michigan, most student business is done online. Your uniqname becomes a critical gateway to computing services, student information, and many other services that will be used throughout your career at U-M. As soon as your uniqname is created, some University offices will begin sending e-mail to your U-M account to share important information or to request that you complete some important transactions online. Often, e-mail is the ONLY notification sent, so check your U-M e-mail account regularly!

If electronic consent is not provided, no Wolverine Access transactions will be available to you. If you decide to withdraw your consent, Wolverine Access transactions will no longer be available to you. If you choose not to consent to conduct business electronically with the University, these actions would need to be completed in person at the appropriate office.

How to Get Your Unigname

Visit https://accounts.www.umich.edu/create/uniqname

To create your uniqname, you'll need:

- Your One Time Identifier (OTID) (The ten-character OTID is sent to you after you return your enrollment form)
- Your UMID number (included in your letter of admission to the University).

MCARDs

The Mcard is the University of Michigan's single-card program that combines many features including photo identification, library borrowing privileges, building access, meal plans and Entrée Plus, and ATM/debit card access all on one card. All of the University community is required to have a valid Mcard.

The eight-digit UMID number printed on the front of each Mcard is the cardholder's University ID number (*e.g.*, student number, employee number); The Uniqname is printed on the back.

Generally, students will obtain their first Mcard free during their student orientation; a \$20 replacement fee is charged for lost, stolen, or abused Mcards. Mcard production may occur at the orientation site or at an ID Issuing Station.

It is very important to notify the proper authorities of lost/stolen Mcards so that card access can be deactivated quickly, preventing potential unauthorized access and/or charges.

Wolverine Access (wolverineaccess.umich.edu)

Wolverine Access is a web-based information system that you may use to access and update your information online. You may change your address and phone number, Backpack or register for classes, and view your course schedule, grades, unofficial transcripts, financial information, apply for graduation, view advisor, view degree progress report, and order official transcripts.

Registration

New students receive all necessary registration materials by participating in the official Orientation Program. Students enrolled in the College of Literature, Science, and the Arts register and make drop/add changes through the wolverine access registration system. All students should register by the end of the registration period indicated in the academic calendar. Initial registration on or after the first day of the term carries an additional fee. After the third week of a full term, students are not permitted to register unless permission has been granted by the Academic Standards Board. (Honors students obtain permission from the Honors Program.)

After the third week of a full term (second week of a half-term) students need authorization to process all election changes. There is no reduction in fee for courses dropped (withdrawn).

All registration and election activity should be confirmed on Wolverine Access before you logout.

The Statement of Student Rights and Responsibilities

The *Statement of Student Rights and Responsibilities* is an expression of Michigan's values. Authored by the U-M community and subject to periodic review, the *Statement* describes a set of prohibited behaviors and outlines a process for community response when violations are alleged to have occurred. U-M's Office of Student Conflict Resolution (OSCR) administers this process. An online version of the Statement can be found at:

studentpolicies.dsa.umich.edu/statementstudentrights.htm

Office of Student Conflict Resolution (OSCR)

G121 South Quadrangle (734) 936-6308 (phone) www.oscr.umich.edu

OSCR helps U-M students learn how to manage and resolve conflicts peacefully.

Our mission is:

- to BUILD TRUST with the U-M community by providing services that are educationally-focused, student-driven and community owned;
- to PROMOTE JUSTICE by administering the Statement of Student Rights and Responsibilities with compassion, integrity, and fairness;
- to TEACH PEACE by providing a comprehensive range of preventive educational programs on conflict resolution, conflict management, and alternative dispute resolution.

OSCR serves as a community hub for U-M student, faculty and staff volunteers with a passion for social justice through peaceful conflict resolution.

U-M students hold significant responsibilities as volunteers with OSCR: *e.g.*, advising students in our conflict-resolution process; serving as arbiters at formal hearings; mediating conflicts between students; and recommending service improvements as part of OSCR's Advisory Board.

For more information, please contact us via phone, the web or in person.

Student Legal Services

2304 Michigan Union 530 South State Street (734) 763-9920 (phone) (734) 936-0844 (fax) studentlegalservices.dsa.umich.edu

Student Legal Services, which is supported by student fees, provides legal advice and representation to currently enrolled University students in the following areas: landlord/tenant disputes, divorce and family law, criminal defense, consumer issues, and wills. Notary and true copy services are also available. Student Legal Services cannot assist in disputes with the University or other enrolled students. Please call to schedule an appointment to meet with an attorney because legal advice is not given over the phone.

Financial Aid

The Office of Financial Aid (OFA) administers financial aid programs and assists students with budgeting. Most aid is awarded on the basis of financial need. Students may take advantage of financial counseling services even if they are not receiving aid. Emergency and/or short-term loans are available to students for educationally related expenses.

Undergraduates are considered for grants, scholarships, loans, and work-study employment. Most scholarships for entering undergraduates are awarded through the admissions process.

See

 $www.finaid.umich.edu/types_of_financial_aid/scholarships/scholar.asp for information.$

Students must apply for financial aid each year that they wish to receive aid. Students must comply with deadline dates to be considered for all aid programs. To apply:

All students must submit to the federal processor a Free Application for Federal Student Aid (FAFSA), available at www.fafsa.ed.gov. Students should submit the FAFSA between January 1 and mid-February. Although the FAFSA may be submitted later, students might not be considered for all aid programs if they submit the FAFSA after mid-February. Entering freshmen and transfer students must also submit a CSS / Financial Aid PROFILE application (available at https://profileonline.collegeboard.com) to be considered for university need-based grants and scholarships.

