## The U N IVERSITY O F CHICAGO



Graduate Programs in the Divisions
AnNouncements 2011-2012

## TABLE of CONTENTS

5 The University of Chicago
7 ACADEMIC CALENDAR
8 General Information
14 INTERDIVISIONAL PROGRAMS
29 INTERDISCIPLINARY OPPORTUNITIES
29 Committee on African and African-American Studies
31 Center for Gender Studies
36 Human Rights Program
37 Center for International Studies
39 Center for East Asian Studies
42 Center for East European and Russian/Eurasian Studies
46 The Morris Fishbein Center for the History of Science and Medicine
48 Center for Jewish Studies
54 Center for Latin American Studies
57 Medieval Studies
59 Center for Middle Eastern Studies
63 NORC
65 Committee on Southern Asian Studies/South Asia Language \&Area Center
69 The Division of the Humanities
71 Master of Arts Program in the Humanities
73 Master of Arts in Latin American Studies
77 Master of Arts in Middle Eastern Studies
80 Department of Art History
84 Department of Cinema and Media Studies
95 Department of Classics
104 Department of Comparative Literature
111 Department of East Asian Languages and Civilizations
130 Department of English Language and Literature
138 Department of Germanic Studies
156 Department of Linguistics
161 Department of Music
171 Department of Near Eastern Languages and Civilizations
176 Department of Philosophy
194 Department of Romance Languages and Literatures
203 Department of Slavic Languages and Literatures
210 Department of South Asian Languages and Civilizations
228 Department of the Visual Arts
232 The Division of the Social Sciences
235 Master of Arts Program in the Social Sciences
240 Department of Anthropology
248 Department of Comparative Human Development
255 Committee on Conceptual and Historical Studies of Science
258 Department of Economics
264 Department of History
271 Committee on International Relations
275 Department of Political Science
281 Department of Psychology
293 The John U. Nef Committee on Social Thought
300 Department of Sociology
306 Committee on Geographical Studies
312 THE DIVISION OF THE BIOLOGICAL SCIENCES AND THE Pritzker School of Medicine
315 Programs of Graduate Study in the Basic Biological Sciencess
318 Department of Biochemistry and Molecular Biology
322 Committee on Cancer Biology
327 Committee on Cellular and Molecular Physiology
331 Committee on Computational Neuroscience
335 Committee on Developmental Biology
340 Department of Ecology and Evolution
345 Committee on Evolutionary Biology
355 Committee on Genetics, Genomics \& Systems Biology
360 Department of Health Studies
366 Department of Human Genetics
369 Committee on Immunology
373 The Interdisciplinary Scientist Training Program
375 Committee on Medical Physics
379 Committee on Microbiology
382 Program in Cell and Molecular Biology
388 Committee on Molecular Metabolism and Nutrition
392 Committee on Neurobiology
397 Department of Organismal Biology and Anatomy
401 Department of Pathology
405 Clinical Departments in the Biological Sciences
411 The Pritzker School of Medicine
417 The Division of the Physical Sciences
420 Divisional Master's Program in the Physical Sciences
422 Department of Astronomy and Astrophysics
428 Graduate Program in Biophysical Sciences
431 Department of Chemistry
441 Department of Computer Science
447 Department of the Geophysical Sciences
454 Department of Mathematics
466 Department of Physics
474 Department of Statistics
479 The Enrico Fermi Institute
482 The James Franck Institute
484 Institute for Biophysical Dynamics
486 The Professional Schools
486 The University of Chicago Booth School of Business
492 The Divinity School
493 The Law School
495 The Irving B. Harris Graduate School of Public Policy Studies
499 The School of Social Service Administration
501 Research Centers
503 The William B. and Catherine V. Graham School of ContinuingLiberal and Professional Studies

## The University of Chicago

Andrew M. Alper, Chairman of the Board of Trustees
Robert J. Zimmer, President of the University
Thomas F. Rosenbaum, Provost
Candidates for admission to graduate programs at the University of Chicago should address their inquiries, including requests for application materials, to the Dean of Students of the relevant graduate division or school to which application is being made.

All of the information in this volume, as well as in the Announcements of each of the professional schools, is available online at http://catalogs.uchicago.edu. These documents are updated periodically. You will find admissions applications and more detailed information about a program that interests you on divisional websites.

The statements contained in these Announcements are subject to change without notice.

Division of the Biological Sciences
924 East 57th Street
Chicago, IL 60637
(773) 8342105
biosci-grad-affairs@bsd.uchicago.edu
http://gradprogram.bsd.uchicago.edu
Division of the Physical Sciences
5747 Ellis Avenue
Chicago, IL 60637
(773) 702-8789

Email: individual departments
http://physical-sciences.uchicago.edu
Division of the Humanities
1115 East 58th Street
Chicago, IL 60637
(773) 702-8512
http://humanities.uchicago.edu
Division of the Social Sciences
1130 East 59th Street
Chicago, IL 60637
(773) 702-8415

Email: ssdadmissions@uchicago.edu
http://socialsciences.uchicago.edu
The University of Chicago Booth School of Business
5807 S. Woodlawn Ave.
Chicago, IL 60637
(773) 702-7743
admissions@chicagobooth.edu
www.chicagobooth.edu (http://www.chicagobooth.edu)
Divinity School
1025-35 East 58th Street
Chicago, IL 60637
(773) 702-8217
tdowens@uchicago.edu
http://divinity.uchicago.edu
Law School
1111 East 60th Street
Chicago, IL 60637
(773) 702-9484
admissions@law.uchicago.edu
http://www.law.uchicago.edu
Irving B. Harris Graduate School of Public Policy Studies
1155 East 60th Street
Chicago, IL 60637
(773) 702-8401
http://www.HarrisSchool.uchicago.edu
School of Social Service Administration
969 East 60th Street
Chicago, IL 60637
(773) 702-1250
ssa.dos@uchicago.edu http://www.ssa.uchicago.edu
The University of Chicago central switchboard: (773) 702-1234

## ACADEMIC CALENDAR

2011 Summer Quarter

Description
Quarter begins
Independence Day
Convocation
Quarter Ends
Medicine Ends
2011 Autumn Quarter

## Description

Registration
Quarter Begins
Thanksgiving
Reading Period
Convocation
Quarter Ends
2012 Winter Quarter

## Description

Quarter Begins
Martin Luther King, Jr. Day
College Break
Reading Period
Convocation
Quarter Ends
2012 Spring Quarter
Description

Quarter Begins
Memorial Day
Reading Period
Convocation
Quarter Ends

Date(s)

Monday June 20
Monday July 4
Friday August 26
Saturday August 27
Friday September 2

## Date(s)

Wednesday September 21
Monday September 26
Thursday-Friday, November 24-25
Thursday-Friday, December 1-2
Friday December 9
Saturday December 10

## Date(s)

Tuesday January 3
Monday January 16
Friday February 10
Thursday-Friday, March 8-9
Friday March 16
Saturday March 17

## Date(s)

Monday March 26
Monday May 28
Thursday-Friday, May 31-June 1
Saturday June 9
Saturday June 9

All dates are subject to change with no notice.
Up to date academic calendars can be found at http://academiccalendar.uchicago.edu/.

## GENERAL INFORMATION

Announcements: Graduate Programs in the Divisions provides an overview of all graduate programs at the University of Chicago in the Divisions of the Humanities, the Social Sciences, the Physical Sciences, and the Biological Sciences. Professional schools in the University are closely integrated into the wider University; their programs are briefly described here. An individual issue of the Announcements is also available from each professional school which describes its programs and requirements in detail.
This volume is organized in a way that reflects the organization and functioning of the University. Each department or degree granting committee in the divisions of the University conducts its own admissions and aid competition, and sets its own degree requirements within a framework that is set by the University and by each division. However, divisions and departments engage in a substantial number of cooperative efforts, as evidenced by the large number of interdepartmental and interdivisional programs, committees, centers, and research groups in the University. Therefore, this volume contains a section for each division, and a separate section for interdivisional programs, centers, committees, and other organizations in which students may participate and, in some cases, earn a degree. The introductory section, which you are now reading, contains information about the University that is relevant to all students and applicants. A final section contains information for those interested in one of the professional schools.

Readers of these Announcements are advised that the policies and degree requirements of academic units that are set forth herein may change at any time without prior notice, or may represent a summary of more detailed policies and requirements. Students and applicants who wish the most up to date information regarding courses and degree requirements should review the divison or department website or contact the department or the dean of students in the relevant division. The provisions of these Announcements are for informational purposes only and are not intended to create a contract or agreement between the University and any applicant or student.

## History and Purpose

The University of Chicago is a private, nondenominational, coeducational institution of higher learning and research. It is located in the community of Hyde Park-South Kenwood, a culturally rich and ethnically diverse neighborhood seven miles south of downtown Chicago. Hyde Park-South Kenwood encompass one and one quarter square miles of commercial and residential districts that extend from 47th Street on the north to 61st Street on the south and from Cottage Grove Avenue eastward to the shoreline of Lake Michigan. The neighborhood is a stimulating blend of the urban and small town.
The University of Chicago includes the undergraduate College; four graduate Divisions (of the Biological Sciences, the Humanities, the Physical Sciences, and the Social Sciences); six graduate professional schools (The University of Chicago

Booth School of Business, the Divinity School, the Law School, the Pritzker School of Medicine, the Irving B. Harris Graduate School of Public Policy Studies, and the School of Social Service Administration); the libraries, laboratories, museums, clinics, and institutes; the William B. and Catherine V. Graham School of Continuing Liberal and Professional Studies; and the University of Chicago Press.
The University was founded by John D. Rockefeller. William Rainey Harper was its first president. Classes began on October 1, 1892, with an enrollment of 594 students and a faculty of 103, including eight former college presidents. In 1930 the undergraduate College and the graduate divisions were created by President Robert Maynard Hutchins to foster interdisciplinary study and encourage interdepartmental cooperation. Such cross fertilization continues to characterize the University.
Since its founding, the University has earned a reputation for recruiting a faculty committed to scholarly distinction and intellectual innovation. The faculty is represented in more than seventy honorary and professional societies, including the National Academy of Sciences, the American Academy of Arts and Sciences, the American Philosophical Society, and the National Academy of Education. Over eighty members of the faculty, former students, or individuals who did research at the University have been named Nobel laureates, and seven are currently members of the faculty. Notable is the faculty's tradition of developing cross disciplinary fields of study, such as Law and Economics, Conceptual and Historical Studies of Science, Ecology and Evolution, and the Institute for Mind and Biology. A leader in higher education, the University of Chicago has had a major impact on the nation's colleges and universities.
The graduate programs in the University aim to send out graduates who have begun to develop mastery of the content and methods of their chosen field of study and who are equipped to continue to learn and to produce new knowledge. To that end, the University of Chicago offers an unusually free environment for graduate study, one that encourages both faculty and young scholars and researchers to develop their interests and talents by working with colleagues throughout the University.
In addition to its Ph.D. programs and the master's degrees offered through them, the University offers a number of special degree programs for students who have completed an A.B. These free standing master's degree programs, which may be departmental and multidisciplinary, or offered in conjunction with a master's degree in a professional school, are carefully tailored for students whose goal is a master's degree. Some students who successfully complete these programs subsequently decide to apply to doctoral programs at the University or elsewhere. However, these special degree programs are conceived as self contained. These programs are listed below:

## Division of the Humanities

- Art History
- Visual Arts (M.F.A.)
- Master of Arts Program in the Humanities

Division of the Social Sciences

- Master of Arts Program in the Social Sciences
- International Relations


## Interdisciplinary programs

- East European and Russian/Eurasian Studies(as M.B.A./A.M. only)
- Latin American and Caribbean Studies
- East Asian Studies (as M.B.A./A.M. only)
- Middle Eastern Studies
- South Asian Studies (as M.B.A./A.M. only)

Division of the Physical Sciences

- Professional Master of Science Program in Computer Science
- Divisional Master of Science Program in the Physical Sciences
- Master of Science Program in Financial Mathematics

Division of the Biological Sciences

- Health Studies


## Application to the Programs in the Divisions

Applicants for admission to graduate programs in the divisions at the University of Chicago should address their inquiries to the dean of students of the graduate division or to the program to which application is being made. Applications are submitted electronically; applicants should consult the appropriate divisional or program website for information and instructions.
Associate Dean of Students
BSD Office of Graduate Affairs
924 East 57th Street, Suite 104
Chicago, IL 606375416
(773) 8342105
bioscigradaffairs@uchicago.edu

## Division of The Physical Sciences

Applicants should consult the website of the program to which they intend to apply for up to date admission materials.
http://physical-sciences.uchicago.edu
Dean of Students
Division of the Humanities
Walker Museum 111
1115 East 58th Street
Chicago, IL 60637
(773) 702-1552
humanitiesadmissions@uchicago.edu
http://humanities.uchicago.edu
Dean of Students
Division of the Social Sciences
Foster Hall 105
1130 East 59th Street
Chicago, IL 60637
(773) 702-8415
admissions@ssd.uchicago.edu
http://socialsciences.uchicago.edu
An applicant who holds a degree from an accredited institution is considered for admission on the basis of (1) an undergraduate record, (2) a well organized plan for graduate study, (3) Graduate Record Examination (GRE) and English proficiency scores, where required, and (4) recommendations from three college faculty members acquainted with the character, ability, potential, qualifications, and motivation of the applicant. Persons who have been away from school for several years may submit recommendations from employers, professional associates, or supervisors.

Certain departments of the University require additional credentials; details concerning these additional credentials are available with the application form, or will be sent to candidates for admission after they have filed their applications.

Transcripts of all academic work should be submitted with the application if at all possible; the applicant should request each institution attended to provide an official transcript in a sealed envelope or via a digitally secured PDF originating from the college's registrar. Letters of recommendation should also be submitted with the application; each recommender should enclose the evaluation in sealed envelopes and put his or her signature across the sealed flap. Foreign records of university work may be certified copies of the original. More detailed instructions are included with the application. Every applicant is asked to study the general statement of the division he or she plans to enter and specific requirements of the proposed field of graduate study.

## International Students

Students from abroad must submit, in addition to the usual credentials, proof of proficiency in English and documentation of all sources of financial support to cover their first year of expenses at the University. Only those students from abroad who hold the equivalent of a U.S. bachelor's degree and whose academic record is excellent will be considered for admission.

## Application Deadlines

Applications for admission and for aid must be submitted by the appropriate deadline. Application deadlines can be found on the online applications and may be as early as December 1 for the following autumn. Incomplete applications will
be evaluated on the basis of materials received at the time of the regular review process.

## PART Time STUDY

Part time study is more feasible in some fields than in others. The divisional dean of students can answer questions about opportunities for part time study in particular departments. Student loans are available to students enrolled at least half time. Applicants for part time study are generally not eligible for scholarship assistance since priority in assigning limited University aid funds must necessarily go to full time students.

Applicants who wish to begin their studies on a part time basis should so indicate on their applications.

## DECISIONS

Most admission and aid decisions for the autumn quarter are sent by mid-March. Students have until April 15 to accept or decline.
In agreement with the Resolution of the Council of Graduate Schools in the United States, a student who agrees to accept a scholarship, fellowship, traineeship, or graduate assistantship at the University of Chicago or at any of these schools prior to April 15 and subsequently desires to change plans must resign the financial aid offer and/or acceptance of admission at any time through April 15 in order to accept another scholarship, fellowship, traineeship, or graduate assistantship, regardless of any understanding reached before then. This protects the student's right to select the offer that is most attractive.

## STUDENTS WITH DisABILITIES

As soon as possible after having been admitted, students should contact their divisional dean of students.

## COnditions of Acceptance

Acceptance of a scholarship or fellowship is conditional on the student's agreement to devote full time to graduate study toward an advanced degree at the University of Chicago. In cases of students holding larger awards, special permission for remunerative work must be secured in advance.

## APplication to Professional Schools

Students interested in the University's professional schools the Graduate School of Business, the Divinity School, the Law School, the Pritzker School of Medicine, the Harris School of Public Policy Studies, or the School of Social Service Administration should contact the admissions office of each school.

## Being a Student at the University of Chicago

From healthcare services to cultural programming, The University of Chicago is dedicated to supporting and enriching the life of its graduate students. To that end, there are many offices and programs that exist to create a healthy, safe, and
productive environment for students both inside and outside the classroom. You can find a list of resources available to graduate students at http://grad.uchicago.edu/

Chicago is a vibrant and exciting city that you will want to explore. As a world class city, Chicago also presents all of the typical challenges of a complex modern urban society. While the University takes measures to ensure a safe campus environment, there are also many things you can do to ensure your own safety. The University's campus safety report, Common Sense, is designed to help equip you to navigate the city successfully and offers information about the University offices that provide services related to security and safety. The report is available online at http://commonsense.uchicago.edu/. Hard copies of Common Sense are available upon request from the Office of Campus and Student Life, 5801 S. Ellis Ave., Chicago, IL 60637, (773 702-7770).

As a member of The University of Chicago community, there are University policies and regulations you are responsible for knowing. These policies protect your rights and outline your responsibilities as students. For instance, the Graduate Student Parents Policy grants academic accommodations to graduate students who are also new parents, and the Residence System for Students in PhD programs defines the status of doctoral students as they progress through their studies. A complete statement of policies and regulations can be found at http:// studentmanual.uchicago.edu/

## INTERDIVISIONAL PROGRAMS

The University of Chicago has a distinctive and distinguished tradition of interdisciplinary research and teaching. Faculty and students with interests that span departmental lines are readily able to find colleagues throughout the University. The many interdivisional programs that flourish at the University vary widely in purpose and organization. Some are formal, degree granting committees, some are area studies centers, some are comparatively informal groupings of faculty and advanced students who share an interest in some method, approach, or subject area.

## COUNCIL ON ADVANCED STUDIES IN the Humanities and Social Sciences

## Chair

- Cathy Cohen


## Members

- Dain Borges, History
- Thomas Christensen, Music
- Elisabeth Clemens, Sociology
- Judith Farquhar, Anthropology
- Rachel Fulton, History
- Elaine Hadley, English Lang. \& Lit.
- Travis Jackson, Music
- Gabriel Richardson Lear, Philosophy
- Dario Maestripieri, Comparative Human Development
- Sankar Muthu, Political Science
- Rebecca Zorach, Art History


## Ex Officio Members

- Richard Rosengarten, Dean of the Divinity School
- Martha T. Roth, Dean of the Division of Humanities
- John Mark Hansen, Dean of the Division of Social Sciences


## Graduate Workshops in the Humanities <br> and Social Sciences, 2011-2012

Graduate workshops in the humanities and social sciences for 2011-2012 are described below. Most of these are ongoing, although the focus may change from year to year. Because new workshops are established on an annual basis, please see our website (http://cas.uchicago.edu) for current information and links to workshop
websites. Generally meetings consist of discussions of papers by advanced graduate students, University of Chicago faculty, or guest speakers from other institutions, although this varies according to each workshop's objective and focus.

## AFRICAN STUDIES

This Workshop is an interdisciplinary forum for graduate students and faculty whose work concerns the material and socio-cultural lives of people of the African continent and it's discursively constituted diasporas, presently and historically. Student participants tend mostly to come from the Anthropology department, but the workshop also has active members in the fields of History, Human Development, Literatures, Political Science, Religious Studies, and History of Culture, and encourages cross-disciplinary collaboration and exchange. In addition to regular presentations by students, faculty, and invited guests, the Workshop hosts bi-annual Red Lion Seminars jointly with Northwestern University's Program of African Studies.

## American Literatures and Cultures

We strive to promote the canonical diversity and comparative approaches that have become critical to the analysis of American cultures. We also investigate the thematic, methodological and pedagogical issues across historical periods within the fields of literary studies and American studies. This workshop discusses papers by graduate students, faculty and guests relating to the broadly defined fields of American literary and cultural studies.

## American Religious History

This Workshop explores the role of religion in American history, culture, and society from the colonial period to the present day. The Workshop engages in historiographical, theoretical, and methodological discussions about the place of religion in narratives of American history by focusing on issues and topics such as gender, race, theology, consumer culture, literature, and the rise of evangelicalism. The Workshop welcomes scholars from a variety of academic disciplines including, but not limited to, the Divinity School and the History, English and Sociology departments. Presentations by students, faculty and guest speakers take place in a relaxed discussion oriented environment designed to further the research and knowledge of participants.

## ANCiENT GREEK AND ROMAN PHilosOphy

A wide range of issues concerned with Ancient Greek and Roman philosophy will be discussed at this workshop. In addition to paying close attention to the arguments, we will consider the historical and literary context as well as the reception of ancient philosophy up to the present. We welcome interdisciplinary approaches.

## ANCIENT SOCIETIES

The theme of this year's Workshop is "Religion and Law," which is a natural development on last year's theme, "Epigraphic habits." First, many religious
systems in the ancient world publicized the rules of cult and even occasionally deontological text, which recent epigraphic work has brought to light. Second, new historical and linguistic investigations have allowed us to contextualize legal documents more robustly then before. Finally, ancient history is witnessing a renewed emphasis, buttressed by new questions and techniques, on the study of law. The time is ripe to bring the fruits of that labor to bear upon the role of discourses of law in the self-articulation of cultic communities, and likewise in the regulation of such by the political communities in which they existed.

## ANTHROPOLOGY OF EUROPE

This Workshop explores current research in the anthropology of Europe and examines ongoing ethnographic fieldwork -local, regional, national, and transnational - in all areas of Europe. While the workshop focuses on anthropological approaches, it also draws on insights from history, sociology and cultural studies, inviting participants from these and other disciplines. Presentations range from lectures by visiting Europeanist anthropologists, to discussions of work in progress by Chicago faculty, to papers by students on their field research.

## ART AND POLITICS OF EAST ASIA

This workshop provides a common intellectual forum for students and scholars of diverse fields investigating the interaction of aesthetics with political economics as reflected in textual, visual, and performance media in East Asia. Taking as its focus the cultural products emerging out of East Asian societies as they experience modernity, the workshop confronts existing theoretical frameworks and methodological issues relevant to the study of artistic production and consumption. The workshop is a space for students to share their work, discuss major crossregional themes, and engage the work of noted scholars in the field.

## CARIBBEAN STUDIES

City, Society and Space
The social organization of urban environments has always held a prominent place in the social sciences and at the University of Chicago in particular. This workshop carries on that tradition, providing an interdisciplinary forum for faculty and graduate students to present current research, participants contribute to the development of new understandings of the social structures and processes within a city. This workshop hosts a lively and interactive series of presentations covering such topics as political economy, culture, social organization, globalization, crime and urban history.

## CLINICAL ETHNOGRAPHY

Workshop meetings provide the opportunity for the faculty and students involved with clinical ethnography and psychiatry to meet together to discuss clinical cultural issues. The intellectual ambition of the group is to understand the influence of cultural meaning and social structure on the identification, experience and treatment of mental illness from psychological anthropology and cultural
psychology perspective while maintaining a commitment to the clinical reality of these struggles.

## COGNITION

COMPARATIVE BEHAVIORAL BIOLOGY
Jointly sponsored by the Institute for Mind and Biology and the Department of Comparative Human Development, this workshop brings together individuals broadly interested in how biology and environment influence social behaviors and how the environment in turn influences genetic change. Presenters conduct research on how developmental, physiological and immunological mechanisms influence organismal behavior, and how evolutionary processes promote these mechanisms. Our regular participants study human and non-human animals, researching paternal behaviors, mate choice, immunology and endocrinology, kin selection and cognition, among other topics. Graduate students interested in any area of the biological and social aspects of behavior are encouraged to attend this open forum.

## Comparative Human Development

The workshop builds upon the reemergence of cultural psychology as the comparative study of the way culture and psyche are constitutive of one another. It is specifically concerned with the ways in which the person and their mental well-being are defined and developed in diverse environmental and sociocultural contexts. Presentations by students, faculty, and outside speakers from anthropology, psychology, and allied fields will focus on diverse topics in mental health behavioral research, including the cultural constitution of disease, the temporal patterning of health-related processes within a lifespan perspective and optimal experience. They also may address positive psychological processes such as enjoyment, creativity, and wisdom. The workshop encourages participants from all fields.

## COMPARATIVE POLITICS

Comparative politics is a broad field. The common thread running through the research presented at our workshop is the search for broad theoretical propositions and fresh empirical insights through the comparative study of politics. What explains levels of violence in civil wars? Why have some former communists systems evolved into democracies with substantial patronage and corruption, whereas other democracies in the region are relatively clean? Why do poor people sometimes migrate internationally to countries that are just as poor as the countries they left? If economic growth encourages democratization, is this because modern economies are wealthier or because they are more egalitarian? These are the sorts of questions raised by papers presented at the workshop.

## CONTEMPORARY ART AND ITS HistORIES

The Contemporary Art Workshop provides a context for the consideration of history as an indispensable component of work on contemporary art. In addition,
the workshop seeks to create a meeting place for artists, art historians, curators and critics both from the University and from without. We offer a supportive, yet critical setting in which the arts community can engage in the sustained analysis and debate of current practices.

## CONTEMPORARY EUROPEAN PHilosophy

The Contemporary European Philosophy Workshop is an interdisciplinary forum that seeks to promote sustained advanced research in the field of European philosophy at the University of Chicago and to foster a local community of scholars from across the humanities and social sciences. It welcomes students, faculty, and members of the wider philosophy community to present and discuss their latest work.

## CONTEMPORARY PHILOSOPHY <br> Early Christian Studies

The purpose of the Early Christian Studies Workshop is to provide a venue for students and scholars of the New Testament, Greco-Roman religions and literatures, and the early history of Christianity to present their creative work on primary texts and other evidence for the early Christian movement and the world in which it grew.

## EARLY MODERN

This interdisciplinary workshop focuses on every aspect of the early modern experience, circa 1350-1800. It encompasses the entirety of the Mediterranean and European worlds as well as their rivals and colonial possessions. While the workshop's approach is historical, we actively encourage participants who work on any aspect of the areas and period covered. Most sessions discuss pre-circulated papers presented by graduate students, faculty, or invited visitors. The Early Modern Workshop is a forum for the Chicago community to meet and help one another in ongoing research about political, cultural, economic and legal topics broadly situated across four centuries of world history, from colonial America to Europe to Southeast Asia.

## EAST ASIA: POlitics, ECONOMY, AND SOCIETY

Current social science research on East Asian societies, particularly the People's Republic of China, Korea, Taiwan, and Japan is the focus of the workshop. The scope of the workshop is truly interdisciplinary, as we attract students and faculty from economics, political science, sociology, international studies, and various other areas. The workshop features presentations by university faculty members, graduate students, and guest speakers working on East Asia. Graduate students are especially encouraged to present their thesis and dissertation research.

## EAST ASIA: TRANSREGIONAL HistOries

This workshop invites students, faculty, and scholars from other academic communities to present creative and original work that speaks across the national lines of East Asia as well as the disciplinary lines of the academic community.

Joint presentations among participants that incorporate multi-disciplinary and/or trans-regional historical perspectives are especially encouraged. While recognizing the continuing importance of the nation state in historical understanding, we believe that it is just as important to give exposure to themes of a transnational and regional or global nature that have been obscured by the national paradigm. Such approaches can prove particularly fruitful when undertaken at a level of understanding beyond traditional departmental and specialty boundaries.

## EDUCATION

This interdisciplinary workshop supports the advancement of education related research and theory among members of the university community in two types of sessions: 1) Methodology and 2) New Findings in Education. Methodology sessions enable presenters with work in progress to seek advice from workshop participants on research design and analysis approaches. New Findings in Education sessions provide an outlet for presenters to share ongoing research and completed papers with workshop participants.

## Eighteenth and Nineteenth Century Cultures

During the years 1660-1900 cultural production achieved unprecedented heterogeneity throughout Britain, its colonial possessions, and Western Europe. The goal of this interdisciplinary workshop will be to examine the tensions between this diversified production and the unifying narrative of modernity often imposed on this two hundred and forty year span. Although students of English, American, and Western European literatures have traditionally formed the core of our attendance, we enthusiastically invite scholars from other areas of inquiry as well: students of non-Western cultural production, art history, philosophy, the history of science and the social sciences. This workshop discusses pre-circulated papers.

## ETHNOISE!: ETHNOMUSICOLOGY

The workshop contributes to a growing interdisciplinary discourse on music and its cultural context, establishing and interchange between disciplines in the humanities and social sciences. This forum capitalizes upon the ongoing work of graduate students in the university and invites innovative scholars to Chicago to explore the challenges faced by music ethnographers. We welcome submissions from graduate students in all disciplines and encourage university wide faculty participation.

## Gender and Sexuality Studies

This workshop provides an interdisciplinary forum for the development of critical perspectives on gender and sexuality. The workshop's primary purpose is to promote studies of the ways in which gender and sexuality shape human experiences and are embedded in other social practices. The workshop serves as a forum for discussing both graduate student papers and unpublished work from scholars in the field. Graduate student presentations may focus on any area of gender and sexuality studies. Workshop participants share the responsibility for
choosing topics and speakers and for evaluating the effectiveness of the workshop's interdisciplinary process.

## GERMAN PHILOSOPHY

## History, Philosophy, and Sociology of Science

This workshop is a forum devoted to interdisciplinary approaches to the sciences. Its meetings provide a chance to encounter the latest work in science studies, presented by outside speakers, faculty, and graduate students. Topics range widely: in recent years the workshop has hosted discussions of subjects as diverse as Aristotelian logic, Renaissance astronomy, William James' Philosophy, modern bioethics, and the sociology of industrial-academic collaboration.

## HUMAN RIGHTS

Due to domestic and world events, human rights has become a vital focus for academic research across disciplines. This workshop responds to a growing need to examine and discuss human rights and for the presentation of research and discussion on relevant contemporary human rights issues. The Human Rights Workshop crosscuts all academic disciplines and helps the campus community to engage in the examination of issues of moral and political significance. The 2009-10 Human Rights Workshop will be organized along thematic lines, in cooperation with faculty sponsors: Autumn, human security; Winter, global justice/local justices and; Spring, the practice of human rights.

## IMMIGRATION

The purpose of the workshop is to stimulate and promote the development and discussion of theoretical and empirical research related to international migration and immigrants' experiences. The immigration related issues cut across historical periods, generations, languages and national boundaries. Who are those people who choose to migrate? Why do they migrate? How do host countries define migrant rights and obligations? How do immigrants and their families integrate into their host societies? How do immigrants influence their host societies? What are the relationships between immigrants and their countries of origin? How does international migration influence global dynamics? The Immigration workshop provides a venue in which to address these and many other questions central to the academic and public debates on immigration.

## InTERDISCIPLINARY Approaches TO MODERN FRANCE

This workshop provides a forum for faculty and students from different departments in the social sciences and the humanities who share a common interest in France from the mid-seventeenth century to the present. Bringing together different disciplinary perspectives and research horizons, it encourages participants to enrich the intellectual and methodological range of their own work. Topics will reflect the diversity of the group and include representatives from the fields of history, anthropology, literature, art history, sociology, and political science. Participants from all disciplines are welcome.

## INTERDISCIPLINARY ARCHAEOLOGY

The primary objective of the Workshop is to forge a lively and respectful dialogue on aspects of method and theory that cut across the field's diverse disciplinary locations. There is a widely perceived need for a forum to engage in conversations and projects of comparison across the different disciplinary homes of archaeology. "Method, practice, and the nature of archaeological knowledge," will be the centerpiece of a series of explorations to be held in a variety of formats throughout the year. Our goal will be to understand the mutual shaping of methods and interpretation from a wide array of perspectives. All interested participants are encouraged to attend.

## InTERDISCIPLINARY WORKSHOP IN PARIS

This workshop provides a forum for Chicago faculty and students conducting research in Paris to share and discuss their work with their colleagues. The diverse nature of participants will assure the interdisciplinary character of the workshop.

## InTERNATIONAL POLITICS, ECONOMY AND SECURITY (PIPES)

PIPES is a center of research and training in international studies at the university. Weekly workshops provide a forum for graduate students and faculty to present their research. Topics include the full range of international studies; including political economy, security studies, foreign policy, international law and organization, international environmental issues, critical international relations theory, and a wide variety of regional issues. This work is methodologically diverse, encompassing historical research, mathematical modeling, quantitative studies and interpretive approaches.

## INTERNATIONAL SECURITY POLICY (PISP)

PISP is a widely attended and intellectually vigorous workshop at the university. PISP's activities revolve around a simple and important goal: to serve as a major center for scholarship and graduate student education for deep understanding of mainstream issues of international security. The workshop original unpublished research paper, commonly a draft of a journal article or dissertation/book chapter by a faculty member or student from the University of Chicago or other intellectual institution. Topics include all aspects of the causes of war and peace, American national security policy, and international security affairs.

## Jewish Studies and the Hebrew Bible

## Language, Cognition, and Computation

This workshop is an interdisciplinary forum for graduate students and faculty whose work addresses human language from a variety of perspectives: cognitive, computation, experimental, theoretical, and their intersection.

## Language, Variation, and Change

This workshop provides an interdisciplinary forum for graduate students and faculty to discuss the motivations and consequences of language change. This is
conducted from diverse perspectives including linguistic, historic, social, cognitive, and computational.

## LATE ANTIQUITY AND BYZANTIUM

We study all aspects of the peoples, cultures, histories, and religions of the Late Antique and Byzantine world, including the near Eastern and Slavic regions and endeavor to create a forum for communications about recent archaeological discoveries in the region.

## LATIN American History

The Workshop is a forum for discussion of novel approaches to Latin American history. It aims to develop wide comparative historical perspectives and to examine methods and techniques from a variety of disciplines. Presentations cover a broad temporal (early colonial to contemporary), geographical (Mexico, Central America, the Caribbean, and South America), and disciplinary range.

## LAW, CUlTURE, AND SOCIETY

The law stands at the center of virtually every social, political, linguistic and cultural domain. It plays a critical role in shaping our most basic concepts and categories of thought and identity, and responds in turn to social and historical transformations. The goal of this Workshop is to facilitate the study of law as a cultural and social institution in both historical and contemporary contexts. Among the questions to be considered are: How do different disciplines conceptualize the concept of law?; Are there any universal elements of the law?; What are the boundaries of the law?; and Why does the law take the formations it currently has?

## Literature and Philosophy

## MASS CUlTURE

This workshop is a forum for recent and ongoing academic research on the historical, theoretical, and practical dimensions of modern mass (commercial, consumer, or popular) media, including cinema, television, journalism, popular music, photography, advertising, fashion, public amusements, and computer technology. While we do consider interpretive problems presented by individual works and different types of mass media, our focus rests on broader questions regarding the key role mass culture plays in the formation of contemporary public spheres. Because the scope of many forms of mass culture extends beyond the boundaries of any one discipline, the Workshop is committed to interdisciplinary work.

## MEDIEVAL STUDIES

MEDICINE, PRACTICE, AND BODY
This workshop focuses on medical and psychiatric practices as a middle ground between the formerly dominant polarities of body as brute materiality, on the one hand, and as mere symbolic representation, on the other. It also seeks to provide a venue for reports on bodily and scientific matters from several disciplinary
orientations and from a variety of Western and non-Western settings. Our thematic interest for the 2009-10 academic year include: the efficacies of psychiatric practice; disciplines of the body; semiotics and the senses; violence and memory; ecology and environment; development logics and humanitarian aid systems as they relate to medicine and the body; reproductive demographics and state policy; scientific and legal approaches to medicine and the body; and the institutional work of health care.

## Middle East History and Theory (MEHAT)

This Workshop serves as a multidisciplinary platform where University students in the Humanities and Social Sciences can discuss a wide array of academic questions related to the history, culture, societies and politics of the Middle East. As an area studies workshop, we accept papers dealing with this broad range of subjects throughout the geography of the Middle East, North Africa, and Central Asia, and over a time span extending from the advent of Islam to the present. One of the Workshop's main concerns is to bridge the existing gap between factual and theoretical approaches to studies of the Middle East.

## Migration, Material Culture, and Memory

## MONEY, MARKETS, AND CONSUMPTION

This workshop emphasizes the role of ethnographic fieldwork and historical finding to critically analyze economic assumptions. The workshop provides a forum for both theory and research into empirical, "on the ground" economic behavior around markets, money and consumption, which allows researchers to observe and deduce the various social and cultural factors that influence and problematize this behavior. This workshop aims to build up an interdisciplinary community of students and faculty to both critique and complement rational economic theories about individual and group economic behavior, through factors such as social, cultural, and historical context

## MUSIC History/THEORY

## New Media

This workshop provides a forum for faculty and graduate students to discuss the innovation and obsolescence of media, where these overlapping, asynchronous events are understood through social practices and lived experience. Spurred by the ongoing, but always uneven impact of media on everyday life, and the most recent materialization of media as "new" and digital, we explore the historical intersection of technology, culture, politics, and aesthetics. The New Media Workshop is committed to fostering critical dialogue on all aspects of mediated experience and invites participation from across all disciplines.

## PERCEPTION AND UNDERSTANDING OF MUSIC <br> POETRY AND POETICS

This workshop provides a forum for all those members of the University devoted to the practice and study of poetry, be they graduate students, faculty or poets.

We commit ourselves to the historical and formal engagement with poetry in all languages and across all periods. We welcome comparative work, as well as work that issues from a variety of theoretical perspectives. We especially encourage graduate students from any field to present essays and dissertation chapters at the workshop.

## POLITICAL PSYCHOLOGY

This workshop focuses on how psychology informs the study of political behavior and how the political world provides useful ways of studying psychological phenomena. Participants in the Workshop seek to understand how the structure and function of the mind informs us about the political world and how political intuitions, events, and actors regulate the workings of the mind. The interdisciplinary focus facilitates synergies and insights, contributing to the burgeoning field of political psychology. The Workshop will draw upon outside speakers in psychology and political science, as well as local faculty and students in those departments and related fields.

## POLITICAL THEORY

This workshop is a forum for the critical discussion of new research in all varieties of political theory, political philosophy, and moral, social and legal theory and philosophy, historical and contemporary. Presenters include graduate students, faculty from the University and other local institutions and prominent visitors. Graduate students also have the opportunity to serve as discussants for presentations by other students, faculty, and visitors. The Workshop subscribes to no particular methodology or political ideology and welcomes participants from all departments and disciplines. We seek to create a rigorous but comfortable space for the development of graduate student projects and professional skills.

## POlitics, COMmUNicATION, AND SOCIETY

## PRACTICAL RELIGION

## Race and Religion: Thought, Practice, and Meaning

This Workshop seeks to address the ideas, meanings, and practices of the sacred within racially marginalized communities. The Workshop seeks to acknowledge both an intellectual conviction to the exploration of religion among racialized peoples and a commitment to engaging with and clarifying the impact of religion in racialized communities.

## Religion and Ethics

## RENAISSANCE

The emphasis of the Workshop is on a cross-disciplinary study of English and Continental culture during the Renaissance, in areas such as literature, politics, theology, and natural science. Our interests include early modern poetry, prose, and drama, humanist pedagogy, politics and law, theological controversy, book history, the literature of trade and exploration, the history of the emotions and much more. Student presentation in the form of article drafts, dissertation proposals or chapters,
practice job interview presentations, practice campus visit talks are given priority. We will also meet with scholars from other institutions and hear from members of Chicago's faculty.

## Reproduction of Race and Racial Ideologies

This Workshop addresses the different processes of racialization experience within groups as well as across groups in sites as diverse as North America, Latin America, the Caribbean, Africa, the Asian Pacific, and Europe. This workshop will examine theoretical and practical considerations of scholarship that highlights the intersection of race and ethnicity with other identities such as gender, class, sexuality, and nationality and interrogates social and identity cleavages within racialized communities. Fundamentally the Workshop is committed to engaged scholarship that rejects the false dichotomy between rigorous intellectual work and community activism.

## RHETORIC AND POETICS

This workshop is concerned with the literature of classical Greece and Rome, considered whether on its own terms or in relation to the literature and poetry of other cultures. It invites presentation of critical arguments completed or in progress from the broadest possible range of perspectives.

## RUSSIAN STUDIES

SEmANTICS AND PHilosophy OF LANGUAGE
The subject of meaning in natural language is currently investigated both by philosophers and linguists, with different foci, methods, and emphases. The two are typically guided by different concerns and goals (e.g., linguists are centrally concerned with patterns of cross-linguistic variation and language acquisition; philosophers investigate the normativity of language and the metaphysical presuppositions of particular theoretical claims), but both groups can profit from cross-disciplinary discussions and mutual understanding of their different questions, methods, and results. The topic of the 2009-10 workshop will be compositionality: the hypothesis that the meaning of a complex expression is fully determined by the meaning of its parts and the way in which they are put together.

## Semiotics: Culture in Context

Presentations will come from a variety of fields including, but not limited to linguistics, psychology, sociology, political science, literary theory, history, and anthropology based on a semiotic framework. The workshop thus does not seek to limit its topics of research by area, period or discipline, thereby providing an eminently suitable forum for wide ranging discussions and conceptualizations regarding the study of social and cultural phenomena as embedded in meaningful contexts. Building on various seminal studies that have used semiotic approaches, the goal of the workshop is to continue to develop and finesse rigorous analytic frameworks that provide the methods for clearly defining linkages between the object of analysis and its context.

## SOCIAL History

This workshop provides a forum to discuss and develop work that takes seriously social history methodology, or the history of everyday life and people who have been excluded from dominant historical narratives. The Workshop focuses primarily on the United States, but also examines issues that transcend U.S. boundaries, such as race, class, gender, and sexuality. Presentations by visitors are interspersed with those of regular participants and frequently include dissertation proposals, chapters in progress, and overviews of dissertations in progress. Occasional sessions are devoted to discussion on methodological and theoretical issues in historical research. Participants include graduate students and faculty in social, cultural, and intellectual history and related disciplines.

## SOCIAL THEORY

This Workshop explores issues in social theory across a variety of disciplines in the social sciences and humanities. The emphasis is less on developing social theory than on exploring in a sustained fashion the social theoretical implications of the participants' work. Themes to be addressed are likely to include the relationship between social and cultural transformations; questions of the public sphere, civil society, and democracy; and conceptual issues posed by globalization.

## SOCIAL THEORY AND EVIDENCE

Social scientists continue to struggle over the relative merits of their many enterprises: explanation versus interpretation, causal versus descriptive analysis, the development of theories versus the testing of hypotheses. Two questions are foundational: What constitutes a good Theory? And at what point does the evidence for an argument turn from plausible to compelling? These problems, present from the birth of social science have grown no less thorny, but also no less critical, since how we choose to solve them informs the evidence we believe and the theories we generate. This workshop focuses on the clarity and cogency of social theories and the logic and effectiveness of evidence in social research.

## Theater and Performance Studies

This workshop seeks to provide a forum for questions of performance that have arisen in a host of disciplines. In addition, the workshop seeks to extend to the graduate level a systematic reflection on the longstanding divide between the theories and praxes of performance that has, for the pasts few years, animated the field.

## THEOLOGY

This Workshop offers an interdisciplinary and comparative approach to the history, ideas and methods of reading and thinking about theological texts and traditions. We are concerned with facilitating conversations across disciplinary lines into the relationship between theological discourse and cultural metaphors, symbols, values, and perspectives. The Workshop proposes to explore theological discourse in its manifold historical, sociological, ethical, mystical, liturgical, poetic,
and philosophical forms $b$ offering a setting in which the various disciplines of the University come together for discussion. The premise of the workshop is that the study of theology belongs to the horizon in which we pose fundamental questions about the role and place of human beings in society, culture, and the world.