For specific information about procedures and deadlines, see www.finaid.umich.edu/apply_and_receive_aid/applying_for_aid/genapply.asp or contact OFA:

Website: www.finaid.umich.edu

e-mail: financial.aid@umich.edu (734) 763-6600 (phone) Main Office & Mailing Address: 2500 Student Activities Building Ann Arbor, MI 48109-1316 North Campus Office: B430 Pierpont Commons

See www.finaid.umich.edu/financial_aid_library/consumer.asp for consumer information about the University and financial aid.

Student Employment Office

2nd Floor Student Activities Building 515 East Jefferson Street (734) 763-4128 (phone) www.studentemployment.umich.edu e-mail: student.employment@umich.edu

The Student Employment Office is an excellent resource for students investigating temporary part-time employment opportunities. This office maintains an up-to-date listing of Work-Study and non-Work-Study positions, both on and off campus. Students can view the positions available on the Student Employment website 7 days a week, 24 hours a day. To apply for a position, students should contact the person listed for that particular job.

To be employed at the University or to work for a Universityapproved off-campus employer, UM–Ann Arbor students must complete an online Student Employment Application on the Wolverine Access Student Business page.

International Center

603 East Madison (734) 764-9310 (phone) www.internationalcenter.umich.edu e-mail: icenter@umich.edu

The International Center provides information, programs and services, including advice about visa and immigration issues for U-M's international students, scholars, faculty, and staff as well as for departments and administrators. The International Center offers educational and social activities throughout the year and hosts a number of cultural events for American and international students.

The Center also provides information, advice, and referrals for those in the University community who are participating in or considering an international educational experience. Members of the U-M community may obtain information on study, work, volunteer, and travel abroad, including information on the Peace Corps, through individual advising informational programs, and reference materials.

Other Counseling / Support Services

Dean of Students Office

3000 Michigan Union (734) 764-7420 (phone) www.umich.edu/~dofs e-mail: deanofstudents@umich.edu

The Dean of Students Office serves as a central point of inquiry for students with concerns not addressed in other areas of the University. Possessing an effective understanding of University policies, procedures, and community life, staff work with individual students, student groups, staff, and faculty to resolve conflicts and eliminate barriers, which impede the realization of educational and personal

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goals. Furthermore, they identify systemic problems in the institutional system and work to effect change. In these ways, the office offers students a centralized location for problem resolution and is a place where students can work with staff that possess the knowledge and influence to effect problem resolution.

Counseling and Psychological Services (CAPS)

3100 Michigan Union (734) 764-8312 (phone) (734) 763-0454 (fax) www.umich.edu/~caps

Counseling and Psychological Services (CAPS) is committed to providing multicultural and multidisciplinary expert and caring therapeutic support at no charge for currently enrolled University of Michigan–Ann Arbor campus students. Services include crisis intervention, and brief personal therapy for individuals, couples, and groups. Common reasons students go to CAPS are: anxiety, depression, relationship issues, academic concerns, and eating disorders. Consultation and workshops on various informational and skillbuilding topics are also available.

We are also available for consultation and support for family members, friends, and U-M staff or faculty members.

We strive to offer these services in an atmosphere that is welcoming and comfortable for all students, regardless of race, gender^{*}, ethnic background, age, sexual orientation, citizenship, or physical status.

* includes gender identity and expression

For further information, online screenings for depression, anxiety, eating issues, and alcohol concerns we invite you to browse our website at www.umich.edu/~caps.

Sexual Assault Prevention and Awareness Center

715 North University, Suite 202 (734) 998-9368 (phone) 24-hour Crisis Line: (734) 936-3333 www.umich.edu/~sapac

The Sexual Assault Prevention and Awareness Center (SAPAC) offers a number of services to the University of Michigan community, including education, advocacy, and activism on issues of sexual assault, relationship violence (emotional, sexual, and physical), stalking, and sexual harassment in the University community. In addition, SAPAC offers rewarding volunteer opportunities in the Networking/Publicity/Activism, Peer Education, and Men's Programs.

SAPAC staff can assist survivors, friends, family members, or nonoffending partners of survivors. The Crisis Line is staffed by professional staff who provide crisis intervention and information and referral over the phone. Outreach assistance at hospitals and police stations in the event of an emergency is available. All services are strictly confidential and free. Come by or call for an appointment or more information.

University Health Service (UHS)

207 Fletcher (734) 764-8320 (phone) www.uhs.umich.edu

UHS is students' campus health resource. UHS is an outpatient clinic that offers extensive services including primary health care, gynecology, allergy treatment, nutrition clinic, specialty clinics, physical therapy, radiology, pharmacy, eye care, optical shop, laboratory, travel health services, advice by phone, and health education on sexual health, alcohol and other drugs, eating issues and more.

UHS is located on central campus and is staffed by licensed medical professionals.

Appointments are recommended or students can walk in without an appointment, usually for conditions that need to be treated as soon as possible. UHS is open Monday through Saturday. When UHS is closed, students can consult a clinician by phone for urgent health matters. Language interpretation is available. Services are confidential.