## Theory and Practice in South Asia (TAPSA)

This workshop is an important part of the fabric of intellectual activity in South Asian studies at the University of Chicago. The TAPSA talks are scheduled to coordinate with the South Asian Seminar, to provide regular interdisciplinary intellectual events, including papers by graduate students, faculty, and visiting scholars. For students, the benefits of TAPSA include the opportunity to present their work in progress to an interdisciplinary audience of peers and teachers, and to benefit from the intensive interaction and feedback.

## Transnational Approaches To Europe

## UNited States Locations

This Workshop explores ethnographic research in Canada and the United States within social scientific fields engaging core cross-disciplinary anthropological problems. In a world of global interconnections, we provide a forum for anthropologists and other social scientists crafting rigorous approaches to locating America as a cultural and sociological entity within, across, and outside the geographic boundaries of North America. Critically analyzing the burgeoning literature on ethnographic practice and theory, and focusing on carefully formulated empirical studies in particular locations, this workshop aims to locate the theoretical position of North America within the field of anthropology and related disciplines.

## Visual and Material Perspectives on East Asia

This workshop is focused on the study of material or visual objects from East Asia. It explores the possible uses of recent theories of art, history, and material and visual culture in the study of East Asia. Presentation of studies of objects and visual materials from a variety of historical periods and geographic locations within East Asia serve as case studies for the exploration of such methodological concerns. The Workshop is about two-thirds student presentations and about one-third outside speakers.

## Western Mediterranean Culture

The study of all aspects of Western Mediterranean culture from 1200-1700 is the focus of this workshop. The Workshop addresses the multiple linguistic, textual, and visual traditions of five regions/ countries: France, Italy, Portugal, Spain, and North Africa (including parts of the Ottoman Empire). It seeks to foster discussion between Medieval and Early Modern specialists as well as between different disciplines. With a focus during 2009-10 on the theme of "the poetics and the translation of history and literature," the Workshop will emphasize the movement and exchange of peoples, ideas, motifs, and goods among the different parts of the region.

## WittGenstein

This Workshop aims to foster a variety of forms of interdisciplinary research that take their point of departure from a shared interest in Wittgenstein's intellectual achievement. The Workshop will seek to provide a forum in which the following activities can be pursued in conjunction with one another; the careful study of Wittgenstein's contributions to both philosophy and other disciplines; the discussion of current research by graduate students with related interests; and the presentation of work by some of the leading contemporary scholars at work in these areas.

## INTERDISCIPLINARY OPPORTUNITIES

## COMmittee on African and AFrican-American Studies

## Chairs

- Jennifer Cole
- Kenneth Warren


## Faculty

- Ralph A. Austen - History Emeritus
- Kenneth Warren - English. Co Chair
- Lauren Berlant - English
- Dain Borges - History
- James E. Bowman - Pathology and Medicine Emeritus
- Cathy Cohen - Political Science
- Jennifer Cole - Human Development
- Jean Comaroff - Anthropology
- John L. Comaroff - Anthropology and Sociology
- Shannon Dawdy - Anthropology
- Michael Dawson - Political Science
- James W. Fernandez - Anthropology Emeritus
- Jacqueline D. Goldsby - English
- John A. Goldsmith - Linguistics
- Gene B. Gragg - Near Eastern Languages and Civilization and Linguistics
- Thomas Holt - History
- Dennis Hutchinson - College and Law School
- Rachel Jean-Baptiste - History
- Loren Kruger - Comparative Literature and English
- Donald N. Levine - Sociology Emeritus
- Omar M. McRoberts - Sociology
- Salikoko Mufwene - Linguistics
- Dolores G. Norton - Social Service Administration
- Emily L. Osborn - History
- Stephan D. Palmie - Anthropology
- François G. Richard - Anthropology
- Julie Saville - History
- Michel Rolph Trouillot - Anthropology
- Robert von Hallberg - English

The Committee on African and African-American Studies is an interdepartmental and interdivisional body concerned with promoting the study of African and African American culture and society from prehistoric to contemporary times. The University does not grant a graduate degree in African or African American Studies and students must be admitted to one of the regular departments or programs. The University of Chicago offers broad opportunities for interdisciplinary and comparative work. Its Divisions of Social Sciences and Humanities and range of interdisciplinary non Western area programs are among the strongest in the country and are organized on a flexible basis to meet a wide range of student interests. Students seeking a Ph.D. based upon a specialization in African or African American studies may apply to one of the departments with faculty listed above. Students seeking an A.M. degree based upon a specialization in African or African American studies may apply to the Master of Arts Program in the Social Sciences, the Committee on International Relations, or the Master of Arts Program in the Humanities. The main activities of the Committee on African and African American Studies are the coordination of graduate studies programs (including opportunities for student teaching in undergraduate courses) and the management of workshops (advanced research seminars) and conferences. For African American Studies, some of this work is shared with the Center for the Study of Race, Politics and Culture (773702 8063, csrpc@uchicago.edu, http://socialsciences.uchicago.edu/ucrpc).

The CSRPC also maintains a list of Courses with Substantial Content on Race and Ethnicity http://social sciences.uchicago.edu/ucrpc/Resources/classindex.htm

For further information on the committee, contact Jennifer Cole; Committee on African and African-American Studies; The University of Chicago; 5730 South Woodlawn Ave 60637; telephone: 773-702-4235; Fax 773 702-0320. Web page (via Social Sciences Division): http://www.uchicago.edu/ uofc/acadunits/SSD.html

## Center for Gender Studies

## Director

- Deborah Nelson


## Faculty

- Danielle Allen - English Language \& Literature
- Leora Auslander - History
- Kelly Austin - Romance Languages \& Literature
- Orit Bashkin - Near East Languages \& Civilizations
- Lauren G. Berlant - English Language \& Literature
- Catherine Brekus - Divinity
- Bill Brown - English Language \& Literature
- Margot Browning - Humanities Division
- E. Summerson Carr - Social Services Administration
- Mary Anne Case - Law
- Tamara Chin - Comparative Literature
- Kyeong Hee Choi - East Asian Languages \& Civilizations
- Elisabeth Clemens - Sociology
- Cathy Cohen - Political Science
- Bertram J. Cohler - Human Development
- Jennifer Cole - Human Development
- Jean Comaroff - Anthropology
- Bradin Cormack - English Language \& Literature
- Raul Coronado - English Language \& Literature
- Kristine Culp - Divinity
- Jane Dailey - History
- Shannon Dawdy - Anthropology
- Daisy Delogu - Romance Languagees \& Literature
- Wendy Doniger - Divinity
- Sascha Ebeling - Near East Languages \& Civilizations
- Darby English - Art History
- Jean Bethke Elshtain - Divinity
- Jacob Eyferth - East Asian Languages \& Civilizations
- Martha Feldman - Music
- Norma Field - East Asian Languages \& Civilizations
- Sheila Fitzpatrick - History
- Ping Foong - Art History
- Richard Fox - Divinity
- Mary Anne Franks - Law
- Susan Gal - Anthropology
- Leela Gandhi - English Language \& Literature
- Melissa Gilliam - Obstetrics and Gynecology
- Jan Ellen Goldstein - History
- Ramon Gutiérrez - History
- Elaine Hadley - English Language \& Literature
- Miriam Hansen - English Language \& Literature
- James Heckman - Economics
- Elizabeth Helsinger - English Language \& Literature
- Julia Henly - Social Services Administration
- Judy Hoffman - Visual Arts
- Rachel Jean-Baptiste - History
- Janet H. Johnson - Oriental Institute
- Waldo Johnson - Social Services Administration
- Robert L. Kendrick - Music
- Janice Knight - English Language \& Literature
- Don Kulick - Human Development
- Aden Kumler - Art History
- Edward O. Laumann - Sociology
- Laura Letinsky - Visual Arts
- David Levin - Germanic Studies
- David Orlinsky - Human Development
- Agnes Lugo Ortiz - Romance Languages \& Literatures
- Armando Maggi - Romance Languages \& Literature
- Rochona Majumdar - East Asian Languages \& Civilizations
- Patchen Markell - Political Science
- Jeanne Marsh - Social Service Administration
- Jill Mateo - Human Development
- Martha K. McClintock - Psychology
- Françoise Meltzer - Romance Languages \& Literatures
- Stuart Michaels - Gender Studies
- J. Mark Miller - English Language \& Literature
- Kathleen Morrison - Anthropology
- Deborah Nelson - English Language \& Literature
- Larry Norman - Romance Languages \& Literatures
- Martha C. Nussbaum - Law
- Wendy R. Olmsted - College
- Mark Osadjan - Biological Sciences
- Emily Lynn Osborn - History
- Lucy Pick - Divinity
- Valerie Ritter - South Asia Languages \& Civilizations
- Melissa Roderick - Social Service Administration
- Martha Roth - Near Eastern Languages \& Civilizations
- Lisa C. Ruddick - English Language \& Literature
- Julie Saville - History
- J. Scappettone - English Language \& Literature
- Kristen Schilt - Sociology
- Reynolds Barton Schultz - Humanities Division
- Bozena Shallcross - Slavic Languages \& Literatures
- Michael Silverstein - Anthropology
- William Sites - Social Service Administration
- Amy Dru Stanley - History
- Christine Stansell - History
- Richard Allen Strier - English Language \& Literature
- Leigh VanValen - Ecology \& Evolution
- William R. Veeder - English Language \& Literature
- Candace A. Vogler - Philosophy
- Linda Waite - Sociology
- Froma Walsh - Social Services Administration
- Martha Ward - Art History
- Elissa Weaver - Romance Languages \& Literatures
- Lisa Wedeen - Political Science
- Rebecca West - Romance Languages \& Literatures
- Jennifer Wild - Cinema \& Media Studies
- Alison Winter - History
- David Wray - Comparative Literature
- Wu Hung - Art History
- Tara Zahra - History
- Judith Zeitlin - East Asian Languages \& Civilizations
- Linda Zerilli - Political Science
- Rebecca Zorach - Humanities

The Center for Gender Studies coordinates courses and activities that take up gender and sexuality as primary objects of study and categories of analysis. Courses engage these domains in many different ways, including: the study of gender and/ or sexuality as historical practice; scientific concept and site of representation; in social movements such as feminism and gay and lesbian liberation; feminist and queer theory; family structures; the gendering of labor force participation; representations of women in literature and the visual arts; intersections of race and gender, transnationalism; and women's and men's participation in politics.

Our courses fall under traditional disciplinary rubrics, and use gender and sexuality as categories of analysis to track contemporary transformations in these and other domains of knowledge. We are interested in developing points of comparison within and among diverse areas of organized knowledge, not assuming that gender means the same thing in different disciplines, historical moments, epistemologies, or cultural frameworks. We are also dedicated to fostering debate about the construction and implications of categories of gender difference and sexual identity. Further, we promote engagement with ways that gender and sexuality give us insight into other modes of social organization and change, including transformations of economic and political systems; media public spheres; form of repression and resistance; modes of production, knowledge and experience; and everyday life.

The Center for Gender Studies confers no graduate degrees at this time. It does, however, foster graduate participation in the center. In addition to offering undergraduate and graduate courses and an undergraduate major and minor in gender studies, the Center sponsors lectures and symposia of interest to graduate students. It also encourages and supports graduate student initiatives for conferences and speakers, as well as student participation in the governance of the center. In addition, many Gender Studies faculty and students participate in the graduate workshops conducted under the auspices of the Council on Advanced Studies in Humanities and Social Sciences that engage questions of gender, sexualities and identities including the Gender and Sexuality Studies Workshop. Each year, the Center offers a dissertation writing fellowship as well as an office space competition at the Center. Problems in the Study of Gender and Problems in the Study of Sexuality (the core undergraduate courses for the program) and Introduction to Theories of Sex and Gender (a graduate level theory course) promote collaborative teaching among faculty and graduate students. The Center also offers graduate student teaching opportunities in the form of free standing courses in the College. A library of textual materials related to the curriculum and the workshops, together with information about gender and women's studies programs at other institutions and funding opportunities for research on women's and gender studies, is kept in the Center for Gender Studies at 5733 S. University Avenue. Additionally, the Center's student caucus, made up of graduate and undergraduate students, organizes its own initiatives, events and programs with the support of the Center.
The resource faculty draws from departments, committees, and professional schools dispersed throughout the University. Members of this faculty support interdisciplinary work in gender studies, even when their major course offerings
are not directly gender studies courses. Faculty also regularly direct master's essays and Ph.D. dissertations in the field of gender studies within the MAPSS and MAPH programs as well as in their own disciplines. Students interested in gender studies who wish to earn advanced degrees leading to careers in research and teaching should apply for admission to the department in which their chief interest falls.

Please contact the Center for Gender Studies, (773) 702-9936, for specific information regarding courses and programs. More information can also be found on the Center's website at http://genderstudies.uchicago.edu.

## Human Rights Program

Faculty Director

- Michael Geyer

Executive Director

## - Susan Gzesh

The University of Chicago Human Rights Program, founded in 1997, is currently led by Faculty Director Michael Geyer and Executive Director Susan Gzesh. The Program's research and teaching in human rights integrate exploration of the core questions of human dignity with critical examination of the institutions designed to promote and protect human rights in the contemporary world. The Human Rights Program is an initiative unique among its peers for the interdisciplinary focus its faculty and students bring to bear on these essential matters.
The Human Rights Program continues the Chicago tradition of rigorous academic preparation, integrated with real world experience and perspectives. The Human Rights curriculum includes a core sequence and an array of elective courses which examine human rights from a variety of disciplinary, thematic, and regional perspectives. The Human Rights Internship Program provides fellowships to students for practical experiences at host organizations in the U.S. and around the world. Through conferences, workshops, lectures, and film series, the Program brings the world to the campus, incorporating the broader community into its educational mission.
For more information please see our website: http://humanrights.uchicago.edu

# CENTER FOR International Studies 

## Director

- Kathleen Morrison

Interim Director

- Mark Lycett

The Center for International Studies, which coordinates many of the University of Chicago's international programs, has grown out of the University's six decade long involvement in the study of international phenomena. This involvement began in the 1930s, with the creation of the Committee on International Relations, the first program of its kind in the United States. In the 1950s and 1960s, University faculty responded to international upheavals resulting from the World Wars by launching area studies centers along with the Center for International Studies. These centers provided an innovative approach to the study of other cultures that became the model for universities across the United States. Today, the University of Chicago is home to six federally funded National Resource Centers in international and area studies - the Center for International Studies itself, along with the Center for East Asian Studies, the Center for East European and Russian/Eurasian Studies, the Center for Latin American Studies, the Center for Middle Eastern Studies, and the South Asia Language and Area Center.
The Center for International Studies promotes collaboration among the six National Resource Centers on educational outreach efforts, scholarly conferences, and thematic initiatives. It coordinates two regional initiatives, on Central Eurasian Studies and on African Studies. In addition, the Center is at the heart of multidisciplinary and interregional discussions about the nature of area studies and the need for new tools to analyze international and global phenomena, with recent and ongoing projects on themes including partitions and population exchanges; changing forms of American power; and new intellectual and policy frameworks for studying forest ecosystems and other socio-natural systems. The latter is part of the new Program on the Global Environment described below.

## Interdisciplinary Initiatives

Among the most pressing issues facing the world in the early twenty-first century are environmental challenges including deforestation, climate change, pollution, water resources, habitat loss, and the food and energy needs of a growing population. Addressing these issues requires area-specific knowledge, knowledge that crosses traditional academic divisions such as that between the natural and human sciences, as well as global and international perspectives and cooperation. To that end, the Center for International Studies launched the Program on the Global Environment in 2007, to coordinate the study of environmental issues across academic units in the biological and physical sciences, social sciences, humanities, and policy studies.

Components of the Program on the Global Environment include the Environmental Studies BA major and minor, the graduate Workshop on the Global Environment, conferences, lecture series, and other events, liaison with student groups and the campus Sustainability Council, and public education and outreach. The program awards annual lectureships to graduate students for courses taught in Environmental Studies. The program also hosts visitors and post-doctoral fellows and encourages research collaborations across disciplinary divides.

## Programs of Study

Through its federal grant, the Center for International Studies supports curriculum development within the undergraduate International Studies and Environmental Studies majors, in the Human Rights Program, and in the College's study abroad programs. The Center for International Studies collaborates closely with the Committee on International Relations, which offers an A.M. degree and a joint A.B./ A.M. program.

## On Campus Collaboration

Thanks to the acknowledged eminence of its international faculty in the social sciences, humanities, business, and law and to the vitality of the University's own intellectual culture, there is a rich, collaborative environment in international studies at the University of Chicago. The Center for International Studies is perfectly situated to develop new modes of collaboration between disciplines and between those who study different regions of the world.

## CENTER FOR EAST ASIAN STUDIES

Director

- Donald Harper

Associate Director

- Theodore N. Foss, China and Korea Studies
- Sarah Arehart, Japan Studies

Center Coordinator

- Theresa Couch

Faculty

- Guy S. Alitto - History
- Susan Burns - History
- Michael Bourdagh - East Asian Languages \& Civilizations
- Tamara Chin - Comparative Literature
- Fangpei Cai - East Asian Languages \& Civilizations
- Kyeong Hee Choi - East Asian Languages \& Civilizations
- Julie Chu - Anthropology
- Paul Copp - East Asian Languages \& Civilizations
- Bruce Cumings - History
- Prasenjit Duara - History
- Xinyu Dong - Cinema and Media Studies
- Jacob Eyferth - East Asian Languages \& Civilizations
- Judith Farquar - Anthropology
- Norma Field - East Asian Languages \& Civilizations
- Michael Fisch - Anthropology
- Ping Foong - Art History
- Chelsea Foxwell - Art History
- Thomas Ginsburg - Law
- Susan Goldin Meadow - Psychology
- Donald Harper - East Asian Languages \& Civilizations
- Yuming He - East Asian Languages \& Civilizations
- James Hevia - International Relations
- Dwight Hopkins - Divinity School
- Christopher Hsee - Booth School of Business \& Behavioral Science
- Chang Tai Hsieh - Booth School of Business
- Paola Iovene - East Asian Languages \& Civilizations
- Reginald Jackson - East Asian Languages \& Civilizations
- Matthew Kapstein - South Asian Languages \& Civilizations
- Yoko Katagiri - East Asian Languages \& Civilizations
- James E. Ketelaar - History
- Hi-Sun Kim - East Asian Languages \& Civilizations
- Jieun Kim - East Asian Languages \& Civilizations
- Cheol-Sung Lee - Sociology
- Meng Li - East Asian Languages \& Civilizations
- Yuxiang Liu - East Asian Languages \& Civilizations
- Hoyt Long - East Asian Languages \& Civilizations
- Harumi Lory - East Asian Languages \& Civilizations
- Misa Miyachi - East Asian Languages \& Civilizations
- Hiroyoshi Noto - East Asian Languages \& Civilizations
- Haun Saussy - Comparative Literature
- Edward Louis Shaughnessy - East Asian Languages \& Civilizations
- Bernard S. Silberman - Political Science
- Laura A Skosey - East Asian Languages \& Civilizations
- Richard Jean So - English Language \& Literature
- Ruey Tsay - Business
- Grace Tsiang - Economics
- Katherine Tsiang - Center for the Art of East Asia
- Youqin Wang - East Asian Languages \& Civilizations
- Hung Wu - Art History
- Ming Xiang - Linguistics
- Kazuo Yamaguchi - Sociology
- Dali Yang - Political Science
- Jun Yang - East Asian Languages \& Civilizations
- Alan Yu - Divinity
- Chun-Su Yuan - Anesthesia \& Critical Care
- Judith Zeitlin - East Asian Languages \& Civilizations
- Dingxin Zhao - Sociology

Professors Emeriti

- C. C. (George) Chao
- Tetsuo Najita
- William Parish
- David Roy
- George Tiao
- Tsuen-Hsuin Tsien
- N. C. Yang
- Anthony C. Yu

The Center for East Asian Studies (CEAS) is an interdepartmental and interdivisional coordinating body whose primary functions include promoting student and faculty research in East Asian Studies and sponsoring special events. For the A.M. and the Ph.D. degrees, students specializing in Chinese, Japanese, or Korean Studies must be enrolled in one of the regular departments of the University. Courses in the various fields of East Asian Studies are offered in several departments in both the Division of the Humanities (see listings for the Departments of Art History, Cinema and Media Studies, East Asian Languages \& Civilizations, and Linguistics in these Announcements) and the Division of the Social Sciences, as well as the Divinity School, the Law School, and the Graduate School of Business.

CEAS supports graduate training and basic research through fellowship programs and faculty research grants. It works closely with the East Asian Library to build resources for current and future research needs. Through seminars, workshops, and public lectures, CEAS promotes intellectual exchange among scholars in the field.

The East Asian Library is one of the world s most distinguished East Asian research collections, and contains over 800,000 volumes in East Asian languages. It is particularly strong in history, politics, classics, literature, and local institutions.

CEAS also has a list of resources of other facilities that exist within the city of Chicago for the study of East Asia for both members of the University and interested members of the Chicago community. The Field Museum of Natural History and the Art Institute of Chicago display notable and extensive collections of objects from East Asia of anthropological and artistic interest; in addition, their libraries are available for consultation by students.

## CENTER FOR EAST EUROPEAN and Russian/Eurasian Studies

## Director

- Victor A. Friedman

Associate Director

- Meredith Clason

Outreach and Campus Programs Coordinator

- Dana Immertreu


## Faculty

- Helga Anetshofer - Near Eastern Languages \& Civilizations
- Kagan Arik - Near Eastern Languages \& Civilizations
- Howard I. Aronson - Slavic Languages \& Literatures (Emeritus)
- Robert Bird - Slavic Languages \& Literatures
- Philip Bohlman - Music
- John W. Boyer - History
- Steven C. Clancy - Slavic Languages \& Literatures
- Robert Dankoff - NELC (Emeritus)
- Bill J. Darden - Slavic Languages \& Literatures (Emeritus)
- June P. Farris - Regenstein Library
- Sheila Fitzpatrick - History
- Cornell Fleischer - Near Eastern Languages \& Civilizations
- Victor Friedman - Slavic Languages \& Literatures and Linguistics
- Paul Friedrich - Anthropology, Linguistics, and Social Thought (Emeritus)
- Susan Gal - Anthropology
- Leonid Gavrilov - NORC
- Natalia Gavrilova - NORC
- Anastasia Giannakidou - Linguistics
- Thomas Ginsburg - Law
- Yaroslav Gorbachov - Slavic Languages \& Literatures
- Lenore Grenoble - Slavic Languages \& Literatures and Linguistics
- Jonathan M. Hall - History and Classics
- Eric P. Hamp - Linguistics (Emeritus)
- Hripsime Haroutunian - NELC
- Faith Hillis - History
- Angelina Ilieva - Slavic Languages \& Literatures
- Norman W. Ingham - Slavic Languages \& Literatures (Emeritus)
- Matthew Jackson - Art History
- Walter E. Kaegi - History
- Hakan Karateke - Near Eastern Languages \& Civilizations
- Kinga Kosmala - Slavic Languages \& Literatures
- James Leitzel - Public Policy Studies
- Sandra Levy - Regenstein Library
- Ofer Malamud - Public Policy Studies
- Stanislav Markus - Political Science
- Boris Maslov - Comparative Literature
- John J. Mearsheimer - Political Science
- Paul Mendes-Flohr - Divinity School
- Jason Merchant - Linguistics
- Martha Merritt - Associate Dean for International Education
- Michael Murrin - Comparative Literature
- William Nickell - Slavic Languages \& Literatures
- Marta Ptaszynska - Music
- Charles Payne - SSA
- John Perry - NELC (Emeritus)
- Nada Petkovic - Slavic Languages \& Literatures
- Valentina Pichugin - Slavic Languages \& Literatures
- Eric Posner - Law
- Eugene Raikhel - Comparative Human Development
- Jan Schwarz - Committee on Jewish Studies
- Michael Sells - Divinity School
- Bozena Shallcross - Slavic Languages \& Literatures
- Holly Shissler - NELC
- Mark Slouka - English
- Edward Snyder - Chicago Booth
- Lina Steiner - Slavic Languages \& Literatures
- Malynne Sternstein - Slavic Languages \& Literatures
- Ronald Suny - History and Political Science (Emeritus)
- Natalia Tamarina - Medicine
- Yuri Tsivian - Slavic Languages \& Literatures
- Robert Ward Vishny - Chicago Booth
- Bernard Wasserstein - History
- Susanne Wengle - Political Science
- Diane P. Wood - Law
- John E. Woods - History
- Tamra Wysocki-Niimi - Linguistics
- Alan Yu - Linguistics
- Tara Zahra - History
- Terese Schwartzman Zimmer - Urban Education Institute
- Marvin Zonis - Chicago Booth (Emeritus)

The Center for East European and Russian/Eurasian Studies (CEERES) is an interdivisional center which promotes the study of, and research about, the countries of Central and Eastern Europe and the former Soviet Union. The University of Chicago has been providing instruction in disciplines of the CEERES region continuously since 1903, when courses in Russian language and area studies were begun. The center now known as CEERES has been in existence since 1965, and it continues to coordinate instruction and facilitate research about Russia/ Eurasia and Eastern/Central Europe, including the Baltic States, Balkans, Caucasus, and Central Asia.

In addition to its robust language offerings, CEERES supports curricula which are particularly strong in Russian/Soviet history; Slavic, Balkan, and Caucasian linguistics; nationalities studies of the former USSR; Slavic literatures (Russian, Polish, Czech, Balkan); Russian and East European cultural anthropology; comparative literature; Russian and East European film and art history; and business administration. CEERES affiliated faculty have expertise also in political science, international relations, economics, sociology, and Central and Eastern European, Byzantine, and Ottoman history. The center does not itself offer a separate master's degree; however, it does administer a joint A.M./M.B.A. degree through the Division of the Social Sciences in conjunction with the Booth School of Business. The faculty members that teach and do research in the CEERES area are supported by one of the best libraries in the country.

CEERES has a mission to disseminate information about and increase knowledge of a vast and diverse region of the world. We have a firm commitment to scholarship within the university community that extends to outreach to the greater Chicago community, the nation, and the world. We fulfill our mission through conferences, workshops, and seminars, including close collaboration with the Council on Advanced Studies workshops; by providing curricular support and administering Foreign Language and Area Studies (FLAS) Fellowships; by organizing teacher training workshops and assisting in developing CEERES-focused curricula for $\mathrm{K}-12$ and community college instruction; and by hosting concerts and cultural programming, including music and dance performances, films, and art exhibits open to the general public. We publicize our activities at our website (ceeres.uchicago.edu), through weekly e-bulletins sent through our listserv, and by
means of our biannual newsletter. A number of our events are also recorded and available as free podcasts at our CEERES Media Archive.

# The Morris Fishbein Center for the History of Science and Medicine 

## Director

- Robert J. Richards

Faculty

- Jean Comaroff, Anthropology
- Arnold Ira Davidson, Philosophy
- Jan Ellen Goldstein, History
- Adrian Johns, History
- Robert J. Richards, History
- Joel M. Snyder, Art History
- Stephen M. Stigler, Statistics
- Russell H. Tuttle, Anthropology
- Alison Winter, History

Emeritus Faculty

- Donald N. Levine, Sociology
- Ian B. Mueller, Philosophy
- George W. Stocking, Jr., Anthropology
- William C. Wimsatt, Philosophy

The Morris Fishbein Center for the History of Science and Medicine was inaugurated at the University of Chicago in 1970. Its mission is to facilitate studies in the history of science and medicine by students, post doctoral scholars, and faculty with interest in this field. It lends particular support to Ph.D. students pursuing the history of science. It maintains close cooperative relations with the Department of History and the Committee on the Conceptual and Historical Studies of Science.
Graduate study in the history of science and medicine can lead to a Ph.D. degree through either the Department of History or the Committee on Conceptual and Historical Studies of Science. An extremely flexible program enables students to draw on a wide range of formal courses and seminars. At the same time it is possible to define programs of individual study that can accommodate the specific needs of persons with quite different backgrounds and interests. Arrangements are normally made with science departments when further technical training or supervision seems advisable. Additional training and supervision are available through the co-operation of historians of science and medicine at other universities throughout the nation.

Programs are designed for those who wish to investigate the sciences and medicine in their religious, philosophical, literary and technological contexts, and to relate them to broad questions of social structure and cultural change. Requirements are listed under the Department of History and the Committee on Conceptual and Historical Studies of Science. Additional information describing the program and the types of financial aid available to students may be obtained on the center's web site: http://fishbein.uchicago.edu/index.html or by writing the Secretary of the Center, 1126 East 59th Street, Chicago, IL 60637.

## COURSES

A listing of courses representative of those offered by members of the center is available at our website: http://fishbein.uchicago.edu/courses.html

## CENTER FOR JEWISH STUDIES

Director

- Joseph Stern, Philosophy

Professors

- Leora Auslander, History
- Philip Bohlman, Music
- Ted Cohen, Philosophy
- Arnold I. Davidson, Philosophy, Divinity, and Comparative Literature
- Michael Fishbane, Divinity
- Cornell Fleischer, Near Eastern Languages and Civilizations
- Michael Geyer, History
- Paul Mendes-Flohr, Divinity
- Françoise Meltzer, Romance Languages and Literatures, Comparative Literature, and Divinity
- David Nirenberg, Social Thought and History
- Martha Nussbaum, Law, Philosophy, and Divinity
- Dennis Pardee, Near Eastern Languages and Civilizations
- Moishe Postone, History
- Shulamit Ran, Music
- Martha Roth, Oriental Institute
- Eric Santner, Germanic Studies
- Bernard Wasserstein, History

Associate Professors

- Orit Bashkin, Near Eastern Languages \& Civilizations
- Hakan Karateke, Near Eastern Languages and Civilizations
- David Levin, Germanic Studies
- Na'ama Rokem, Near Eastern Languages and Civilizations
- David Schloen, Near Eastern Languages and Civilizations
- Bożena Shallcross, Slavic Languages and Literatures
- Jeffrey Stackert, Divinity

Assistant Professors

- Simeon Chavel, Divinity
- Julie Cooper, Political Science
- James Robinson, Divinity
- Anat Schechtman, Philosophy
- E. Glen Weyl, Economics


## Senior Lecturer

- Ariela Finkelstein, Near Eastern Languages \& Civilizations


## Emeritus

- Howard I. Aronson, Slavic Languages \& Literatures
- Menachem Brinker, Near Eastern Languages \& Civilizations
- Joel Kraemer, Divinity
- Jerrold Sadock, Linguistics

Other Members

- Raja Kamal, Harris School of Public Policy Studies
- Judith Nadler, Library

Jewish Studies has been an important field of research at The University of Chicago since the days when its first president, the Biblical scholar William Rainey Harper, oversaw the beginnings of programs in Bible and Ancient Near Eastern Civilizations. In addition to Professor Harper, Rabbi Emil Gustav Hirsch taught Jewish Studies from the very founding of the university. In 1892 he was appointed one of the first four full professors at the fledgling university, occupying a chair in "Rabbinical Literature and Philosophy." He held the chair until his death in 1923. In fact, the University of Chicago was one of the first universities in the world to have a full fledged program in Jewish Studies. A few decades later, these early initiatives received a huge institutional boost with the founding of the Oriental Institute, which remains one of the preeminent centers for the study of ancient Near Eastern language, civilization, and archeology. But the flourishing of Jewish Studies over the years at Chicago has also been sustained by appointments in a wide range of departments: professorships of Jewish Hellenism in Classics, Medieval Jewish Philosophy in Philosophy, Jewish Social and Economic History in History, to name only a few. During the past decade, the University has appointed eminent scholars in the study of Hebrew Bible, Midrash, Jewish Medieval Studies, Hebrew Literature, American Jewish Literature, and German Jewish Culture. Working together, they have created one of the most modern comprehensive, distinguished and interdisciplinary programs in Jewish Studies available at any American university. Students can make full use of the resources in Jewish Studies available through the Divinity School, the Departments of Germanic Studies, History, Linguistics, Philosophy, Music, Near Eastern Languages \& Literature, and the Oriental Institute.

## ACADEMIC OppORTUNITIES

Graduate students in Jewish Studies at the University of Chicago earn their degrees in a department, school, or committee, while supplementing their disciplinary training through participation in the inter-disciplinary activities and scholarship opportunities offered by the Center. Students who wish to pursue
graduate work in an area of Jewish Studies should apply to the appropriate department, school, or committee, and not to the Chicago Center for Jewish Studies. The following departments and schools offer specialized graduate study in the following tracks or programs of Jewish Studies:

## The Divinity School

- Biblical Studies
- Hebrew Bible and the Ancient Near East
- Hebrew Bible and Early Jewish Literature
- Jewish and Christian Bible
- History of Judaism
- Rabbinic literature, Midrash, and mysticism
- Medieval Jewish philosophy, thought, and literature (including Islamic philosophy)
- Modern Jewish thought and intellectual history

For information about the Divinity School please visit http://divinity.uchicago.edu.

## Department of Germanic Studies

- German-Jewish Intellectual History
- Yiddish Language, Literature, and Culture

For information about the Department of Germanic Studies please visit http:// german.uchicago.edu.

## Department of History

- Modern Jewish History

For information about the Department of History please visit http:// history.uchicago.edu.

## Department of Near Eastern Languages and Civilizations (NELC)

- Near Eastern Judaica (including Modern Hebrew Studies and Hebrew Studies)
- Northwest Semitic Philology (including Hebrew, Phoenician-Punic, Ugaritic, Aramaic, and Syriac)
- Ancient Near Eastern History (including the ancient history of Syria-Palestine)
- Near Eastern Art and Archaeology
- Modern Hebrew Language and Literature
- Islamic History and Civilization (including the study of Jews in the Islamic world)
- Islamic Thought (including the interaction between Jewish and Islamic thought)

For more information about NELC please visit http://nelc.uchicago.edu/.
In addition, students and faculty work in specific areas of Jewish Studies in the Departments of Music, Philosophy, Political Science, and Slavic Languages and Literatures.
The Chicago Center for Jewish Studies seeks to provide a common space in which graduate students of all disciplines working in the diverse areas of Jewish Studies can participate in a rich and lively intellectual community. We are now in the course of planning inter-disciplinary graduate courses, lectures and conferences, and graduate workshops and seminars for faculty and students. The faculty of the Center can also guide students to the multiple opportunities for the study of Judaism and Jewish culture available across the university. In addition, the Center awards research and travel grants and dissertation year fellowships to students in any department and school working on topics related to Jewish Studies. Prospective and current students should keep in mind that, given the deeply ingrained interdisciplinary culture of the University of Chicago, their opportunities for study and research can range across the entire faculty in addition to the resources of their home department or unit. Although each program has its own requirements, students typically take courses and seminars in departments other than their own, and dissertation committees often include faculty from multiple departments, thus reflecting the interdisciplinary nature of graduate study at this university.

## Jewish Studies \& Hebrew Bible Workshop

Bringing together faculty and students from across various disciplines, the Jewish Studies and the Hebrew Bible Workshop seeks to provide a forum for vibrant discourse and critical reflection on work and topics that may range across the field of Judaica. From Jewish language, literature, and music to religion and philosophy, this workshop looks to engage students and faculty interested in Jewish studies while stretching them to think beyond the strictures that currently typify their subdisciplines.

## The Graduate Working Group

The goal of the Jewish Studies Working Group is to bring together graduate students across the disciplines with research interests in Jewish Studies. Representing different programs ourselves, we believe that interdisciplinary exchange can only widen our perspective on all questions Jewish.

This workshop gives graduate students an opportunity to receive feedback at any stage of their work in a welcoming environment. The format of our meetings can accommodate anything from presenting conference papers and practicing Q\&A's, to getting feedback on the development of course papers, grant applications, exam lists, dissertation proposals, dissertation chapters, etc.

## Research and Library Resources

The University of Chicago library system serves the research and study interests of faculty and students and houses a bound volume and microfilm collection of more than 5 million volumes; a manuscript and archival collection of over 7 million pieces; serial holdings of some 95,000 titles; and a photographic study collection of visual art of more than 500,000 pieces. The physical facilities of the library system consist of the Joseph Regenstein Graduate Research Library, supporting research activities and graduate programs in the humanities and social sciences; Harper Memorial Library, serving primarily students in the College; and six professional and departmental libraries. Regenstein Library provides the central location for research materials in the humanities, the social sciences, and the ancient and modern languages an array of resources numbering more than 3 million volumes.

Regenstein Library contains the Department of Special Collections, a major repository of archival and rare published materials. Regenstein also houses the Middle East Collection, with rich holdings in Assyriology and Egyptology. Of particular interest to students in Jewish Studies is the unique Ludwig Rosenberger Collection, which contains thousands of items in German Judaica. In addition, the Oriental Institute maintains extensive holdings in ancient Near Eastern and Biblical studies and archaeology.

Library resources are not limited to the University community. The libraries of the cluster of eight theological schools in the University neighborhood enrich the available library facilities by more than 1,000,000 volumes. The libraries of the Art Institute and the Chicago Historical Society also contain extensive resources for historical study. The Newberry Library, located on Chicago s Near North Side, is a world-renowned research collection of some 1,000,000 titles and 5,000,000 manuscripts in the humanities, chiefly in history, literature, music, and philosophy, with special strengths in European, American, and Latin American history and literature.

## STUDENT FUNDING AND Opportunities

## Dissertation Year Fellowship

When funds are available, the Chicago Center for Jewish Studies offers annual Dissertation Year Fellowship(s) for students in all Divisions and Schools at the University of Chicago pursuing projects on any topic relating to Jewish Studies, including (but not restricted to) study of the history, culture, and thought of the Jews, classical and modern Jewish texts, and languages of the Jews (e.g., Biblical through Modern Hebrew, Yiddish).

## Travel and Research Grants

The Chicago Center for Jewish Studies awards grants to students to support their work in any area of Jewish Studies. Eligible expenses include (1) research travel and materials, (2) advanced foreign language study in an accredited program (beyond the level offered at the University), and (3) conference travel and fees. Because funds
are currently limited, priority will be given to proposals in the order listed. Students may combine their awards with funding from other sources.

## TEACHing NOMinATIONS TO THE GRAHAM SCHOOL FOR CONTINUING EDUCATION

The Chicago Center for Jewish Studies at the University of Chicago, in cooperation with the Graham School of General Studies, organizes an annual competition for Jewish Studies courses to be taught at the Graham School (at the Gleacher Center). The Graham School offers an array of open enrollment non-credit courses in the liberal arts for adult students; for examples of current courses, see http:// grahamschool.uchicago.edu/has). The Center for Jewish Studies oversees three such courses on topics in Jewish Studies, to be taught by University of Chicago Ph.D. students, one in each quarter of the academic year.

Each course meets for a total of 20 hours per quarter; usually they are taught over eight weeks, each meeting lasting $21 / 2$ hours. Courses are contingent on minimal enrollment (typically six students). Each student teacher will be assigned a faculty mentor who will work with her on her syllabus and oversee her teaching.

## Annual Student-Organized Academic Conference at the UNIVERSITY OF CHICAGO

The Center for Jewish Studies funds an annual one day graduate studentorganized conference to be held during the academic year. Graduate students submit conference proposals to the Governing Board of the Center. The organizers are responsible for all aspects of the conference from contacting speakers to organizing the conference schedule.

For additional information about the Jewish Studies program, please see http:// lucian.uchicago.edu/blogs/ccjs/.

## CENTER FOR LATIN American Studies

## Director

- Mauricio Tenorio

Faculty

- Michael Albertus - Department of Political Science
- Fernando Alvarez - Department of Economics
- Kelly Austin - Department of Romance Languages and Literatures
- Dain Borges - Department of History
- Claudia Brittenham - Department of Art History
- Chad Broughton - Department of Public Policy Studies (College)
- Melvin Butler - Department of Music
- Raúl Coronado - Department of English
- Shannon Dawdy - Department of Anthropology
- Frederick A. de Armas - Department of Romance Languages \& Literatures
- René de Costa - Department of Romance Languages \& Literatures
- Cécile Fromont - Department of Art History
- Roberto Gonzales - School of Social Service Administration
- Ramón Gutiérrez - Department of History
- Susan R. Gzesh - Department of Human Rights
- James Heckman - Department of Economics
- Thomas Holt - Department of History
- Dwight Hopkins - Divinity School
- Robert L. Kendrick - Department of Music
- Alan Kolata - Department of Anthropology
- Emilio H. Kourí - Department of History
- Benjamin Lessing - Department of Political Science
- Ana Maria Lima - Department of Romance Languages \& Literatures
- Victor Lima - Department of Economics
- Hedibert Lopes - Booth School of Business
- Maria Cecilia Lozada - Department of Romance Languages \& Literatures
- John A. Lucy - Department of Comparative Human Development
- Agnes Lugo Ortiz - Department of Romance Languages \& Literatures
- Alfredo Cesar Melo - Department of Romance Languages \& Literatures
- Alicia Menendez - Harris School of Public Policy
- Salikoko Mufwene - Department of Linguistics
- Stephan Palmié - Department of Anthropology
- Tianna Paschel - Department of Political Science
- Marcos Rangel - Harris School of Public Policy
- Mario Santana - Department of Romance Languages \& Literatures
- Julie Saville - Department of History
- Paul Sereno - Department of Organismal Biology \& Anatomy
- Alberto Simpser - Department of Political Science
- Karl Swinehart - Harper-Schmidt Postdoctoral Fellow
- Robert M. Townsend - Department of Economics
- Michel Rolph Trouillot - Department of Anthropology
- E. Glen Weyl - Department of Economics

Established in 1968, the Center for Latin American Studies (CLAS) fosters intellectual exchange and innovation in the research and teaching of Latin America at the University of Chicago. CLAS coordinates workshops, seminars and conferences; hosts visiting scholars; and provides financial support for preliminary student field research, library acquisitions, and the development of curricular materials in the less commonly taught languages of the region. In consortium with the University of Illinois at Urbana Champaign, the Center for Latin American Studies has been designated a National Resource Center by the United States Department of Education continuously since 1976. This funding provides a wide range of support, including Foreign Language and Area Studies (FLAS) fellowships. A full description of Latin American Studies programming is available at the Center's website, http://clas.uchicago.edu.
The Center sponsors various activities that contribute to the richness of Latin American Studies at the University of Chicago. The Center sponsors major academic conferences every year, bringing scholars from around the world to examine particular issues in Latin American studies. The Latin American Briefing Series brings renowned figures to campus for public lectures on current affairs in Latin America.
The Center for Latin American Studies administers a Master of Arts degree program in Latin American Studies. For details on the Master of Arts in Latin American Studies, please see the entries under either Social Sciences Master of Arts Programs or Humanities Master of Arts Programs.

The Center also administers a Joint A.M./M.B.A. degreeand a dual A.M. in Latin American Studies/A.M. in Public Policy. The Joint A.M./M.B.A. is adrministered through the Division of Social Sciences and the Booth School of Business. Students take an integrated program of fourteen courses in the business school and nine in Latin American studies. Applicants submit a single application to the joint program through the Booth School of Business (the business school accepts applications for autumn quarter only). Business School students may choose to apply to the joint program during their first quarter of residence. The two degrees can be attained in
three years or less, depending on the student's previous training. The dual A.M. in Latin American Studies/A.M. in Public Policy is administered through the Divisions of Social Sciences or Humanities and the Harris School of Public Policy Studies. Students take the one-year A.M. in Latin American Studies, and during the fall quarter apply to matriculate into the Harris School the following academic year. In the second year, students complete a nine-course A.M. in Public Policy, and graduate at the end of two years with a dual A.M. in Latin American Studies and in Public Policy Studies.