Enrolled students pay a health service fee as part of tuition, which covers most UHS services, including clinic visits, physical therapy, radiology and most laboratory tests. Therefore currently enrolled U-M students have few additional expenses at UHS.

The health service fee does not cover fees for allergy antigens, routine eye exams, glasses, contact lenses, immunization, medications and certain laboratory tests. Health care received outside UHS (including dental care and hospitalization) is not covered. Students are responsible for paying any costs not covered by the health service fee.

Students should have health insurance. Health insurance helps to cover the cost of services not covered by the health service fee (for example, ambulance, emergency room visits, medicine or hospitalization). Students who need insurance (or supplemental coverage) may be eligible to purchase the Domestic Student Health Insurance Plan (DSHIP), endorsed by the Michigan Student Assembly. Students should carry proof of insurance and know how to use their insurance.

Services for Students with Disabilities (SSD)

G664 Haven Hall 505 South State Street (734) 763-3000 (phone) (734) 936-3947 (fax) www.umich.edu/~sswd AIM: SSWDFrontDesk

Services for Students with Disabilities (SSD) provides services to students with visual impairments, learning disabilities, mobility impairments, or hearing impairments. SSD also works with students who have chronic health or mental health conditions. SSD offers services which are not provided by other University offices or outside organizations. SSD provides such services as accessible campus transportation, adaptive technology, sign language interpreting, guidance for course accommodations, and more, all free of charge.

Before and after a student enrolls at the University, SSD is available to answer questions or provide referrals concerning admission, registration, services available, or financial aid. In addition, SSD can help assess the need for modified housing, attendants, interpreters, transportation, classroom accommodations, note-takers, or adaptive equipment.

The Career Center

3200 Student Activities Building 515 East Jefferson Street (734) 764-7460 (phone) (734) 763-9268 (fax) www.careercenter.umich.edu e-mail: careercenter@umich.edu

The Career Center serves both undergraduate and graduate students on career and life planning issues. The following services and resources are available for 1^{st} year through Ph.D. students:

- On-line reference letter services
- Occupational information and other career resources
- · Self-assessment inventories for career decision making
- Resume and cover letter writing assistance and complementary on-line tools
- Summer jobs and internships resources and opportunities
- Career exploration/decision making assistance
- On-campus recruitment/On-line job postings
- Career Fairs
- Graduate/professional school preparation/application

These resources enable students to make informed decisions, develop skills for success, and develop a foundation for making meaningful contributions after graduation. Valuable information is also available via the Career Center's website.

Undergraduate Tuition and Fees and Fee Regulations

Undergraduate Tuition and Fees

The tuition and fees assessed by the University of Michigan are subject to change without advance notice by the Regents of the University. The information provided below is intended for general information purposes.

The tuition is a student's contribution to the costs of instruction and library services. In addition, the following fees are assessed:

Fee	Full Term Fee	Half Term Fee
Registration fee	\$80.00	\$40.00
School and College government fee	\$1.50	\$0.75
Michigan Student Assembly fee	\$7.19	\$3.60
Student Legal Services fee	\$6.00	\$3.00

The tuition schedule is based on the number of credits elected during a specific term as well as on residency status (see Residency Regulations in this chapter) and class standing: lower-division (up to 54 credits toward a degree program) or upper-division (55 or more credits toward a degree program).

The following tuition information was applicable for undergraduates enrolled at the University of Michigan (Ann Arbor) during the 2009-10 academic year.

Tuition Schedulefull program (12-18 credits)(2009-10 academic year)	<u>Michigan</u> <u>Resident</u>	<u>Non-Michigan</u> <u>Resident</u>
Lower-Division Students	\$5,735	\$17,374
Upper-Division Students	\$6,476	\$18,600

Tuition for the 2010-11 academic year is subject to change.

The tuition schedule for programs of less than 12 credits or more than 18 credits varies according to the specific number of credits elected, residency status, and lower/upper division status. Tuition and fee schedule information is available from the Office of the Registrar, ro.umich.edu/tuition. Tuition and fees are collected by Student Financial Services according to their Billing Due Date calendar (www.finops.umich.edu/student/billing/duedates).

Students are required to pay all accounts due the University in accordance with regulations set forth for such payments. Students with a "financial hold" are not able to register and cannot obtain a transcript of previous academic work.

This information refers to tuition only and does not include the cost of housing, board, or personal incidental expenses. University housing rates are available from the University Housing Office. Information about average student expenses based on class-level, and residency is available from the Office of Financial Aid,

finaid.umich.edu/Financial_Aid_Basics/cost.asp.

Fee Regulations

- 1. The Board of Regents shall determine the level of full program fees and a schedule of such fees shall be published. All other student fees shall be fixed by the Committee on Budget Administration.
- 2. All fees are payable in accordance with the regulations established by the Vice-President and Chief Financial Officer, providing only that said regulations may not defer payment of these fees beyond the end of the term for which they are assessed.
- 3. No exemption from the payment of fees shall be granted unless specifically approved by the Board.
- 4. All persons, not specifically exempted, who are using University facilities and services must register and pay the appropriate fee.
- Students enrolled in more than one school/college will pay the 5. higher tuition rate for all credits elected.