## MEDIEVAL STUDIES

## Director

- Christina von Nolcken


## Faculty

- Michael Allen - Classical Languages \& Literatures
- Persis Berlekamp - Art History
- Robert Bird - Department of Slavic Languages and Literatures
- Arnold Ira Davidson - Philosophy
- Daisy Delogu - Romance Languages \& Civilizations
- Fred Donner - Near Eastern Languages \& Civilizations
- Constantin Fasolt - History
- Rachel Fulton - History
- Ryan Giles - Romance Languages \& Civilizations
- Norman Golb - Near Eastern Languages \& Civilizations
- Richard Hellie - History
- Dick Helmholz - Law School
- Walter E. Kaegi - History
- Robert L. Kendrick - Music
- Aden Kumler - Art History
- Franklin Lewis - New Eastern Languages \& Civilizations
- Bruce Lincoln - Divinity School
- Jonathan Lyon - History
- Yitzhak Melamed - Philosophy
- John Mark Miller - English Language \& Literature
- Michael J. Murrin - English Language \& Literature
- David Nirenberg - Social Thought and History
- Lucy Pick - Divinity School
- Tahera Qutbuddin - Near Eastern Languages and Civilizations.
- Anne Walters Robertson - Music
- James Robinson - Divinity School
- Jay Schleusener - English Language \& Literature
- Michael Sells - Divinity School
- Justin Steinberg - Romance Languages \& Civilizations
- Josef J. Stern - Philosophy
- Noel M. Swerdlow - Astronomy \& Astrophysics
- Christina von Nolcken - English Language \& Literature
- Donald S. Whitcomb - Near Eastern Languages \& Civilizations
- John E. Woods - Near Eastern Languages \& Civilizations

The faculty in Medieval Studies advises students in the planning of a medieval specialization in any field. Students take their advanced degrees under the auspices of a department or interdepartmental degree granting committee and must submit their applications to the department or committee in which their primary interests lie.

Courses in medieval studies may be found in the listings of the Departments of Art History, Classical Languages and Literatures, English Language and Literature, History, Music, Near Eastern Languages and Civilizations, New Testament and Early Christian Literature, Romance Languages and Civilizations, Slavic Languages and Literatures, and in the Divinity School.

## CENTER FOR MIDDLE EASTERN STUDIES

## Director

- Fred M. Donner

Deputy Director

- Franklin Lewis

Deputy Director for Academic Programs

- Paul E. Walker

Associate Director

- Thomas E. R. Maguire

Project Assistant

- Traci Lombré

Outreach Coordinator

- Alexander Barna

Near Eastern Languages \& Civilizations

- Osama abu-Eledam
- Helga Anetshofer
- Kagan Arik
- Orit Bashkin
- Menachem Brinker (Emeritus)
- Richard L. Chambers (Emeritus)
- Robert Dankoff (Emeritus)
- Fred M. Donner
- Peter Dorman (Emeritus)
- Muhammad Eissa
- Ahmed El Shamsy
- Ariela Finkelstein
- Cornell Fleischer
- Noha Aboulmagd Forster
- Saeed Ghahremani
- McGuire Gibson
- Norman Golb
- Gene B. Gragg
- Hripsime Haroutunian
- Kay Heikkinen
- Halil Inalcik (Emeritus)
- Janet H. Johnson
- Wadad Afif Kadi (Emerita)
- Hakan Karateke
- Carolyn G. Killean (Emerita)
- Franklin Lewis
- Heshmat Moayyad (Emeritus)
- Farouk Mustafa
- Dennis G. Pardee
- John R. Perry (Emeritus)
- Tahera Qutbuddin
- Na'ama Rokem
- Holly Shissler
- Jaroslav Stetkevych (Emeritus)
- Matthew W. Stolper
- Paul E. Walker
- Donald Whitcomb
- Aslihan K. Yener


## Anthropology

- Kathleen Morrison
- Hussein Agrama

Art History

- Persis Berlekamp

Business

- Marvin Zonis (Emeritus)

Divinity

- Michael Fishbane
- Joel Kraemer (Emeritus)
- Bruce Lincoln
- Paul Mendes-Flohr
- Michael Sells

Geographical Studies

- Marvin W. Mikesell

History

- Ralph A. Austen (Emeritus)
- Walter E. Kaegi
- John E. Woods
- Bernard Wasserstein

Law

- Gidon A.G. Gottlieb (Emeritus)

Linguistics

- Eric P. Hamp (Emeritus)

Music

- Philip Bohlman

Political Science

- Iza Hussin
- John Mearsheimer
- Robert Pape
- Ronald Suny (Emeritus)
- Lisa Wedeen


## Slavic Languages and Literatures

- Victor Friedman

South Asian Languages and Civilizations

- Muzaffar Alam

Since its establishment in 1965, the mandate of the Center for Middle Eastern Studies has been to coordinate, stimulate, and encourage academic, extracurricular, and outreach activities relating to the study of North Africa, Western Asia, Central Asia, and the Islamic World.
In fulfillment of this mission, the Center funds and administers a wide variety of programs and projects. At the undergraduate level, CMES ensures the availability of elementary and intermediate language courses and seeks to enhance their quality. In addition, CMES has taken the lead in helping to develop new non language courses in the College. The Center is a designated National Resource Center funded by the Department of Education; this funding includes Foreign Language and Area Studies (FLAS) fellowships. Graduates of the doctoral programs in Middle Eastern studies at Chicago continue to achieve recognition nationally and to find placement in the finest institutions of higher learning in the United States and abroad. The Center coordinates and sponsors a lecture series, several film series, current events forums and the student organized and administered Middle East History and Theory Workshop and Conference. Finally, the ultimate goal is to produce American experts in and citizens knowledgeable about the Middle East, its languages, and international affairs, as well as to build and maintain a strong research base in these areas.

The Center administers two joint programs through the Division of the Social Sciences, Chicago Booth School of Business, and the Harris School of Public Policy Studies. Students interested in this option should refer to the Social Sciences Announcement for further details.

The Center also administers an interdisciplinary Master of Arts program in Middle Eastern Studies. For information on the M.A. program, please see the entries under either the Social Sciences or the Humanities Master of Arts programs.
Virtually all the disciplines in the humanities and social sciences are represented in Middle East programs of study. Ten languages of the ancient Middle East are taught and 12 of the classical and modern periods. Most of the distinguished faculty hold appointments in one or more departments or schools. The interdisciplinary, comparative, and innovative approaches to knowledge and learning pioneered at Chicago profoundly inform the language and area studies programs at the University. This feature of the curriculum has been significantly strengthened by the creation of the Foreign Language and Area Studies Council under the aegis of the Center for International Studies. Research in all spheres is powerfully supported by one of the finest library collections in North America.

Long a national model, the CMES public education program provides materials and services to educators, schools, community groups and cultural institutions, healthcare providers, businesses, and the media. To achieve this objective of service to the community most efficiently, we seek partnerships with likeminded organizations whose aims are consistent with our own goals of enhancing Americans' understanding of the nation's global connections and its multicultural society through education and training on the Middle East and the Islamic World.


## NORC

NORC is an independent, not for profit research center that has been affiliated with the University for more than fifty years. NORC's international reputation as a technically innovative and high quality survey research organization is based upon an extensive program of research into human behavior and attitudes, including policy studies and evaluations of social experiments. NORC has pioneered methodological investigations which advance the science of survey research. As an active presence in the research and teaching life of the Divisions of the Social Sciences and Biological Sciences, as well as the Pritzker School of Medicine, the Harris Graduate School of Public Policy Studies, and the School of Social Service Administration, NORC houses several research centers in which many of the University's faculty and advanced graduate students engage in empirical research. NORC also conducts nationwide surveys that are used as data resources for social scientists and social policy analysts throughout the world. NORC's Survey Operations Center maintains a national field staff of over 1,000 trained interviewers and conducts more than 30 surveys each year on such topics as the costs and practices of health care, environmental studies, substance abuse, education, labor, family, and the social fabric. NORC conducts the General Social Survey (GSS), which is used in college and university teaching programs across the nation.

The seven academic research centers at NORC provide a collegial, interdisciplinary environment in which University of Chicago faculty can conduct social science research. The Population Research Center, funded by the National Institute of Child Health and Human Development, facilitates interdisciplinary population research by economists, sociologists, and other population sciences from the University. The Committee of Demographic Training of the University of Chicago administers a training program that funds five to seven postdoctoral fellows each year, along with pre-doctoral fellows from various units of the University of Chicago. The Center on Demography and Economics of Aging is funded by the National Institute on Aging. Like the Population Research Center, faculty Research Associates come from across the University community, with members housed in the Division of Social Sciences, the Harris School of Public Policy, the Graduate School of Business and the Pritzker Medical School, as well as other University units. The Ogburn Stouffer Center for the Study of Social Organizations houses and supports social organization research and the sociology of education. Fostering methodological innovation in survey research is the focus of the Center for Excellence in Survey Research. Two other centers are the Political and Social Research Center, which houses NORC's General Social Survey, the trend study that has been tracking Americans attitudes toward important social issues and demographic characteristics for more than thirty years, and the new Joint Education Research Center, which will add collaborative opportunities for scholarship and draw on the increasing body of research in education conducted at the University of Chicago. Another new research center, the Data Research and Development Center, receives funds from the National Science Foundation to bring to scale educational
interventions that have been shown to improve student performance in reading, mathematics and science.

University students participate in NORC's activities in several ways. NORC offers a summer intern program open to graduate and undergraduate students. In addition, some students are hired by faculty members as research assistants; some are provided support through NORC for their own research in the writing of dissertations; many attend conferences and weekly workshops that are sponsored by and held at NORC. NORC employs many University graduates at professional career levels.

# Committee on Southern Asian Studies/South Asia Language \& Area Center 

Chair, Committee on Southern Asian Studies

- William T. S. Mazzarella

Interim Director, South Asia Language and Area Center

- John D. Kelly

Associate Director, South Asia Language and Area Center \& Committee on Southern Asian Studies

- Tarini Bedi

Members: Faculty and Emeritus Faculty

- Muzaffar Alam, South Asian Languages \& Civilizations
- E. Annamalai, South Asian Languages \& Civilizations
- Daniel Arnold, Divinity
- Kali Charan Bahl, South Asian Languages \& Civilizations Emeritus
- Elena Bashir, South Asian Languages \& Civilizations
- Mandira Bhaduri, South Asian Languages \& Civilizations
- Philip V. Bohlman, Music
- Mark Bradley, History
- Yigal Bronner, South Asian Languages \& Civilizations
- Dipesh Chakrabarty, South Asian Languages \& Civilizations
- Steven Collins, South Asian Languages \& Civilizations
- Thibaut d'Hubert, South Asian Languages \& Civilizations
- Wendy Doniger, Divinity
- Sascha Ebeling, South Asian Languages \& Civilizations
- Gayathri Embuldeniya, Comparative Human Development
- Philip Engblom, South Asian Languages \& Civilizations
- Leela Gandhi, English
- Jason Grunebaum, South Asian Languages \& Civilizations
- Isa Hussin, Political Science
- Ronald B. Inden, History Emeritus
- Matthew Kapstein, Divinity
- John D. Kelly, Anthropology
- Alan Kolata, Anthropology
- Nisha Kommattam, South Asian Languages \& Civilizations
- Spencer Leonard, Harper-Schmidt, College
- James Lindholm, South Asian Languages \& Civilizations
- Mark Lycett, Anthropology
- Rochona Majumdar, South Asia Languages \& Civilizations
- McKim Marriott, Anthropology Emeritus
- Colin P. Masica, South Asian Languages \& Civilizations Emeritus
- Kaley Mason, Music
- William Mazzarella, Anthropology
- Kathleen Morrison, Anthropology
- Choudhri M. Naim, South Asian Languages \& Civilizations Emeritus
- Constantine Nakassis, Anthropology
- Karma Ngodup, South Asian Languages \& Civilizations
- Ralph W. Nicholas, Anthropology Emeritus
- Martha Nussbaum, Law
- James H. Nye, Library
- Emily Oster, Booth School
- Poornima Paidipaty, Harper-Schmidt, College
- Vasudha Paramasivan, South Asian Languages \& Civilizations
- Maureen Patterson, Library Emeritus
- C. Ryan Perkins, South Asian Languages \& Civilizations
- Tahera Qutbuddin, Near East Languages \& Civilizations
- Frank E. Reynolds, Divinity Emeritus
- Laura Ring, Library
- Lloyd I. Rudolph, Political Science Emeritus
- Susanne Hoeber Rudolph, Political Science Emerita
- John Schneider, Medicine
- Clinton B. Seely, South Asian Languages \& Civilizations Emeritus
- Richard Shweder, Human Development
- Daniel Slater, Political Science
- Paul Staniland, Political Science
- Ulrike Stark. South Asian Language \& Civilizations
- Kaushik Sundar Rajan, Anthropology
- Richard P. Taub, Comparative Human Development
- Gary Tubb, South Asian Languages \& Civilizations
- Christian Wedemeyer, Divinity
- Norman H. Zide, South Asian Languages \& Civilizations Emeritus

Affiliates: Faculty and Emeritus Faculty

- Paul Friedrich, Anthropology Emeritus
- Heshmat Moayyad, Near Eastern Languages \& Civilizations
- John Perry, Near Eastern Languages \& Civilizations Emeritus
- Robert M. Townsend, Economics
- John E. Woods, History

The University of Chicago is one of the leading centers for the study of Southern Asia. Countries in which we have scholarly expertise include in South Asia, Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka, and Tibet (as an autonomous region); and in Southeast Asia, Burma (Myanmar), Cambodia (Kampuchea), East Timor, Indonesia, Laos, Malaysia, Papua New Guinea, the Philippines, Singapore, Thailand, and Vietnam. Chicago's Southern Asia strength is built around two related bodies: a federally-funded Title VI South Asia Language and Area Center (SALAC), the Committee on Southern Asian Studies (COSAS) made up of faculty across the University who share teaching and research interests in Southern Asia.

The University of Chicago Committee on Southern Asian Studies and the South Asia Language and Area are separate, but closely aligned, organizations promoting the study of South and Southeast Asia at the University of Chicago.

The Committee on Southern Asian Studies is an interdepartmental and interdivisional committee that coordinates research and teaching dealing with the countries of South and Southeast Asia. The committee works cooperatively with the South Asia Language and Area Center, inaugurated in 1959 with grants from the Ford Foundation and the United States Department of Education under the National Defense Education Act, Title VI.

The center (SALAC) and the committee work to enhance opportunities available to scholars both in the United States and in South and Southern Asia and to foster intellectual and scholarly communication and inter-disciplinary collaboration among the students and faculty at the University of Chicago and the wider Chicago and Southern Asian Studies communities.

The committee and the center do not offer degrees, but cooperate with the several departments, committees, and schools within which specialized work on South or Southeast Asia may be combined with a degree program. These include the College; the Departments of Anthropology, Art History, Comparative Human Development, Comparative Literature, Economics, English, History, Linguistics, Music, Political Science, Psychology, Sociology, and South Asian Languages \& Civilizations; the Committees on History of Culture, International Relations, and Social Thought; in the Divinity School, the fields of History of Religions, Church History, Philosophy of Religions; and in the Law School, International and Comparative Legal Studies.

A joint A.M. in Southern Asia Studies/M.B.A. is administered through the Booth School of Business and the Division of the Social Sciences. Advanced degree programs with specialization in Bengali, Hindi, Malayalam, Marathi, Pali, Sanskrit, Tamil, Telugu, Tibetan, and Urdu languages, literatures, and civilizations are
available in the Department of South Asian Languages \& Civilizations. Persian and Arabic are available through the Department of Near Eastern Languages \& Civilizations. A limited number of fellowships, scholarships, and grants in aid are awarded by the committee in support of training or research dealing with South or Southeast Asia. Students in all disciplines interested in training in South Asian languages may also apply for Foreign Language and Area Studies Fellowships under Section 602 of Title VI of the Higher Education Act of 1965 as amended. For further information, please write to the Director of the South Asia Language and Area Center.
The University of Chicago Library has a very strong and well balanced collection of South Asian books, government documents, journals, and maps. It includes extensive holdings in all South Asian languages, as well as publications on the subcontinent from major publishing centers around the world. The library has been a comprehensive participant since 1962 in the Library of Congress Foreign Acquisitions Program for South Asia. The library s membership in the nearby Center for Research Libraries, and in its South Asia Microfilm Project (SAMP), provides ready access to additional valuable research materials. The library's South Asia Collection staff coordinates acquisition and processing, and provides specialized reference service. A smaller collection of Southeast Asian materials is limited to Western language works on the area from Burma to the Philippines.

# The Division of the Humanities 

Dean

- Martha Roth

Associate Dean

- Mario Santana

Dean of Students

- Martina Munsters

Students in the Division of the Humanities investigate the varied achievements of the human mind in language and literature, music, the visual arts, and philosophy. These investigations can range from the methods of the established humanistic disciplines to the newer alliances of humanities and social sciences, from the history of a civilization to the philosophy of science, from the aesthetics of a literary genre to the broader cultural occasions that bring the visual arts into contact with linguistic theory or musicology into contact with anthropology. The division regards a multiplicity of questions and approaches as the hallmark of its intellectual life and encourages its students to share in this diversity.

The academic units of the division guide and support the students' scholarly interests and inquiry and are correspondingly varied. These programs of study are described in detail in this section of the Announcements.

The University is known for its interdisciplinary approach. Students cross disciplines easily by taking courses in different fields as well as through participation in Graduate Workshops, established under the auspices of the Council on Advanced Studies. These interdisciplinary workshops bring together students and faculty in the Divinity School, the Division of the Humanities, and the Division of Social Sciences for ongoing and collaborative exchange of ideas around particular areas of interest. Interdisciplinary work also takes place in many different venues such as the Centers for Area Studies, Interdisciplinary Centers, and Interdisciplinary Programs. The interdisciplinary and area centers are described in another section of these Announcements.

## Admission to the Division

The Division of the Humanities invites applications from students whose breadth of academic experience and fitness for the specific field of study suggest the potential for scholarly achievement. In general, only applicants holding the bachelors degree or equivalent, with excellent academic records, are admitted. Faculty recommendations and the applicant's statement of purpose are carefully weighed. Research papers, publications, and other works may also be considered by the admissions committees during their evaluations. The admissions selection committee for each department reviews all the applications submitted by the December deadline for admission for autumn quarter of the following year. During this selection, all available places and financial aid are allocated for the following
academic year. An offer of admission is made only for the next academic year and cannot be deferred. Most programs, particularly those with intensive language requirements, are designed to start in the autumn quarter. A person holding a Ph.D. or its equivalent, or who has completed most of the work required to earn the Ph.D. elsewhere, may apply to a Ph.D. program in the Division of the Humanities only if it is an unrelated field of study.

# Master of Arts Program in the Humanities 

## Director

- David Wray, Classics, Comparative Literature

The Master of Arts Program in the Humanities (MAPH) is an intensive oneyear interdisciplinary program leading to the A.M. degree. MAPH is designed to address the diverse needs and interests both of intellectual generalists and of specialists who stand to benefit from a year of intensive work in the humanities. Many MAPH students are recent college graduates. Others are professionals at midcareer, freelance writers, or performers. They hold undergraduate degrees from public and private institutions throughout the world, in disciplines ranging from biology to English to marketing. A number come with extensive experience in nonacademic fields, including independent film-making, politics, science, non-profit work, and business.

Approximately half the students in MAPH plan to continue their studies at the doctoral level in preparation for a career in university teaching and research. For these students, MAPH provides an ideal setting for clarifying their academic and professional goals and offers a year of intensive preparation for competitive Ph.D. programs.

MAPH's emphasis on critical writing, analytical thinking, scholarly research, and flexible cultural perspectives has also proved invaluable for those interested in careers in cultural institutions and cultural policy, publishing, journalism, business, politics, secondary school or community college teaching, and the full spectrum of the nonprofit sector.

## DEGREE REQUIREMENTS

Requirements for the A.M. degree include:

- The fall quarter MAPH Core Course, Foundations of Interpretive Theory (known to MAPH students as "Core"). Core begins two weeks before regular University classes and covers seminal works by thinkers such as Freud, Lacan, and Marx. It is taught by the MAPH Director and often includes guest lectures by distinguished faculty members from different disciplines. The course is designed to give MAPH students a shared base for their further study.
- Seven elective courses chosen from the Division of the Humanities, Social Sciences, or the other divisions and professional schools. The choice of these courses is left largely to the student, although a program of study will be designed in consultation with and approved by the student's preceptor and other faculty advisers. Some students concentrate their courses in one field of study; others take a wide-ranging variety of courses in multiple disciplines. Most programs of study fall somewhere in between these two extremes.

MAPH also offers several Program Options, developed in consultation with Humanities Division departments and committees, which provide guidance in selecting electives for interested students. The Options include programs of study designed by Classics, Cinema and Media Studies, the Cultural Policy Center in the Harris School of Public Policy Studies, and the Committee on Creative Writing. The MAPH Creative Writing Option is the University of Chicago's alternative to a traditional MFA.

- A master's thesis of 25 to 35 pages, produced under the supervision of a faculty thesis adviser and a preceptor, and completed toward the end of the spring quarter. In conjunction with thesis preparation, students take a thesis workshop, which involves small group meetings focused on the development of thesis topics and the writing of the thesis. MAPH thesis projects range from traditional research papers to creative works accompanied by a critical assessment.


## PRECEPTORS

Preceptors are advanced graduate students or recent Ph.D.s, each of whom oversees the progress of 10-12 MAPH students. Each student is assigned a preceptor for the academic year. In addition to serving as a general adviser, the preceptor leads small discussion groups in connection with the Core course and leads the winter and spring thesis workshops. Preceptors also offer courses specially designed for MAPH students in the winter and spring quarters.