Adjustments in Fees

Students who change their program in the first three weeks of classes in the full term or first two weeks in the half-term will receive a full refund of the fees paid and will be assessed the full fee appropriate to the new elections. If changes are made thereafter, the higher of the two fees will be assessed.

Refund of Fees

- 1. Students withdrawing beginning the first day of the term and before the end of the first three weeks of classes in the full term or the first two weeks in the half term shall pay a disenrollment fee of \$50.00 and a registration fee of \$80.00 (\$40.00 in the halfterm) but will be refunded any part of the fees which has been paid.
- 2. Students withdrawing during the third week of classes in the half term or in the fourth, fifth, and sixth week of classes in the full term, shall forfeit 50 percent of the assessed fee, plus a \$80.00 (\$40.00 in the half-term) registration fee.
- 3. Students withdrawing subsequent to the third week of classes in the half term or to the sixth week of classes in the full term shall pay the assessed term fees in full.
- 4. The effective date of refund is the date the withdrawal notice is received in the Office of the Registrar.
- Any refund due will be mailed to the student's address of record 5. upon request to Student Financial Services.

RESIDENCY CLASSIFICATION FOR TUITION ASSESSMENT PURPOSES

The University of Michigan's tuition structure is two-tiered, reflecting resident and nonresident rates. To be eligible for resident classification, a student must demonstrate compliance with the University's *Residency Classification Guidelines*, which can be found at www.umich.edu/~regoff/resreg.html. These guidelines differ from those of other schools and are independent of guidelines used by state authorities to determine residency for purposes such as tax liability, driving, voting, *etc.*

If you believe you are eligible to be classified as a resident and any of the following circumstances apply, you must file an *Application for Resident Classification* and be approved in order to qualify for resident tuition:

- You currently live outside the state of Michigan for any purpose, including, but not limited to, education, volunteer activities, military service, travel, employment.
- You have attended or graduated from a college outside the state of Michigan.
- You have been employed or domiciled outside the state of Michigan within the last 3 years.
- You are not a U.S. citizen or Permanent Resident Alien (if you're a Permanent Resident Alien, you must have a Permanent Resident Alien card).
- Your spouse, partner, or parent is in Michigan as a nonresident student, medical resident, fellow, or for military assignment or other temporary employment.
- You are 24 years of age or younger and a parent lives outside the state of Michigan.

- You are 24 years of age or younger and have attended or graduated from a high school outside the state of Michigan.
- You have attended or graduated from an out-of-state high school and have been involved in educational pursuits for the majority of time since high school graduation.
- You previously attended any U-M campus (Ann Arbor, Dearborn, or Flint) as a nonresident.

Other circumstances may also require you to file a residency application.

Applications for resident classification can be downloaded at www.umich.edu/~regoff/resreg.html. The deadline dates for submitting applications for resident classification apply to the term for which residency is sought and are as follows:

- September 30 for Fall Term
- January 31 for Winter Term
- July 31 for Spring, Spring/Summer, and Summer Terms.

Applications must be received in the Residency Classification Office by 5 p.m. on the deadline date.

For additional information contact:

The Residency Classification Office, University of Michigan Office of the Registrar, 1210 LSA, 500 South State Street, Ann Arbor, MI 48109-1382, (734) 764-1400 (phone). The academic minor in Electrical Engineering was approved after the publication deadline.

Electrical Engineering and Computer Science

Electrical & Computer Engineering Division

Electrical Engineering and Computer Science College of Engineering 3415 EECS Building 1301 Beal Avenue (734) 763-2305 (phone) (734) 763-1503 (fax) www.eecs.umich.edu/ece/

e-mail: ugadmin@eecs.umich.edu Professor Khalil Najafi, ECE Chair

Professor Fred L. Terry, Jr., Director of Undergraduate Programs, ECE Division

Electrical Engineering provides students with a fundamental background in the basic theoretical concepts and technological principles of modern electrical engineering. A flexible curriculum allows students to emphasize a wide variety of subject areas within the field, including: analog and digital circuits, communication systems, control systems, electromagnetics, integrated circuit (microprocessor) design, signal processing, microelectromechanical devices, solid state electronics, and optics and photonics. Common efforts of electrical engineers include making systems and components smaller, faster, more energy efficient, and less costly, designing systems for the generation, storage and distribution of energy, and developing algorithms for extraction of information from signals.

Questions?

If you have questions about the EE academic minor, or would like advice about pursuing the academic minor, please contact the EECS Undergraduate Advising Office to set up an appointment with an advisor.

Undergraduate Advising Office EECS Department 3415 EECS Building University of Michigan Ann Arbor, MI 48109-2122 Telephone: (734) 763-2305 www.eecs.umich.edu e-mail: ugadmin@eecs.umich.edu

Electrical Engineering Academic Minor

An academic minor in Electrical Engineering is not open to Computer Science concentrators or academic minors

Students pursuing a major in Electrical Engineering (EE), Computer Engineering (CE) and Computer Science (CS) are not eligible for the EE minor

As the lines between engineering and scientific disciplines become increasingly blurred, many students are forced to make tough decisions about which concentration to choose. An Academic minor in Electrical Engineering (EE), offered through the ECE division of the EECS Department, is designed to provide an avenue for a diverse education for students outside of the EECS department. Due to the extensive breadth of EE discipline areas, students seeking an aca-

demic minor in EE have a spectrum of choices for the program paths they choose. Path options include Applied Electromagnetics, Circuits, Communications, Control Systems, Optics, Signal Processing, and Solid State.

Intended Audience. While the academic minor would be open to all qualified students in LSA, it is expected to be of interest primarily to students in the *Physical Sciences* (who both use complex electronics and signal processing to collect and analyze data, and also contribute to improved electronic devices), *Mathematics* (improved algorithms for a wide variety of applications including signal processing, communications, and control), and *Life Sciences* (electronics, signal processing, and electromagnetics for research and patient treatment). It may also be of interest for students in pre-law programs planning a career in patent law, or in other areas.

Note: Most EECS courses in the Electrical Engineering academic minor count as non-LSA credits. LSA students may use a maximum of 20 credits of non-LSA course work toward the total 120 credits required for the degree.

Minimum Grade Policy. A grade of C is required for all prerequisites and courses used to satisfy the academic minor.

Prerequisites to the Academic Minor.

- 1. ENGR 101;
- 2. MATH 115, 116, 215, and 216 or equivalent;
- 3. PHYSICS 140/141 and 240/241 or equivalent.

LSA students are not required to take CHEM 125, 126, 130, or ENGR 100.

The EE academic minor is open to all students across campus as long as the eligibility requirements stated below are met:

- 1. Students must have an average of 2.0 or higher at time of declaring the EE academic minor.
- 2. Students must have completed MATH 115 and 116 and PHYSICS 140/141 prerequisites with a grade of C or better.

Academic Minor Program. A minimum of 15 credits. At least one elective course must be at the 400-level or higher.

1. EECS 215

- 2. One of the following **program core courses:** 216, 230, 270, 320
- 3. **Two electives** from among the following courses, chosen in consultation with and approved by the academic minor advisor: 216, 230, 270, 320, 311, 312, 330, 334, 370, 373, 411, 413, 414, 420, 421, 423, 425, 427, 429, 430, 434, 451, 452, 455, 460, 461, 470, 530. Other EECS classes may be used with the prior approval of the EE Chief Program Advisor. These classes must be of similar level to this defined list.

Classes which lie principally in the discipline of Computer Science will not be allowed. Students with these interests are referred to the LSA CS academic minor.

Suggested Program Options

- 1. Systems: Communications, Control, Signal Processing
- 2. Electromagnetics and Optics
- 3. Circuits and Solid State

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Sample Paths

Paths Option	Required Core	Path Preparation Core	Elective (1)	Elective (2)
1. Systems	215	216	451, 455, 460	451, 452, 455, 460, 461 (no duplicates)
2. Electromagnetics and Optics	215	216	330, 334	411, 430, 434, 438, 530
 Circuits & Solid State 	215	216	311, 312, 320	411, 413, 414, 420, 421, 423, 425, 427, 429

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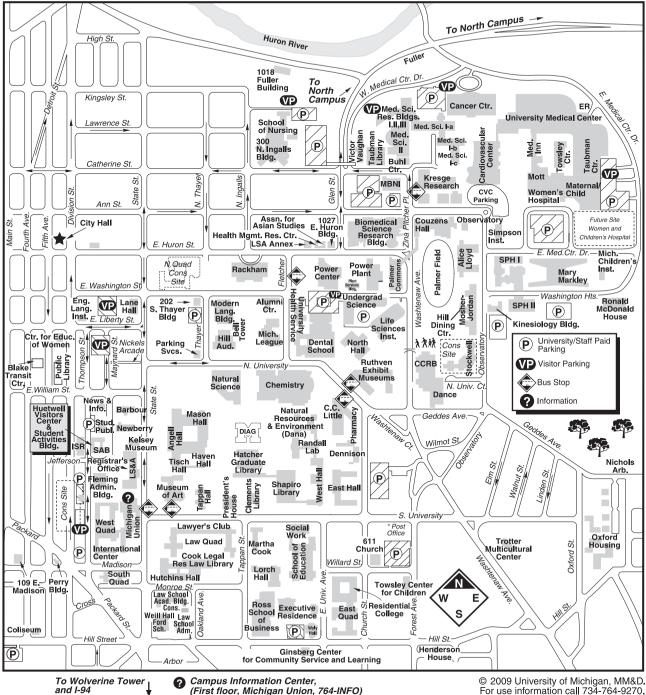
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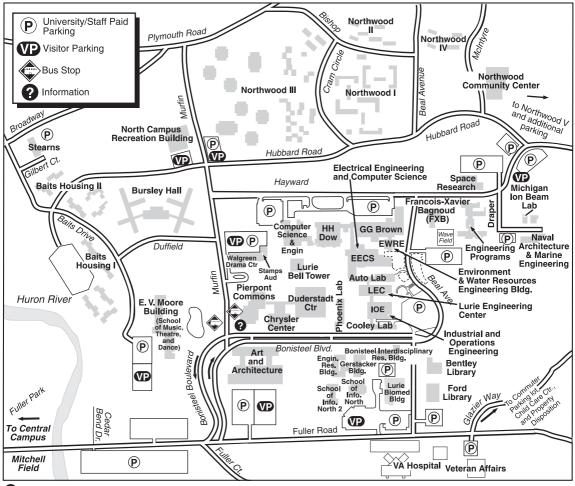
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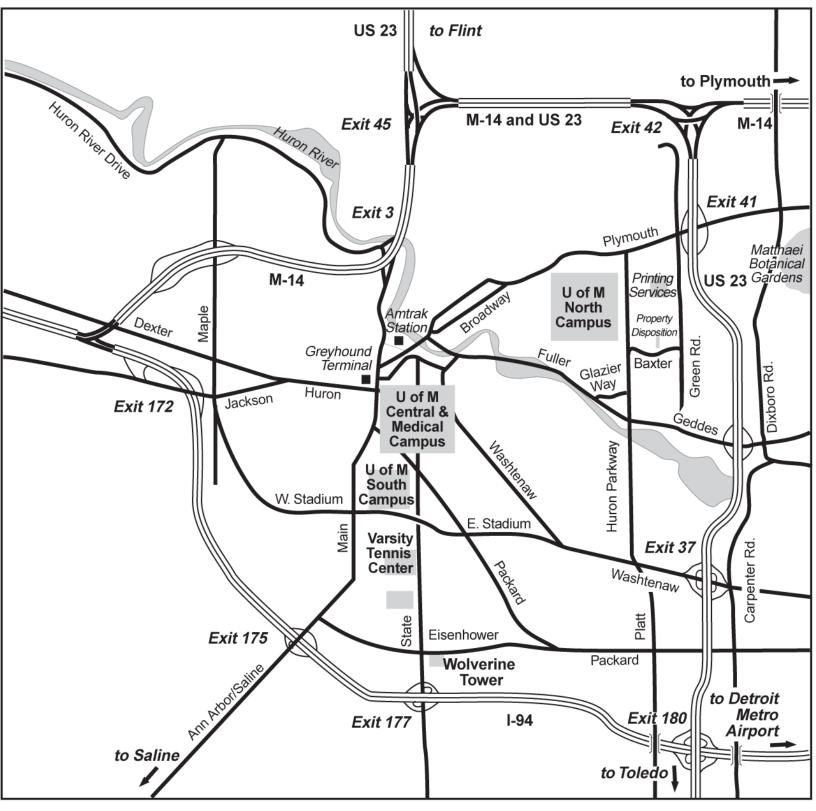
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This issue of the LSA Bulletin is DEDICATED TO