## ADMISSION

Applicants to MAPH must meet the general divisional requirements for admission and will submit a critical writing sample of no more than 15 pages. Students applying to the MAPH Creative Writing Option must also submit a substantial creative writing sample in their chosen genre (e.g., several poems, a short story, a chapter from a work of longer fiction in progress, a play, or a 10-15 page work of creative nonfiction).

For further information, visit the MAPH website at http://maph.uchicago.edu/ or email ma-humanities@uchicago.edu or phone (773) 834-1201.

To apply, go to https://apply-humanities.uchicago.edu/apply/.

# MASTER OF ARTS IN LATIN AMERICAN STUDIES 

## Director

- Mauricio Tenorio

Associate Director

- Josh Beck

Please see entry for Center for Latin American Studies for the list of the Latin American Studies faculty committee, also available at http://clas.uchicago.edu/.
The Center for Latin American Studies administers a Master of Arts degree program in Latin American Studies. The Master of Arts program is a one year program of graduate studies that provides students with a thorough knowledge of the cultures, history, politics, and languages of the region. Students benefit from various resources that put the University of Chicago at the forefront of research and scholarship on Latin America, including world renowned faculty, top quality library resources, graduate workshops, and field research grant opportunities. Please see the Center for Latin American Studies entry in the Graduate Announcements for full details on Center resources. The Center also administers a Bachelor of Arts (major and minor) in Latin American Studies (for details please see http:// clas.uchicago.edu/programs/).

The master's program attracts students who will benefit from interdisciplinary training in a highly individualized and flexible program. Each student works closely with faculty and the program advisor to design a customized curriculum, define an area of scholarly research, and write a master's paper. Students take advantage of the program's flexibility to advance their academic and/or career objectives before making a major professional or educational commitment. Some students approach a research interest from a multidisciplinary perspective. Others strengthen their training in a single discipline as it relates to Latin American Studies, or explore new fields.

Through the M.A. Proseminar, the required common core of the master's program, students gain a critical understanding of the major theoretical approaches, principal research methods, and current trends in Latin American Studies. During the winter quarter of the Proseminar students develop the proposal for their master's paper. The master's paper is meant to demonstrate the student's ability to apply formal training in Latin American Studies toward a specific and original research problem. Primary Latin Americanist faculty at the University of Chicago serve as guest lecturers in the Proseminar to introduce students to their research.
The master's program provides students with the opportunity to develop and enhance skills and knowledge appropriate for careers related to Latin America or as preparation for further graduate work or professional training. Graduates of the program enter or return to careers for which the master's degree is increasingly an entry-level requirement, including secondary and higher education, government,
business, and various cultural organizations and non-profit agencies. Others enter doctoral and professional degree programs with support and advice from Latin American Studies staff and faculty.

## ADMISSION TO THE MASTER'S PROGRAM

Prospective students to the Master of Arts program in Latin American Studies may apply to the program through the Division of the Social Sciences or through the Division of the Humanities and will receive the degree from the division through which they have been admitted.

## Information on How to Apply

The application process for admission and financial aid for all graduate programs in Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http:// humanities.uchicago.edu/prospective/admissions.html.

Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

Foreign students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Current minimum scores, etc., are provided with the application.

Students who wish to earn a Ph.D. degree should apply to a degree program in one of the graduate departments or committees in the Division of the Humanities or the Division of the Social Sciences. Foreign students should be advised that in the United States completion of a master's degree program is generally not a prerequisite to entering a Ph.D. program.

## Program Requirements

Upon entering the program, students will work under academic direction of the CLAS Associate Director to develop a specific program of study, cultivate their research interests, and identify a faculty advisor for their master's paper. The basic components of the master's program are described below.

## LANGUAGES

A fundamental requirement of the program is proficiency in one of the spoken languages (other than English) of Latin America and the Caribbean. This requirement normally will be met in Spanish or Portuguese. However, substitution of an Amerindian language (such as Aymara, K'iche' Maya, or Yucatec Maya ) or a language spoken in the Caribbean (such as Hatian Creole) is permissible with the approval of the program advisor. Petitions for substitution will be evaluated in light of the student's prior competency and curricular program and the adequacy
of instructional resources in the substitute language. Advanced Proficiency Examinations will be administered to evaluate the entering student's language skills. Students usually meet the language requirement through the Advanced Proficiency Examination in Spanish or Portuguese.

## Course Requirements

The standard course requirement is nine quarter courses, to be met as follows: the M.A. Proseminar in Latin American Studies; five courses in Latin American and Caribbean Studies; and three elective courses. Students are expected to fulfill the language requirement through proficiency examination, and complete the master's program in three quarters of course work. In consultation with the program advisor, the student will select three elective courses suited to individual curricular interests. These courses may be selected from the offerings in the divisions and professional schools of the University. Non degree graduate level courses at the University completed prior to admission to the master's program may be used in fulfillment of elective requirements, upon approval of the program advisor.

Credits towards the Master of Arts in Latin American Studies must be taken at the graduate level (courses designated as 30000 or above). However, certain lower level courses may be accepted, at the discretion of the program advisor. All course requirements can be met in three academic quarters.

## THE MASTER'S PAPER

In addition to the course requirements outlined above, every master's degree candidate is required to submit a master's paper. This paper is meant to demonstrate the student's ability to apply formal training in Latin American and Caribbean studies toward a specific research problem developed over the course of the program. The research and writing of this paper will be conducted under the guidance of a faculty advisor. A student may register for the course LACS 40300 Master's Paper Preparation, which is arranged on an individual basis with the faculty advisor for the project. This course, while optional, may be counted as one of the five required Latin American Studies core courses.

## COURSES

Courses pertinent to the Latin American area are offered through the individual departments and committees of the Divisions of the Social Sciences and the Humanities, and through the University's professional schools. Please refer to the listings in these Announcements and in the quarterly Time Schedules for specific offerings. Additionally, special courses are offered by senior visiting Latin Americanist faculty through the Center's Tinker Visiting Professorship. Each quarter the Center compiles a comprehensive list of Latin American and Caribbean courses to be offered at the University available at http://clas.uchicago.edu/courses.shtml.

For additional information about the Master of Arts in Latin American Studies program, please see http://clas.uchicago.edu/ or call (773) 702-8420

# MASTER OF ARTS IN Middle Eastern Studies 

## Director

- Fred M. Donner

Deputy Director

- Franklin Lewis

Deputy Director for Academic Programs

- Paul E. Walker

Associate Director

- Thomas E. R. Maguire

Project Assistant

- Traci Lombré

Public Education Project Director

- Alexander Barna

Please see entry for Center for Middle Eastern Studies for the list of Middle Eastern Studies faculty, also available at http://cmes.uchicago.edu/.
The Center for Middle Eastern Studies offers an interdisciplinary Master of Arts program designed for students who wish to use their knowledge of the Middle East in careers other than university teaching and research. The program is also suitable for students considering an academic career who have not had the appropriate academic background for direct entrance into a doctoral program. Language and area studies preparation may be supplemented by relevant course work in a professional school or department. Students may be admitted to the Master of Arts program in either the Division of the Social Sciences or the Humanities and will receive the degree from the division through which they have registered. Students with significant previous training in Middle Eastern or Islamic studies who wish to earn a doctoral degree leading to careers in research and college or university teaching should apply for admission directly to one of the graduate doctoral departments or committees of the University.

## ADMISSION

Applicants for the Master of Arts in Middle Eastern Studies are expected to meet the graduate admissions requirements of the University and of the division to which they apply. In addition, applicants to the Middle Eastern Studies program must submit an academic writing sample. Foreign students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Students are encouraged to enter the program in the autumn quarter. Although the program is designed for full time students, applications from those who can attend only on a part time basis will be considered.

The application process for admission and financial aid for all graduate programs in Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http:// humanities.uchicago.edu/prospective/admissions.html.
Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

## PROGRAM REQUIREMENTS

Only courses taken for a quality grade will count toward fulfilling the requirements. No P or R grades will be accepted.
The requirements are satisfactory completion of:

- Six quarters of a Middle Eastern language (through at least two year proficiency)
- One quarter core colloquium, Approaches to the Study of the Middle East
- Three quarters of an approved integrated Middle Eastern survey course
- Seven courses in relevant electives
- One course in thesis preparation, or reading and research
- A master's thesis

The Master of Arts program (including the core methodology course and a three quarter survey course, six quarter language courses and three or four relevant electives) offers a joint degree option with the Harris School of Public Policy Studies or the Chicago Booth School of Business. A student may earn the M.P.P. in Public Policy or the M.B.A. along with the M.A. in Middle Eastern Studies in an integrated joint program that normally requires a total of three years of study.

Those with previous work in Islamic studies will be advised to substitute, where appropriate, more advanced and specialized courses in the field.

## Language Study

Placement examinations will be given so that entering students may register for courses at the appropriate level of instruction. All or part of the language requirement may be met through the placement examination.

Students who elect to study Arabic will concentrate on the modern literary language. Students who elect to study Persian, Turkish, or Hebrew will concentrate on the modern and contemporary idiom.

## ELECTIVES

In consultation with advisers, students select courses providing instruction in skills related to their future careers. These courses may be in research methodology; statistics; cross cultural, demographic, or economic analysis. They may be selected from the offerings of departments in the graduate divisions, such as the Departments of Economics, Statistics, or Sociology; or of the professional schools, such as the Chicago Booth School of Business, the Law School, the Harris School of Public Policy Studies or the School of Social Service Administration.

Students are strongly encouraged to consider participating in the University Writing Program (Little Red Schoolhouse).

## MASTER'S THESIS

Students are required to submit a master's thesis that should deal with a problem relevant to the student's intended career and should give evidence of the specialized disciplinary aspects of his or her training. The student's program adviser and a faculty member with special interest in the subject of the paper will guide the research and writing of the paper and judge whether it exhibits proof of competence in the field.

During the writing of the paper, the student will register for a thesis preparation or reading and research course. The thesis title will be listed on the student's transcript.

## COURSES

Consult in the quarterly Time Schedules the listings of the Departments of Art History, Anthropology, English Language \& Literature, History, Music, Near Eastern Languages \& Civilizations, Political Science, Sociology, South Asian Languages \& Civilizations, and the Committee on Geographical Studies.

## Department of Art History

## Chair

- Joel M. Snyder


## Professors

- Charles Cohen, Department of Visual Arts
- Jas' Elsner, Visiting Professor of Art History
- Tom Gunning, Cinema and Media Studies
- Elizabeth Helsinger, English Language \& Literature
- William J. T. Mitchell, English Language \& Literature
- Richard Neer
- Joel M. Snyder
- Yuri Tsivian, Cinema and Media Studies
- Wu Hung, East Asian Languages \& Civilizations

Associate Professors

- Darby English
- Matthew Jesse Jackson, Department of Visual Arts
- Christine Mehring
- Katherine Taylor
- Martha Ward
- Rebecca Zorach

Assistant Professors

- Persis Berlekamp
- Ping Foong
- Chelsea Foxwell
- Cécile Fromont
- Aden Kumler

Harper Schmidt Collegiate Assistant Professor

- Heather Badamo

Terra Foundation Postdoctoral Scholar in American Art

- Sarah Miller

American Council of Learned Societies--Andrew W. Mellon New Faculty Fellow

- Molly Warnock

Director of Visual Resources

- Megan Macken


## Emeritus Faculty

## - Neil Harris

- Reinhold Heller
- Robert S. Nelson
- Linda Seidel
- Barbara Stafford

The Department of Art History provides a program for the study of the history and theory of art, leading to the degree of Doctor of Philosophy. The program seeks to create a forum for the exploration of the visual arts as manifested in major epochs of European, Near Eastern, Asian and American civilizations. This is accomplished by encouraging the exploration of diverse approaches and the examination of varied materials. The department seeks to cultivate knowledge of salient works of art, of the structures within which they are produced and utilized, and of the ways in which the visual environment in the broadest sense generates, acquires, and transmits meaning. Ways of addressing and analyzing the range of materials that constitute visual culture are emphasized in lectures, seminars, and workshops through the oral and written presentation of research and inquiry into specific objects, periods, and issues.

## ADMISSION

A student wishing to enter the graduate program should have a sound undergraduate education in the humanities and liberal arts, preferably but not necessarily with a major in the history of art. It is highly recommended that students have usable skills in French, German, or Italian. To apply to the program, students are normally required to submit Graduate Record Examination aptitude scores. Both applicants with a B.A. and applicants who bring an M.A. in Art History from another institution are welcome to apply for admission to the Ph.D. program. The department grants M.A. degrees but does not have an independent M.A. program.
The application process for admission and financial aid for all graduate programs in the Division of the Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http://humanities.uchicago.edu/prospective/\#admissions | the-application

Questions about admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

## The Degree of Doctor of Philosophy

The department sets specific requirements in areas of language, course distribution, and procedures leading to the completion of a dissertation. These are worked out individually, in accordance with a student's interests, in consultation with the major advisor and the director of graduate studies. Ordinarily they include proficiency in two foreign languages and eighteen courses, at least twelve
of which are in art history, distributed between major and minor fields. These courses are taken during a two year period and center on seminars, including one in methodology and one in historiography. Independent research work in the student's area of interest completes the program and provides the opportunity for the development of a dissertation proposal.

After completing course work and a qualifying paper, the student prepares for a written examination testing knowledge in his or her major field of study and probable area of dissertation research. Successful completion of these preliminary examinations and departmental approval of the dissertation proposal qualifies the student for admission to candidacy. This identifies the final, most challenging and gratifying stage of doctoral study, the research and writing of the dissertation, an original contribution of scholarly or critical significance. Because the requirements for the programs in art history are regularly reviewed and revised, applicants should consult the department for up-to-date statements.

## The Degree of Master of Arts

The objective of the program is the Ph.D. degree. However, students may apply for the M.A. degree along the way to achieving the Ph.D., or if they choose or are advised to leave the Ph.D. program after the second-year review. Any student is eligible for the M.A. degree after completing the following requirements: one foreign language required for the student's field; fifteen one-quarter courses, which include Methodology and meet the first-year distribution requirements; and approval of the qualifying paper from both readers. Students normally complete their 15 courses before applying for the M.A. degree. If instead they wish to obtain the degree in the quarter during which they complete the required courses, they must make arrangements to obtain course grades from their instructors by Friday of 10th week. For more specific information, inquire at the department or see the departmental website at: http://arthistory.uchicago.edu/.

## COURSES

The following is a sampling of graduate courses offered by the Department of Art History.

## Art History Lecture Courses

| ARTH 30100 | The Art Of Ancestral Worship | 100 |
| :--- | :--- | :---: |
| ARTH 30605 | Course ARTH 30605 Not Found |  |
| ARTH 31410 | Advanced Theories of Sex/Gender | 100 |
| ARTH 30509 | Course ARTH 30509 Not Found |  |
| ARTH 33400 | Art, Architecture, and Identity in the Ottoman Empire | 100 |
| ARTH 34110 | Course ARTH 34110 Not Found |  |
| ARTH 34710 | Japan and the World in 19th Century Art | 100 |
| ARTH 35900 | Theories of Media | 100 |


| ARTH 36400 | The History of Photography in America | 100 |
| :---: | :---: | :---: |
| ARTH 36609 | Abstraction | 100 |
| ARTH 35806 | Course ARTH 35806 Not Found |  |
| ARTH 36810 | Course ARTH 36810 Not Found |  |
| ARTH 37400 | Feminism \& The Visual Arts | 100 |
| ARTH 37503 | Modern/Postmodern | 100 |
| ARTH 37610 | Drawing After 1953 | 100 |
|  | SEMINARS |  |
| ARTH 10100 | Introduction to Art ${ }^{100}$ | 100 |
| ARTH 40610 | Democratic Athens | 100 |
| ARTH 42010 | Art and Neoplatonism, East and West | 100 |
| ARTH 42610 | Imperial Collections of Chinese Painting \& Calligraphy | 100 |
| ARTH 43410 | Course ARTH 43410 Not Found |  |
| ARTH 43500 | Italian Ren Drawing | 100 |
| ARTH 44909 | Seminar: Japanese Handscroll Paintings | 100 |
| ARTH 45010 | Course ARTH 45010 Not Found |  |
| ARTH 46210 | Arabesque Narrative: A Hybrid Form of the Imaginary | 100 |
| ARTH 46309 | Secularization \& Resacralization of the Work of Art | 100 |
| ARTH 48910 | European Art in the Reconstruction Era | 100 |
| ARTH 49309 | Race, Media and Visual Culture | 100 |
| ARTH 49910 | Writing Art History: From Antiquity to Modernity | 100 |

# Department of Cinema and Media Studies 

## Chair

- James Chandler, Barbara E. and Richard J. Franke Distinguished Service Professor, Department of English, Department of Cinema and Media Studies, Committee on the History of Culture, and the College


## Professors

- James Chandler, Barbara E. and Richard J. Franke Distinguished Service Professor, Department of English, Department of Cinema and Media Studies, Committee on the History of Culture, and the College
- Tom Gunning, Edwin A. and Betty L. Bergman Distinguished Service Professor, Department of Art History, Department of Cinema and Media Studies, and the College
- David Levin, Professor, Department of Germanic Studies, Department of Cinema and Media Studies, the Committee on Theater and Performance Studies, and the College
- Yuri Tsivian, William Colvin Professor, Department of Art History, Department of Slavic Languages and Literatures, Department of Comparative Literature, Department of Cinema and Media Studies, and the College
- Rebecca West, William R. Kenan, Jr. Distinguished Service Professor, Department of Romance Languages and Literatures, Department of Cinema and Media Studies, and the College


## Associate Professors

- Robert Bird, Department of Slavic Languages and Literatures, Department of Cinema and Media Studies, and the College
- James Lastra, Department of Cinema and Media Studies, Department of English Language and Literature, and the College
- Noa Steimatsky, Department of Cinema and Media Studies and the College


## Assistant Professor

- Xinyu Dong, Department of Cinema and Media Studies and the College; affiliated faculty at the Center for East Asian Studies
- Rochona Majumdar, Department of Cinema and Media Studies, Department of South Asian Languages and Civilizations, and the College
- Jennifer Wild, Department of Cinema and Media Studies, Department of South Asian Languages and Civilizations, and the College

Senior Lecturer

- Judy Hoffman

Lecturer

- Phil Kaffen


## AFFILIATED FACULTY

- Patrick Jagoda, Assistant Professor, Department of English Language and Literature and the College
- Loren Kruger, Professor, Department of English Language and Literature and the College
- Laura Letinsky, Professor, Department of Visual Arts and the College
- Joel Snyder, Professor, Department of Art History and the College
- Catherine Sullivan, Assistant Professor, Department of Visual Arts and the College

The Department of Cinema and Media Studies offers a Ph.D. program that focuses on the history, theory, and criticism of film and related media. Faculty are drawn from a wide range of departments and disciplines, primarily in the humanities. In addition to offering its own doctoral degree, the committee offers courses and guidance to students who specialize in film and related media within departmental graduate programs or might be pursuing a joint degree.

Centering on the cinema, the graduate program provides students with the critical skills, research methods, and an understanding of the debates that have developed within cinema studies as a discrete discipline. At the same time, the study of cinema and related media mandates an interdisciplinary approach in a number of respects. The aesthetics of film is inextricably linked to the cultural, social, political, and economic configurations within which the cinema emerged and which it in turn has shaped. Likewise, the history of the cinema cannot be separated from its interaction with other media. Just as it is part of a wholly new culture of moving images and sounds that includes television, video, and digital technologies, the cinema draws on earlier practices of instantaneous photography and sound recording and, in a wider sense, those media that are more often described as the fine arts (painting, sculpture, architecture, literature, theater, and music). Finally, the interdisciplinary orientation of the program entails an emphasis on the diversity of film and media practices in different national and transnational contexts and periods and thus an understanding of the cinema as a historically variable and rich cultural form.
The Film Studies Center, located on the third floor of Cobb Hall, serves as a resource for course related and individual research and as a forum for cinema and media related activities.

## The Degree of Doctor of Philosophy

Students are expected to complete sixteen courses during their course of study, of which a minimum of eleven have to be listed among the offerings of the Department of Cinema and Media Studies. These Cinema and Media Studies courses will include:

1. Three required courses originating in the department:
A. CMST 40000 Methods and Issues in Cinema and Media Studies: an introduction to research methods, key concepts, and theoretical approaches, using case studies to introduce students to debates and issues in the field.
B. CMST 48500/48600 History of International Cinema: a two quarter survey course that is designed as both a beginning level graduate and an upper level undergraduate course.
2. Eight elective courses in the Department of Cinema and Media Studies.
3. A sample program for students entering the department without previous graduate study in cinema and media studies would consist in the following:
A. First year: A total of seven courses; the three required courses, a minimum of two elective courses in the Department of Cinema \& Media Studies, and two further elective courses.
B. Second year: A total of six courses; a minimum of four elective courses in the Department of Cinema and Media Studies, and two further elective courses. Of these six courses, three must be designated as advanced courses.
C. Third year: A total of three courses; at least one Ph.D. research seminar in the Department of Cinema and Media Studies, and two elective courses.

Students entering the committee with an M.A. from another institution or another program may ask to be exempt from some of these requirements. Such requests will be handled on an individual basis. Students wishing to waive requirements must get the approval of their adviser and the Director of Graduate Studies.

## FIELDS EXAMINATION

Students entering the committee without previous graduate study in Cinema and Media Studies are expected to take their fields examination by the end of the third year; students entering with an M.A. may be encouraged to take the examination earlier. All candidates for the Ph.D. in Cinema and Media Studies must complete comprehensive examinations after completing the required course work.