ROBERT D. WALLIN

IN RECOGNITION OF HIS MANY YEARS OF DEDICATED SERVICE AND COMMITMENT TO ACADEMIC ADVISING IN THE COLLEGE Welcome to the University of Michigan, one of our country's great public universities. One of the many reasons I am thrilled to be part of our university community is because of its long-standing commitment to diversity. I firmly believe that we can learn some of life's most important lessons from each other. The more varied the perspectives represented, the richer our education. Our differences — whether they be the academic questions that engage us, age, economic background, gender, or race, to name just a few — help create the intellectual vitality that makes Michigan internationally renowned.

Since its founding 190 years ago, the University has aspired to provide an outstanding education to a diverse student population. Former President James B. Angell, in his 1879 commencement address, said, "Good learning is always catholic and generous ... It frowns on caste and bigotry. It spurns the artificial distinctions of conventional society. It greets all comers whose intellectual gifts entitle them to admission



to the goodly fellowship of cultivated minds. It is essentially democratic in the best sense of that term."

Several years ago, Michigan's faculty, through the University Senate, reaffirmed its commitment "to recruiting and maintaining a culturally and racially diverse student body and faculty that are representative of contemporary society, and to assuring that these diverse influences are respected and incorporated into the structure of the University."

I am proud to belong to an academic community that historically has embraced diversity and is as committed today to this ideal as it was during the days of President Angell. I invite you to join me in supporting Michigan's ongoing efforts to promote an appreciation of and openness to the viewpoints and contributions of others.

Sincerely,

Mary Sue Cleman

Mary Sue Coleman, President University of Michigan



Welcome to the College of Literature, Science, and the Arts! LSA is nationally recognized as one of the leading liberal arts colleges in the country. Our departments and programs have consistently ranked among the top 10 in the nation. We are proud that our long history as an undisputed leader in the liberal arts has been achieved in an environment of diversity, acceptance and opportunity that is the hallmark of public education.

Because of our excellent reputation, LSA is able to attract outstanding faculty and remarkable students and bring them together to advance knowledge, transform lives and fulfill dreams. As a student in LSA, you will have the opportunity to take advantage of all the College has to offer to expand your horizons, challenge your expectations and prepare you for a fulfilling and successful future.

Four years of study in the humanities, social sciences and natural sciences will prepare you for the complex and ever-

changing world of work that awaits you after graduation. In a culture marked by a globalizing economy, and a pace of change that is blindingly fast, the abilities you develop here — thinking analytically, writing clearly, and reading carefully — will provide you with the breadth and adaptability that will become the foundation for a rich life and an active citizenship. You may choose to gain first-hand knowledge about a different culture through study abroad, to engage in significant research with a faculty mentor, or to enrich your creative expression in an intimate and supportive living-learning community. These experiences and more will make you better able to define and to solve social and scientific problems, to evaluate works of art, to respect diverse views and to understand the crucially important fact that the world has been made – and can be remade – by people just like you.

Our thousands of alumni tell us that the knowledge they gained through the study of the liberal arts opened doors to their future and prepared them for personal and professional success. They share with us their memories of the professor, the book or the class in LSA that first fired their interests — in science, literature, politics and other areas — which have sustained and deepened their lives over many years.

We are ready to welcome you to Michigan — to make a difference in your life, and to equip you to make a powerful and positive difference in the world.

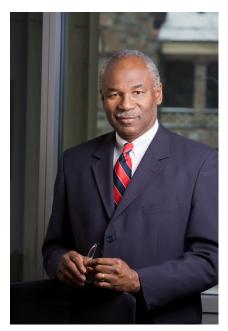
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Terrence J. McDonald, Dean College of Literature, Science, and the Arts and Professor of History

Welcome to the diverse and exciting world of the College of Literature, Science, and the Arts. Each student entering the College is beginning a journey of unprecedented opportunity.

From quantitative reasoning to creative expression, from argumentative writing skills to the study of race and ethnicity, from courses in western and non-western cultures to evolutionary anthropology, neuroscience, economics, and astronomy, from learning a second language to studying abroad, the College of LSA offers you a wide range of experiences to help you understand, prepare for, and learn to lead in the world around us.

Whether you are about to embark on your journey or now catching sight of your final port, let me invite you to take full advantage of the many services, resources, and opportunities offered by the College, both academic and otherwise. Some of you will be connected with the Comprehensive Studies Program, Honors Program, or Residential College Program, each of which provides academic advising, guidance,



and support for its own students. Most of you will be in the main stream, and whether or not you have chosen to participate in one of the learning communities, you will receive academic advising in the Newnan LSA Advising Center. The Advising Center is home base for all your advising needs and serves as a link to academic information from throughout the College and University.

Although the myriad choices available to you can be overwhelming and confusing, advisors throughout the College can help guide your successful navigation. Advisors encourage and nurture your active participation in the pursuit of your academic goals and aspirations and can play a major role as mentor while you journey through your undergraduate years. We all are intent on making your student learning experience the most challenging, exciting, and rewarding one it can be. Many tell us it is transformative.

Finally, as a student in LSA you are accountable for your choices. Be an informed decision maker. Act with integrity. Think about your educational choices. Read this *Bulletin*. Visit our Website. Talk with faculty. Read the *LSA Course Guides*. Visit the Newnan LSA Advising Center. Seek assistance as you proceed. And whether the waters you face seem rough or smooth, return as often as you like. We are here to support your intellectual and personal development. By your active involvement you will grow to understand the true meaning of a liberal arts education. Take full advantage of the rich opportunities available to you in the College.

We look forward to engaging your own ideas and thoughts as you join our community of scholars. Welcome to the College of Literature, Science, and the Arts.

Esrold A. Nurse, Assistant Dean LSA Student Academic Affairs

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POSTMASTER: Send address changes to College of Literature, Science, and the Arts, G255 Angell Hall, University of Michigan, 435 South State, Ann Arbor, Michigan 48109-1003.

The LSA Bulletin

While the Office of Advising Technology is charged with ensuring the current accuracy of this *LSA Bulletin*, all policies and procedures, rules and regulations, programs and courses herein described are subject to change without prior notice. The College of Literature, Science, and the Arts welcomes suggestions for improving the quality of this and all other College publications. Suggestions may be directed to:

Rick Jones, Editor, LSA Advising Technology Philip J. Gorman, Director,

LSA Advising Technology

Pam Rinker, Program Associate, LSA Curriculum Committee

Evans Young, Assistant Dean for Undergraduate Education

Professor Robert Megginson, Associate Dean for Undergraduate & Graduate Education

Disclaimer

The information contained in this *Bulletin* is **subject to change at any time**. It is intended to serve only as a general source of information about the College of Literature, Science, and the Arts and is in no way intended to state contractual terms. The College of Literature, Science, and the Arts has designated the printed version of the *Bulletin* to be the authoritative source for degree program requirements. Past versions of the printed *Bulletin* and records for the college are available at the Bentley Historical Library.

Campus Safety Statement

Each year, the University of Michigan prepares a "Campus Safety Handbook." The report includes detailed information on campus safety and security policies, procedures, and programs, including information on: emergency services, security telephone numbers, sexual assault policy, stalking laws, handling obscene phone calls, sexual harassment policy, dealing with workplace violence and threats, police agencies, health services, counseling services, safe transportation after dark, safety tips, and alcohol and drug policies and programs. The report also includes statistics concerning crimes on campus. If you would like to receive a complete copy, please call the University of Michigan Department of Public Safety at (734) 763–3434. (www.police.umich.edu).

Design

College of Literature, Science, and the Arts Cover design by Hans Anderson

The cover photos feature various students and Ann Arbor community members. Annie Sanchez appears courtesy of Wishing Tree Gardens (http://wishingtreegardens.org) and Donald Harrison appears courtesy of the Ann Arbor Film Festival (www.aafilmfest.org). The University of Michigan is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, 30 North LaSalle Street, Suite 2400, Chicago, Illinois 60602-2504. Phone: (800) 621-7440; (312) 263-0456; Fax: (312) 263-7462.

The Computer Science program is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, phone (410) 347-7700.

The Board of Regents of the University of Michigan

The University is governed by the Board of Regents, which consists of eight members elected at large in biennial state-wide elections. The president of the University serves as an ex officio member of the board.