1. The exam will be comprised of two parts: a written exam, and an oral defense. The student will select the exam committee in consultation with the graduate adviser.
2. The written exam will be comprised of three (3) equally weighted areas defined by three "lists" covering three areas of study.
A. These areas will be defined by generally canonical criteria: genre, period, nationality, movements, etc., but are not prescribed by the department.
B. Alternately, one area may be defined by the student as a way of tailoring a list to a special research interest.
C. CMS faculty will supervise the development of the lists to ensure that central texts are not omitted, that the lists cover an appropriate range of materials, including films, and that a balance of issues, periods, debates, etc. are engaged by the student. At least two members of the exam committee must be department members.
D. Each list will include approximately 30 "items." An item is a flexible unit that may be a book, a group of articles, a group of films, or, at times, a single [substantial] work - the number and nature of an "item" will be negotiated between faculty member and student.
E. To ensure consistency, all lists will be approved by the chair or designated faculty delegate. At least four weeks prior to the scheduled exam, the student should return a completed approval form and a copy of the approved lists to the Cinema and Media Studies office, Gates-Blake 405. Approval forms are available from the CMS office.\# Essay questions will be prepared by the faculty in advance of the written exam date.
3. The student will determine the sequence in which the written exam will be administered, specifying which list will comprise the first portion of the exam, which the second, and which the third. At 9:00 a.m. on a mutually selected date the student will pick up the first question or questions of the written exam. The student will return the completed essay by 5:00 p.m. the next day. The student may pick up the remaining two portions of the exam at 9:00 a.m. on subsequent days, at his or her own pace, returning the exams the next day, by 5:00 p.m. The student will finish the written exam no later than two weeks after the starting date.
4. At the time of the written exam, the student will turn in a sample syllabus for a course based upon one or more of the lists. The syllabus will be discussed as part of the oral defense.
5. The faculty committee and the student will meet for an oral defense shortly after the written exam has been completed. Faculty will have evaluated the written portion, and will come with questions that respond to the written work. However, other aspects of the list will be considered fair game. The oral exam will last approximately 1.5 hours.

## Foreign Language Requirement

Given the highly international nature of the field of cinema and media studies, proficiency in two modern foreign languages has to be demonstrated by earning High Passes on the University's Foreign Language Reading Examinations. The first of these two languages must be either French or German, and proficiency should be demonstrated by the beginning of the Autumn quarter of the student's second year. The second language will be chosen in consultation with the graduate advisor, and proficiency must be demonstrated before the student will be permitted to take the Fields Examination.

## TEACHING

We will make every effort to assure that all students who apply for a course assistantship have at least one quarter of supervised teaching during their years in the program, and more if specified by the terms of their award package. Further information on teaching in CMS and other opportunities to teach at the University of Chicago can be found in the CMS Graduate Student Handbook and from the Office of the Dean of Students.

## DISSERTATION PROPOSAL

Before being admitted to candidacy, students must write a dissertation proposal under the supervision of the dissertation committee.

## DISSERTATION

Upon completion of the dissertation, the student will defend it orally before the members of the dissertation committee.

For further information concerning Cinema and Media Studies, please see http:// cms.uchicago.edu or contact the Department Coordinator at (773) 834-1077 or via email at cine-media@uchicago.edu.

## Application and Financial Aid

The application process for admission and financial aid for all graduate programs in the Division of the Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http://humanities.uchicago.edu/prospective/admissions.html.

Questions about admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

## COURSES

The following list represents the range and variety of graduate courses taught in the past, including those taught by visiting faculty. For current course offerings and detailed descriptions of the courses below, see the department's website at http:// humanities.uchicago.edu/cmtes/cms/academics/gradcourses.html.

## Cinema and media Studies Courses

CMST 30101. Women Mystery Writers: From Page to Screen. 100 Units. Edit
Course Data - default
Many distinguished filmmakers have found inspiration in mystery novels written by women. This course is a reading of novels by Patricia Highsmith (Strangers on a Train, The Talented Mr. Ripley, Ripley's Game) and Ruth Rendell (Tree of Hands, The Bridesmaid, Live Flesh). Time permitting, we also read Laura by Vera Caspary, Bunny Lake Is Missing by Evelyn Piper, and Mischief by Charlotte Armstrong. We also analyze the films based on these novels, directed by such luminaries as Hitchcock, Chabrol, Caviani, Clément, Wenders, Almodóvar, and Preminger. Topics include techniques of film adaptation; transnational dislocations from page to screen; the problematics of gender; and the transformations of "voice," understood both literally and mediatically.
Instructor(s): R. West
CMST 31801. Chicago Film History. 100 Units. Edit Course Data - default Students in this course screen and discuss films to consider whether there is a Chicago style of filmmaking. We trace how the city informs documentary, educational, industrial, narrative feature, and avant-garde films. If there is a Chicago style of filmmaking, one must look at the landscape of the city; and the design, politics, cultures, and labor of its people, as well as how they live their lives. The protagonists and villains in these films are the politicians and community organizers, our locations are the neighborhoods, and the set designers are Mies van der Rohe and the Chicago Housing Authority.
Instructor(s): J. Hoffman
Equivalent Course(s): CMST 21801,ARTV 26750,ARTV 36750,HMRT 25104,HMRT 35104

CMST 32302. Rome in Film and Literature. 100 Units. Edit Course Data - default We shall analyze films and fictional works that reflect both realities and myths about the "Eternal City," Rome. Classical Rome will not be studied; instead the focus will be on a trajectory of works, both written and cinematic, that are set in and explore late nineteenth to late twentieth-century Rome. The goal is to analyze some of the numerous diverse representations of modern Rome that portray historical, political, subjective, and/or fantastical/mythopoetic elements that have interacted over time to produce the palimpsest that is the city of Rome. Books by D'Annunzio, Moravia, Pasolini and Malerba; films by Fellini, Visconti, Rossellini, Bertolucci, Pasolini, and Moretti.
Instructor(s): R. West Terms Offered: Winter
Note(s): Taught in English; Italian majors will read the texts in the original Italian.
Equivalent Course(s): ITAL 23203,CMST 23202,ITAL 33203

CMST 33930. Documentary Production I. 100 Units. Edit Course Data - default This class is intended to develop skills in documentary production so that students may apply for Documentary Production II. Documentary Production I focuses on the making of independent documentary video. Examples of various styles of documentary will be screened and discussed. Issues embedded in the documentary genre, such as the ethics and politics of representation and the shifting lines between fact and fiction will be explored. Pre-production methodologies, production, and post-production techniques will be taught. Students will be expected to develop an idea for a documentary video, crews will be formed, and each crew will produce a five-minute documentary. Students will also be expected to purchase an external hard drive.
Instructor(s): J. Hoffman Terms Offered: Autumn
Note(s): Prior or concurrent enrollment in CMST 10100 recommended
Equivalent Course(s): ARTV 23930,ARTV 33930,CMST 23930,HMRT 25106,HMRT 35106

CMST 33931. Documentary Production II. 100 Units. Edit Course Data - default This course focuses on the shaping and crafting of a nonfiction video. Students are expected to write a treatment detailing their project. Production techniques focus on the handheld camera versus tripod, interviewing and microphone placement, and lighting for the interview. Postproduction covers editing techniques and distribution strategies. Students then screen final projects in a public space.
Instructor(s): J. Hoffman
Prerequisite(s): CMST 23930/ARTV 23930
Equivalent Course(s): CMST 23931,ARTV 23931,ARTV 33931
CMST 34607. China's New Documentary Cinema. 100 Units. Edit Course Data default
Since the early 1990s, the "new documentary" has emerged as one of the most prominent phenomena in Chinese film and video, widely circulating at international film festivals and eliciting considerable critical debate. This course examines the styles and functions of China's "new documentary" over the last fifteen years, paying particular attention to the institutional, cultural, economic, and political conditions that underpin its flourishing. This overview will lead us to consider questions that concern the recent explosion of the documentary form worldwide, and to explore the tensions and imbalances that characterize the global circulation of the genre. We will address such issues as: what is "new" about China's recent documentary cinema; the "national" and "transnational" dimensions of documentary filmmaking, and the ways in which these dimensions intersect in its production and circulation; the extent to which the international demand for "unofficial" images from China has contributed to its growth; the politics involved in documentary filmmaking, and the forms and meanings of "independent" cinema in the wake of intensified globalization; the links between Chinese documentary and the global rise of documentary filmmaking, and the ways in which they challenge extant concepts and theorizations of the genre.
Instructor(s): P. Iovene
Equivalent Course(s): CMST 24606

CMST 35501. Poetic Cinema. 100 Units. Edit Course Data - default
Films are frequently denoted as "poetic" or "lyrical" in a vague sort of way. It has been applied equally to religious cinema and to the experimental avant-garde. Our task will be to interrogate this concept and to try to define what it actually is denoting. Films and critical texts will mainly be drawn from Soviet and French cinema of the 1920s-1930s and 1960s-1990s. Directors include Dovzhenko, Renoir, Cocteau, Resnais, Maya Deren, Tarkovsky, Pasolini, Jarman, and Sokurov. In addition to sampling these directors' own writings, we shall examine theories of poetic cinema by major critics from the Russian formalists to Andre Bazin beyond. Instructor(s): R. Bird
Equivalent Course(s): CMST 25501,SLAV 29001,SLAV 39001
CMST 37600. Introduction to Black and White Film Photography. 100 Units. Edit Course Data - default
Photography is a familiar medium due to its ubiquitous presence in our visual world, including popular culture and personal usage. In this class, students learn technical procedures and basic skills related to the 35 mm camera, black and white film, and print development. They also begin to establish criteria for artistic expression. We investigate photography in relation to its historical and social context in order to more consciously engage the photograph's communicative and expressive possibilities. Course work culminates in a portfolio of works exemplary of the student's understanding of the medium. Field trips required.
Terms Offered: Autumn, Winter
Prerequisite(s): ARTV 10100, 10200, or 10300
Note(s): Camera and light meter required.
Equivalent Course(s): ARTV 24000,ARTV 34000,CMST 27600
CMST 37602-37702. Photography I-II. Edit Course Data - default
The goal of this course is to develop students' investigations and explorations in photography, building on beginning level experience and basic facility with this medium. Students pursue a line of artistic inquiry by participating in a process that involves experimentation, reading, gallery visits, critiques, and discussions, but mostly by producing images. Primary emphasis is placed upon the visual articulation of the ideas of students through their work, as well as the verbal expression of their ideas in class discussions, critiques, and artist's statements. As a vital component of articulating ideas and inquiry, students will refine their skills, e.g., black and white or color printing, medium or large format camera usage, or experimenting with light-sensitive materials. Courses taught concurrently and can be repeated as part of an ongoing, developing photographic project.

CMST 37602. Photography I. 100 Units. Edit Course Data - default
Instructor(s): S. Huffman Terms Offered: Spring
Prerequisite(s): ARTV 10100, 10200, or 10300; and 24000.
Note(s): Camera and light meter required. Courses taught concurrently and can be repeated as part of an ongoing, developing photographic project.
Equivalent Course(s): ARTV 24401,ARTV 34401,CMST 27602

> CMST 37702. Photography II. 100 Units. Edit Course Data - default Instructor(s): S. Huffman Terms Offered: Spring Prerequisite(s): ARTV 10100, 10200, or 10300; and 24000.
> Note(s): Camera and light meter required. Courses taught concurrently and can be repeated as part of an ongoing, developing photographic project. Equivalent Course(s): ARTV 24402,ARTV 34402,CMST 27702

CMST 38200. Nonfiction Film: Representations and Performance. 100 Units. Edit Course Data - default
This course attempts to define nonfiction cinema by looking at the history of its major modes (e.g., documentary, essay, ethnographic, agitprop film), as well as personal/autobiographical and experimental works that are less easily classifiable. We explore some of the theoretical discourses that surround this most philosophical of film genres (e.g., ethics and politics of representation; shifting lines between fact and fiction, truth and reality). The relationship between the documentary and the state is examined in light of the genre's tendency to inform and instruct. We consider the tensions of filmmaking and the performative aspects in front of the lens, as well as the performance of the camera itself. Finally, we look at the ways in which distribution and television effect the production and content of nonfiction film. Instructor(s): J. Hoffman
Equivalent Course(s): CMST 28200,ARTV 25100,ARTV 35100,HMRT 25101,HMRT 35101

CMST 38900. Introduction to Video. 100 Units. Edit Course Data - default This course is an introduction to video making with digital cameras and nonlinear (digital) editing. Students produce a group of short works, which is contextualized by viewing and discussion of historical and contemporary video works. Video versus film, editing strategies, and appropriation are some of the subjects that are part of an ongoing conversation.
Instructor(s): S. Wolniak Terms Offered: Spring
Prerequisite(s): ARTV 10100, 10200, or 10300
Equivalent Course(s): ARTV 23800,ARTV 33800,CMST 28900,TAPS 28427

CMST 44508. Decolonizing Drama and Performance in Africa. 100 Units. Edit Course Data - default
This course examines the connections among dramatic writing, theatrical practice, and theoretical reflection on decolonization primarily in Africa and the Caribbean in the twentieth century. Authors (many of whom write theory and theater) may include Aima Aidoo, Fatima Dike, Aime Cesaire, Franz Fanon, Fernandez Retamar, Athol Fugard, Biodun Jeyifo, Were Liking, Mustafa Matura, Jose Marti, Ngugi wa Thiong'o, Kwame Nkrumah, Wole Soyinka, and Derek Walcott. Texts in English, French, and/or Spanish.
Instructor(s): L. Kruger
Prerequisite(s): Third- or fourth-year standing and prior course in either theater or African studies. Working knowledge of French and/or Spanish is required for Comparative Literature status and recommended, but not required, for other students.
Equivalent Course(s): CMST 24508
CMST 45201. Cinema and the First Avant-Garde, 1890-1933. 100 Units. Edit Course Data - default
Equivalent Course(s): CMST 25201,ARTH 25205,ARTV 25201
CMST 48500-48600. History of International Cinema I-II. Edit Course Data default
This sequence is required of students majoring in Cinema and Media Studies. Taking these courses in sequence is strongly recommended but not required.

[^0]CMST 48600. History of International Cinema II: Sound Era to 1960.100
Units. Edit Course Data - default
The center of this course is film style, from the classical scene breakdown to the introduction of deep focus, stylistic experimentation, and technical innovation (sound, wide screen, location shooting). The development of a film culture is also discussed. Texts include Thompson and Bordwell's Film History: An Introduction; and works by Bazin, Belton, Sitney, and Godard. Screenings include films by Hitchcock, Welles, Rossellini, Bresson, Ozu, Antonioni, and Renoir.
Instructor(s): Y. Tsivian Terms Offered: Winter
Prerequisite(s): Prior or concurrent registration in CMST 10100 required.
Required of students majoring in Cinema and Media Studies.
Note(s): CMST 28500/48500 strongly recommended
Equivalent Course(s): ARTH 28600,ARTH 38600,ARTV 26600,CMLT
22500,CMLT 32500,CMST 28600,ENGL 29600,ENGL 48900,MAPH 33700

## Department of Classics

## Chair

- Alain Bresson


## Professors

- Clifford Ando
- Elizabeth Asmis
- Shadi Bartsch
- Alain Bresson
- Christopher A. Faraone
- Jonathan M. Hall
- Michèle Lowrie
- James M. Redfield
- Peter White

Associate Professors

- Michael I. Allen
- Helma J. Dik
- David G. Martinez
- Mark Payne
- David L. Wray

Assistant Professors

- Emanuel Mayer
- Sarah Nooter
- Emeritus Faculty
- Walter R. Johnson
- D. Nicholas Rudall

Affiliated Faculty

- Tamara Chin, Comparative Literature
- Michael Dietler, Anthropology
- Jas' Elsner, Art History
- Elizabeth Gebhard, Director of Excavations, Isthmia
- Janet Johnson, Near Eastern Languages and Civilizations
- Walter Kaegi, History
- Gabriel Richardson Lear, Philosophy
- Bruce Lincoln, Divinity School
- Glenn Most, Committee on Social Thought
- Richard Neer, Art History
- Martha Nussbaum, Philosophy and Law
- Wendy Olmsted, Humanities
- Dennis Pardee, Near Eastern Languages and Civilizations
- Kent Rigsby, Emeritus, Duke University
- Robert Ritner, Near Eastern Languages and Civilization
- Martha Roth, Near Eastern Languages and Civilizations
- David Schloen, Near Eastern Languages and Civilizations
- Laura Slatkin, Committee on Social Thought
- Matthew Stolper, Near Eastern Languages and Civilizations
- Theo van den Hout, Near Eastern Languages and Civilizations

The Department of Classics offers advanced study in the civilizations of the ancient Mediterranean, including literature and literary theory, history, philosophy, science, art, and archaeology. The programs of the department lead to A.M. and Ph.D. degrees and seek to prepare students for careers in teaching and research. They allow students to explore areas with which they are unfamiliar, as well as to strengthen their knowledge in those in which they have already developed a special interest.

The classics faculty consists of active scholars, expert in one or more areas of classical studies. Apart from their influence through books and articles, the faculty has long been identified with the publication of Classical Philology, one of the leading journals devoted to classical antiquity. The diverse graduate students at the University include a number in programs outside the Department of Classics also engaged in the study of the ancient world. The Oriental Institute, the Divinity School, the Committee on Social Thought, and the Departments of History, Linguistics, \& Near Eastern Languages \& Civilizations all have programs that focus on different aspects of the classical period. Graduate student faculty workshops, where graduate students, faculty, and visiting scholars present work in progress, are a further means of scholarly collaboration and training. The department currently sponsors workshops entitled Ancient Societies, Rhetoric and Poetics, and Ancient Philosophy, which involve participants from other areas as well.

## Research and Library Resources

The library system of the University contains over six million volumes. Classics has been one of the strongest parts of this collection since its first formation in 1891, when the University purchased the entire stock of an antiquarian bookstore in Berlin which specialized in classical philology, archaeology, and science. Apart from current monographs, the library receives more than seven hundred serials devoted to ancient Greece and Rome. Major editions of classical texts printed from the Renaissance through the eighteenth century are available in the Department of Special Collections, which also houses collections of Greek and Latin manuscripts
and a large reference library devoted to paleography, manuscript catalogues, and facsimiles.

The database of the Thesaurus Linguae Graecae and the software needed to use it are accessible over the campus network; the Latin texts prepared by the Packard Humanities Institute, the CETE DOC database of ancient and medieval Christian Latin texts, and several other electronic databases useful to the study of the classics are mounted on workstations in the Regenstein Library; and additional computing resources are available in the departmental computer cluster in the Classics Building.

## FELLOWSHIPS

All fellowships cover tuition and health insurance and include a generous stipend for living expenses. Aid is awarded primarily on the basis of merit, and students entering with aid have the assurance that it will be renewed without competition if they make satisfactory progress in the program. All fellowships are for five years, including those for students who enter with an A.M. Graduate students in classics may also apply for fellowships which aid students during the writing of Ph.D. dissertations and for travel fellowships that support visits to libraries, collections, and archaeological research sites in Europe and the Near East.

## TEACHING Opportunities

At the University of Chicago, undergraduate classes are small, the situations in which graduate students take an instructional role are varied, and teaching need not be a constant sideline to the detriment of their own studies. Moreover, the department and the University have invested considerable effort in training graduate students to teach effectively. The Center for Teaching and Learning conducts a series of workshops and forums designed to build skills in lecturing, leading discussions, and focusing writing assignments.

Teaching opportunities lie in four areas. The first is in classics, where students who have completed the first two years of coursework may apply to serve as course assistants alongside regular faculty in the beginning Greek and Latin and ancient civilization sequences. Experienced course assistants may apply to teach independently in the first or second year language courses. Graduate students also have a broad role in the summer Greek and Latin Institute, and in the Graham School of General Studies, for which they are encouraged to offer courses of their own design (some recent courses have been devoted to the Iliad, the Odyssey, and the Aeneid).

The second area of teaching is through The Little Red Schoolhouse, a nationally famous writing program in which graduate students are taught how to deal constructively with the confused prose they will encounter in undergraduate papers, and are then assigned as interns in the humanities and social sciences core courses of the College. Here they work in a small class with the professor, serving as special writing instructors and learning how to teach courses in which reading,
discussion, and short papers are the chief ingredients. A third area of teaching is serving as the graduate assistant for the College's ten-week Study Abroad program in Athens, which is regularly staffed by faculty from the Classics Department. The graduate assistant serves as both a course assistant and a resident assistant and as an instructor for a course entitled Readings in Attic Greek. Finally, at the most advanced level, graduate students are eligible to teach sections of the humanities core sequence. All teaching is recompensed by a stipend proportional to the teaching responsibility and normally includes remission of tuition.

## Programs of Study

The department offers Ph.D. degrees in Classical Languages and Literatures, the Ancient Mediterranean World, and Ancient Greek and Roman Philosophy, as well as a joint Ph.D. in Social Thought and Classics.

## Ph.D. Program in Classical Languages and Literatures

The curriculum in Classical Languages and Literatures emphasizes excellence in the Greek and Latin languages and training for scholarly investigation. Various kinds of courses are offered to meet the students' needs and desires. Some are devoted to the reading of texts, with emphasis on the linguistic structure. Others stress literary, historical, or philosophical interpretation. Several seminars each year, which deal with Greek and Latin texts and are often related to current research interests of the faculty, invite students to think deeply about an aspect of antiquity and provide training in the writing of scholarly research papers. A synoptic view is furnished by a yearlong sequence devoted in alternate years to Greek and to Latin literature. These survey courses are designed to help the student acquire skill in the rapid reading of Greek and Latin. Students may also pursue individual interests by taking courses offered outside the department, and may, in special circumstances, arrange for independent study.

Applicants to the Program in Classical Languages \& Literatures should have a strong background in Greek and Latin. Students with undergraduate degrees in other fields are encouraged to apply if their scholarly interests lie in classics and if they have begun intensive study to make up any deficiencies in Greek and Latin. All graduate students are expected to demonstrate proficiency in reading French and German, one language for the A.M. degree and the second for the Ph.D.; entering students should have begun this preparation if they are not already competent.