The Regents serve without compensation for overlapping terms of eight years. According to the Michigan Constitution of 1963, the Regents have "general supervision" of the institution and "the control and direction of all expenditures from the institution's funds." The Regents meet once a month in a public session.

Regents' website: www.regents.umich.edu

Regents of the University

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Nondiscrimination Policy Notice

The University of Michigan, as an equal opportunity/affirmative action employer, complies with all applicable federal and state laws regarding nondiscrimination and affirmative action. The University of Michigan is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, national origin, age, marital status, sex, sexual orientation, gender identity, gender expression, disability, religion, height, weight, or veteran status in employment, educational programs and activities, and admissions. Inquiries or complaints may be addressed to : The Senior Director for Institutional Equity, and Title IX/Section 504/ADA Coordinator, Office of Institutional Equity, 2072 Administrative Services Building, Ann Arbor, Michigan 48109-1432, 734-763-0235, TTY 734-647-1388.

For other University of Michigan information call 734-764-1817. http://hr.umich.edu/oie/ndpolicy.html

LSA Academic Calendar, 2010-11

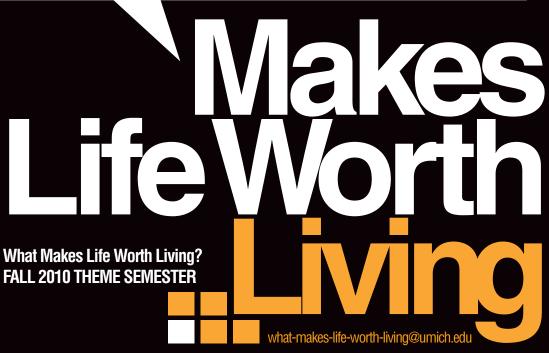
	Fall Term	Winter Term	Spring Term	Summer Term	Spring/Summer
	2010	2011	2011	2011	Term 2011
Registration	September 3,	January 4,	May 2,	June 28,	May 2,
	Friday	Tuesday	Monday	Tuesday	Monday
Last day to disenroll from term without fees	September 6,	January 4,	May 2,	June 28,	May 2,
	Monday	Tuesday	Monday	Tuesday	Monday
Classes begin; Disenrollment and registration fees begin to apply	September 7,	January 5,	May 3,	June 29,	May 3,
	Tuesday	Wednesday	Tuesday	Wednesday	Tuesday
Last day to withdraw (100% tuition waiver less disenrollment and registration fees)	September 27, Monday	January 25, Tuesday	May 16, Monday	July 12, Tuesday	May 23, Monday
for tuition adjustment for a reduced academic load					
for regular drop/add (no "W" for drop)					
Pass/fail deadline					
Authorization needed to drop or add; "W" posted for drops	Beginning September 28, Tuesday	Beginning January 26, Wednesday	Beginning May 17, Tuesday	Beginning July 13, Wednesday	Beginning May 24, Tuesday
Deadline to finish incompletes	October 4,	February 1,	October 3,	October 3,	October 3,
	Monday	Tuesday	Monday	Monday	Monday
Last day to withdraw from all classes	October 18,	February 15,	May 23,	July 19,	June 13,
with a 50% tuition waiver	Monday	Tuesday	Monday	Tuesday	Monday
Begin full fees for students who withdraw	October 19,	February 16,	May 24,	July 20,	June 14,
	Tuesday	Wednesday	Tuesday	Wednesday	Tuesday
Last day for approved late drop/add	November 12,	March 18,	June 3,	July 29,	July 8,
	Friday	Friday	Friday	Friday	Friday
Classes end	December 13,	April 19,	June 20 (5:00 p.m.),	August 16 (5:00 p.m.),	August 16 (5:00 p.m.),
	Monday	Tuesday	Monday	Tuesday	Tuesday
Study days	December 14,	April 20,	June 21-22,	August 17,	August 17,
	Tuesday	Wednesday	Tuesday-Wednesday	Wednesday	Wednesday
	December 18-19, Saturday-Sunday	April 23-24, Saturday-Sunday			
Examination period	December 15-17,	April 21-22,	June 23-24,	August 18-19,	August 18-19,
	Wednesday-Friday	Thursday-Friday	Thursday-Friday	Thursday-Friday	Thursday-Friday
	December 20-22, Monday-Wednesday	April 25-28, Monday-Thursday			
No Classes	Labor Day Holiday : September 6, Monday	Martin Luther King, Jr. Birthday University Symposia (no regular classes): January 17	Memorial Day Holiday: May 30, Monday	Independence Day Holiday: July 4, Monday	Memorial Day Holiday: May 30, Monday
		Mondaý			Independence Day Holiday: July 4, Monday
Recess	Fall Study Break: October 18-19 Monday-Tuesday Thanksgiving Recess: November 24 (5:00	Mid-Winter Recess: February 26 (12:00 noon), Saturday through March 7 (8:00 a.m.), Monday			

	Thanksgiving Recess: November 24 (5:00 p.m.), Wednesday through November 29 (8:00 a.m.), Monday	through March 7 (8:00 a.m.), Monday			
Tuition Payments	August 31, Wednesday	January 5, Wednesday	April 30, Saturday	June 30, Thursday	April 30, Saturday
Commencement	December 19, Sunday	April 30, Saturday			
University Honors Convocation		March 20, Sunday			



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NO









WINTER 2011 LSA THEME SEMESTER

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