The Ph.D. Program in Classical Languages and Literatures is designed for six years, the first two being devoted to a full load of nine courses, the third and fourth to completing course work and examinations, and the final two to the dissertation.

In the first year of the Classical Languages and Literatures program, students regularly take one of the survey courses, a prose composition course, two seminars, at least two courses in the minor language, and other courses (often in other departments such as Art History, Linguistics, Near Eastern Languages
\& Civilizations, etc.) to meet special interests. Students are required to take the qualifying exam in the language of the survey sequence at the end of this year. This is also the year to pass the first modern language exam in French or German. Students who complete their coursework and pass the French or German exam are awarded the A.M. in Classical Languages and Literatures.

The second year is similar, usually with a major focus on the second survey course and such courses as may allow students to explore new areas; in the spring, students are required to pass the second language qualifying examination. In the third year, students are required to pass examinations in Greek and Roman History (this requirement can also be met by certain ancient history courses or study abroad programs) and to prepare the special field exam (a study of a particular text chosen by the student). In the fourth year and fifth year students should expect to develop a topic for the dissertation, and to write the dissertation.

## Ph.D. Program in the Ancient Mediterranean World

The Program in the Ancient Mediterranean World (formerly the Committee on the Ancient Mediterranean World) was founded in 1975 with the intention of bringing together faculty whose fields of study, ranging from the ancient Near East and the ancient Greek world to late antiquity, adjoin and overlap chronologically and geographically. While these fields require mastery of relevant languages, the Program in the Ancient Mediterranean World is focused less on texts than on contexts; it offers students an opportunity to use philological skills in historical and cultural explorations. Most students in this program are in the areas of ancient history, history of ancient religions, Greek and Near Eastern studies, or late antiquity.

Although not primarily a language program, students in the Program in the Ancient Mediterranean World are required to take competency examinations in two ancient languages and should therefore have a strong background in at least one. All graduate students are expected to demonstrate proficiency in reading French and German, one language for the A.M. degree and the second for the Ph.D.; entering students should have begun this preparation if they are not already competent

The Ph.D. Program in the Ancient Mediterranean World is designed for six years, the first two being devoted to a full load of nine courses, the third and fourth to completing course work and examinations, and the final two to the dissertation. In the first year of the Ancient Mediterranean World program, students regularly take the two-quarter research seminar and a range of courses, at least two of which must be distributed across two of the following disciplinary fields: literature; philosophy/ religion; art/archaeology; and social sciences (e.g. anthropology, sociology, political science). This is also the year to pass the first modern language exam in French or German. Students who complete their coursework and pass the French or German exam are awarded the A.M. in the Ancient Mediterranean World. In the second year, students are required to take a further nine courses, at least two of which must be
distributed across a different pair of the disciplinary fields specified above and to pass the first ancient language qualifying examination. Before the end of the third year, students are required to pass written and oral examinations in one major and two minor historical fields and, before the end of the fourth year, the second ancient language qualifying examination. Students should also, in the course of their fourth year, expect to develop a topic for the dissertation, which is written in the fifth and sixth years.

## Ph.D. PROGRAM In ANCIENT Greek and Roman Philosophy

The study of ancient Greek and Roman philosophy is inherently interdisciplinary. Scholars must be able to situate philosophical texts in their broader cultural context. They must also be alive to the way a given text engages with and contributes to its philosophical tradition. Finally, they must be able to communicate effectively with scholars trained in either Classics or Philosophy. Thus, a student who plans to specialize in ancient philosophy ought to receive an interdisciplinary training. The Program in Ancient Greek and Roman Philosophy allows students to enroll either in the PhD program in Classics or in the PhD program in Philosophy but with the requirement that they will take certain courses in the department in which they are not enrolled. The program is a joint program in the sense that the faculty of both departments are committed to training students in the other department and in the sense that the students will develop a working relationship with each other, both through participation in seminars and in the Ancient Greek and Roman Philosophy workshop.

The Ph.D. Program in Classical Languages and Literatures is designed for six years, the first two being devoted to a full load of nine courses, the third and fourth to completing course work and examinations, and the final two to the dissertation. In the first year, students regularly take one of the survey courses, a prose composition course, two quarters of seminar work, at least one of which must be in ancient philosophy, one course in the Philosophy department that deals with a topic other than Greek or Roman Philosophy, and one course in the minor language. Students are required to take the qualifying exam in the language of the survey sequence at the end of this year and also the first modern language exam in French or German. Students who complete their coursework and pass the French or German exam are awarded the A.M. in Classical Languages and Literatures. The second year is similar; in the spring, students are required to pass the second language qualifying examination. In the third year, students are required to take two additional graduate courses on a philosophical topic and the special field exam, which is a written examination on a Greek or Latin philosophical text (complete or an excerpt) of the candidate's own choosing. In the fourth year and fifth year students should expect to develop a topic for the dissertation, and to write the dissertation.

# The Joint Ph.D. Program in Social Thought and Classics 

The Joint Ph.D. Program in Social Thought and Classics is intended for students whose study of a particular issue or text from the ancient Greek and Roman world requires a broadly interdisciplinary approach alongside a professional mastery of philological skills. Those interested in pursuing this joint degree program must first be admitted in EITHER the Committee on Social Thought OR the Department of Classics and must complete at minimum the three quarter language survey (Greek or Latin) offered by the Department of Classics, with an average grade of B or higher. Application shall then be made to the second department and, provided that the standards of admission to that department are met, students will be admitted to joint degree status. Their original department, however, will remain their sole department for purposes of registration and financial aid (including dissertation fellowships).
Students admitted to the joint degree program must satisfy both all the normal requirements for the A.M. and Ph.D. in Classical Languages and Literatures and all the normal requirements for the A.M. and Ph.D. in Social Thought. However, the Social Thought language requirement of a high level pass in a foreign language exam will be automatically met by the requirements of the Classics program. Students with joint degree status will be required to offer at least a majority of non Classical texts on the Social Thought Fundamentals Examination. The dissertation proposal will have to be approved by both departments and the dissertation committee will normally include three faculty, at least one of whom will come from each department.

## Application

The application process for admission and financial aid for all graduate programs in the Division of the Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http://humanities.uchicago.edu/prospective/admissions.html.

Questions about admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

## COURSES

The courses listed below are offered regularly, normally on a three-year rotating basis. In addition, new courses are frequently introduced, especially seminars and classics courses, and these cannot be predicted very far in advance. In 2009-2010, for example, these included seminars on Early Rome, Tragedy and the Tragic, A History of Rhetoric, Greek Tragedy in Africa, Juvenal, The Ancient Economy, Oral Poetries, The Poetry of Death, Security in Latin Literature, and Stoics and Epicureans.

Greek
Homer
Hesiod
Greek Hymns
Greek Lyric Poetry
Greek Elegy
Plato
Aeschylus
Aristophanes
Menander
Herodotus
Sophocles
Euripides
Survey of Greek Literature I
Survey of Greek Literature II
Survey of Greek Literature III
Lyric and Epinician Poetry
Aristotle
Thucydides
Greek Prose Composition
Theocritus
Hellenistic Poetry
Greek Linguistics
LATIN Livy
Roman Elegy
Roman Novel
Vergil
Augustine
Lucretius
Roman Satire
Roman Oratory
Survey of Latin Literature I
Survey of Latin Literature II
Survey of Latin Literature III
Ovid
Sallust and Tacitus
Horace
Roman Comedy
Silver Latin Epic
Latin Prose Composition
Political Philosophy
Latin Paleography
Medieval Literature

Letters: Cicero and Sen


## DEPARTMENT OF Comparative Literature

Chair

- Françoise Meltzer, Romance Languages \& Literatures


## Professors

- Arnold Davidson, Philosophy
- Frederick de Armas, Romance Languages \& Literatures
- Loren A. Kruger, English Language \& Literature
- Françoise Meltzer, Romance Languages \& Literatures
- Michael J. Murrin, English Language \& Literature
- Thomas Pavel, Romance Languages \& Literatures
- Haun Saussy, Comparative Literature
- Michael Sells, Divinity School
- Joshua Scodel, English Language \& Literature
- Yuri Tsivian, Slavic Languages \& Literatures
- David Wellbery, Germanic Studies

Associate Professors

- Lawrence Rothfield, English Language \& Literature
- David Wray, Classics

Assistant Professor

- Tamara Chin
- Boris Maslov


## Emeritus Faculty

- David Bevington, English Language \& Literature
- Walter R. Johnson, Classics
- Kenneth J. Northcott, Germanic Studies
- Frantisek Svejkovsky, Slavic Languages \& Literatures
- Robert von Hallberg, English Language \& Literature
- Edward Wasiolek, Slavic Languages \& Literatures
- Anthony C. Yu, Divinity

The Department of Comparative Literature is organized to facilitate the study of literature unrestricted by national boundaries and the conventional demarcations of subject matter. The department makes every effort to arrange a course of studies fitted to the individual student's background and interest. Students may choose from courses offered by the department, as well as those offered by relevant
departments in the Division of the Humanities and in some cases those offered by other divisions. Students are expected to read relevant texts in the original languages. The master's program may be used to explore areas of interest by the student, as well as to strengthen areas of established interest and competence. Students who proceed to the Ph.D. program will choose one of two tracks in their learning and training:

## 1. National literatures

2. literature and other disciplines

Track 1 is a program of studies of one national literature (the major) in its historical entirety and of a second national literature (the minor) in a specified area. Track 2 will consist of the study of a literature or some part of that literature and its relationship to another discipline such as sociology, psychoanalysis, philosophy, or religion. It is assumed that whichever option the student chooses, an international perspective on the relevant problem will be sought and maintained. Students will be provided with individual counseling to help them formulate programs of study that will answer to their needs and interests. There are no formal boundaries to the extent and nature of these interests, although the department will require that programs be coherently conceived and responsibly carried out.

## Application

The department requires a writing sample of no more than 25 pages, usually a critical essay written during the student's college years.

## The Degree of Master of Arts

The formal requirements for the M.A. degree are the following: For students entering the program in the fall 2003 and after, a program of eight graduate level courses (one full academic year), all of which must be taken for a letter grade; the required two quarter sequence Seminar: Introduction to Comparative Literature[50100 and 50200;] and demonstrated competence (high proficiency in a graduate literature course or high pass in a University examination) in two foreign languages, one of which must be either French or German. The remaining six quarter courses are normally divided among two literatures, although a student may, with department permission, place greater emphasis on one literature or on some special interest. Admission to the Ph.D. program will be based on a student's grade record and performance in the required two quarter sequence.

## The Degree of Doctor of Philosophy

Programs leading to the doctor's degree in the department will be organized for students possessing the M.A. who have shown unusual competence and who wish to prepare themselves for teaching and scholarly investigation in comparative literature. Students are required to take six graduate level courses in their second year of Ph.D. study and two in their third year. Students are also required to write a
minimum of two substantial papers the second year, and one the third year. Copies of these papers must be submitted to the graduate chair.

In the two years of post-M.A. courses, students may take no more than one of the required courses per year for a Pass/Fail grade (i.e., one of the six required graduate level courses for the first year of post-M.A. doctoral level study, and one of the two required graduate level courses in the second year of doctoral level study).

Before the student is recommended for admission to candidacy for the doctor's degree he or she must pass satisfactorily an oral examination after completion of eight Ph.D. level courses. This examination will be based on one of the following two options.

Track I requires The National Literature Oral. This is an examination based on no fewer than 60 titles in the major literature and no fewer than 30 titles in the minor literature. The list for the major literature will cover all periods and genres. The list for minor literature will cover the major texts of the approved period or genre.
Track II requires The Field Oral. This is an oral examination on a representative list of approximately 70-90 titles in a given comparative field, such as literature and anthropology, literature and art, literature and film, literature and history, literature and linguistics, literature and music, literature and psychology, literature and sociology, literature and religion, literature and science. Texts chosen for this exam are to be distributed evenly between the two disciplines.

For admission to candidacy the same language requirements hold for BOTH tracks. These are as follows: either high proficiency in one language (=normally one graduate literature course) + two University reading exams in two additional languages (with a high pass on both) OR two high proficiency (graduate literature courses) in two languages. In both tracks one of those languages must be either French or German. All graduate students who wish to fulfill the language requirement through graduate course work must pick up a form in the departmental office to be filled out by the instructor after the course work has been completed. No student will get credit for the language requirement by course work without the instructor's completion of such a form. The form will rate the student's general knowledge of the language with almost exclusive emphasis on reading.

Before entering candidacy students will be asked to present and discuss their dissertation proposals at a proposal hearing attended by their dissertation committee and other interested faculty. After entering candidacy students will participate in a colloquium, normally in the fifth quarter after their admission to candidacy, in which they will discuss with their dissertation committee the current state of the dissertation and outline their plans and schedule for further progress. Students are strongly urged to join appropriate workshops and present dissertation chapters on a regular basis to such workshops. After satisfying the above requirements, the candidate is expected to pursue independent research under the direction of a member of the faculty culminating in the writing of a doctoral dissertation. The candidate must conclude his or her studies by defending successfully this dissertation in an oral final examination.

For additional information about the Comparative Literature program, please see http://complit.uchicago.edu/ or call (773) 702-8486.

## Information on How To Apply

The application process for admission and financial aid for all graduate programs in Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http:// humanities.uchicago.edu/prospective/admissions.html.

Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552. Our application process is now entirely online. Please do not send any materials in hard copy. All materials should be submitted through the online application (https://applyhumanities.uchicago.edu/apply/).

## COMparative literature COURSES

CMLT 30500. History and Theory of Drama I. 100 Units. Edit Course Data - default
This course is a survey of major trends and theatrical accomplishments in Western drama from the ancient Greeks through the Renaissance: Aeschylus, Sophocles, Euripides, Aristophanes, medieval religious drama, Marlowe, Shakespeare, and Jonson, along with some consideration of dramatic theory by Aristotle, Horace, Sir Philip Sidney, and Dryden. The goal is not to develop acting skill but, rather, to discover what is at work in the scene and to write up that process in a somewhat informal report. Students have the option of writing essays or putting on short scenes in cooperation with other members of the class. End-of-week workshops, in which individual scenes are read aloud dramatically and discussed, are optional but highly recommended.
Instructor(s): D. Bevington, D. Dir Terms Offered: Autumn
Note(s): May be taken in sequence with ENGL 13900/31100 or individually. This course meets the general education requirement in the dramatic, musical, and visual arts.
Equivalent Course(s): CLCV 21200,CLAS 31200,CMLT 20500,ENGL 13800,ENGL 31000,TAPS 28400

CMLT 31101. Roman Elegy. 100 Units. Edit Course Data - default
This course examines the development of the Latin elegy from Catullus to Ovid. Our major themes are the use of motifs and topics and their relationship to the problem of poetic persona.
Terms Offered: Not offered 2012-13; will be offered 2013-14.
Equivalent Course(s): LATN 21100,CMLT 21101,LATN 31100

CMLT 31851. Zhuangzi: Lit, Phil, or Something Else. 100 Units. Edit Course Data default
Instructor(s): H. Saussy
Equivalent Course(s): EALC 31851
CMLT 32201. Magic Realist and Fantastic Writings from the Balkans. 100 Units. Edit Course Data - default
In this course, we ask whether there is such a thing as a "Balkan" type of magic realism and think about the differences between the genres of magic realism and the fantastic, while reading some of the most interesting writing to have come out of the Balkans. We also look at the similarities of the works from different countries (e.g., lyricism of expression, eroticism, nostalgia) and argue for and against considering such similarities constitutive of an overall Balkan sensibility.
Instructor(s): A. Ilieva Terms Offered: Spring
Equivalent Course(s): SOSL 27400,CMLT 22201,SOSL 37400
CMLT 32301. War and Peace. 100 Units. Edit Course Data - default
Instructor(s): W. Nickell Terms Offered: Autumn
Equivalent Course(s): RUSS 22302,CMLT 22301,ENGL 28912,ENGL 32302,FNDL 27103,HIST 23704,RUSS 32302

CMLT 32400. History of International Cinema I: Silent Era. 100 Units. Edit Course Data - default
This course introduces what was singular about the art and craft of silent film. Its general outline is chronological. We also discuss main national schools and international trends of filmmaking.
Instructor(s): J. Lastra Terms Offered: Autumn
Prerequisite(s): Prior or concurrent enrollment in CMST 10100. Required of students majoring in Cinema and Media Studies.
Note(s): This is the first part of a two-quarter course.
Equivalent Course(s): CMST 28500,ARTH 28500,ARTH 38500,ARTV 26500,ARTV 36500,CMLT 22400,CMST 48500,ENGL 29300,ENGL 48700,MAPH 36000

CMLT 32500. History of International Cinema II: Sound Era to 1960. 100 Units. Edit Course Data - default
The center of this course is film style, from the classical scene breakdown to the introduction of deep focus, stylistic experimentation, and technical innovation (sound, wide screen, location shooting). The development of a film culture is also discussed. Texts include Thompson and Bordwell's Film History: An Introduction; and works by Bazin, Belton, Sitney, and Godard. Screenings include films by Hitchcock, Welles, Rossellini, Bresson, Ozu, Antonioni, and Renoir.
Instructor(s): Y. Tsivian Terms Offered: Winter
Prerequisite(s): Prior or concurrent registration in CMST 10100 required. Required of students majoring in Cinema and Media Studies.
Note(s): CMST 28500/48500 strongly recommended
Equivalent Course(s): CMST 28600,ARTH 28600,ARTH 38600,ARTV 26600,CMLT 22500,CMST 48600,ENGL 29600,ENGL 48900,MAPH 33700

CMLT 33201. Returning the Gaze: The Balkans and Western Europe. 100 Units. Edit Course Data - default
This course investigates the complex relationship between South East European self-representations and the imagined Western "gaze" for whose benefit the nations stage their quest for identity and their aspirations for recognition. We also think about differing models of masculinity, the figure of the gypsy as a metaphor for the national self in relation to the West, and the myths Balkans tell about themselves. We conclude by considering the role that the imperative to belong to Western Europe played in the Yugoslav wars of succession. Some possible texts/films are Ivo Andric, Bosnian Chronicle; Aleko Konstantinov, Baj Ganyo; Emir Kusturica, Underground; and Milcho Manchevski, Before the Rain.
Instructor(s): A. Ilieva Terms Offered: Autumn
Equivalent Course(s): SOSL 27200,CMLT 23201,NEHC 20885,NEHC 30885,SOSL 37200

CMLT 33301. Balkan Folklore. 100 Units. Edit Course Data - default
This course is an overview of Balkan folklore from ethnographic, anthropological, historical/political, and performative perspectives. We become acquainted with folk tales, lyric and epic songs, music, and dance. The work of Milman Parry and Albert Lord, who developed their theory of oral composition through work among epic singers in the Balkans, help us understand folk tradition as a dynamic process. We also consider the function of different folklore genres in the imagining and maintenance of community and the socialization of the individual. We also experience this living tradition first hand through our visit to the classes and rehearsals of the Chicago-based ensemble "Balkanske igre."
Instructor(s): A. Ilieva Terms Offered: Winter
Equivalent Course(s): SOSL 26800,CMLT 23301,NEHC 20568,NEHC 30568,SOSL 36800

CMLT 33401. The Burden of History: A Nation and Its Lost Paradise. 100 Units. Edit Course Data - default
This course begins by defining the nation both historically and conceptually, with attention to Romantic nationalism and its flourishing in Southeastern Europe. We then look at the narrative of original wholeness, loss, and redemption through which Balkan countries retell their Ottoman past. With the help of Freud's analysis of masochistic desire and Žižek's theory of the subject as constituted by trauma, we contemplate the national fixation on the trauma of loss and the dynamic between victimhood and sublimity. The figure of the Janissary highlights the significance of the other in the definition of the self. Some possible texts are Petar Njegoš's Mountain Wreath; Ismail Kadare's The Castle; and Anton Donchev's Time of Parting.
Instructor(s): A. Ilieva Terms Offered: Winter
Equivalent Course(s): SOSL 27300,CMLT 23401,NEHC 20573,NEHC 30573,SOSL 37300

CMLT 36500. Renaissance Romance. 100 Units. Edit Course Data - default
Selections from a trio of texts will be studied: Ovid's Metamorphoses (as the recognized classical model), Boiardo's Orlando innamorato (which set the norms for Renaissance romance), and Spenser's Faerie Queene. A paper will be required and perhaps an oral examination.
Instructor(s): M. Murrin Terms Offered: Autumn
Equivalent Course(s): ENGL 16302,CMLT 26500,ENGL 36302,RLIT 51200
CMLT 36901. Orality, Literature, and Popular Culture of Afghanistan and
Pakistan. 100 Units. Edit Course Data - default
Instructor(s): C. R. Perkins Terms Offered: Winter 2013
Equivalent Course(s): SALC 26910,CMLT 26901,HIST 26905,HIST 36905,NEHC
20901,NEHC 30901,SALC 36901
CMLT 38601. Fiction, Ideals, and Norms. 100 Units. Edit Course Data - default
This course will discuss the ways in which fiction imagines a multitude of individual cases meant to incite reflection on moral practices. The topics will include: the distance between the " I " and its life, the birth of moral responsibility, and the role of affection and gratitude. We will read philosophical texts by Elisabeth Anscombe, Charles Taylor, Robert Pippin, Hans Joas, Charles Larmore, and Candace Vogler, and literary texts by Shakespeare, Balzac, Theodor Fontane, Henry James, Carson McCullers, and Sandor Marai.
Instructor(s): T. Pavel Terms Offered: Spring
Equivalent Course(s): FREN 28600,CMLT 28601,FREN 38600,SCTH 38211

## DEPARTMENT OF EAST ASIAN Languages and Civilizations

## Chair

- Edward Shaughnessy


## Professors

- Norma Field
- Donald Harper
- James Ketelaar, History
- Hung Wu, Art History
- Judith Zeitlin


## Associate Professors

- Guy S. Alitto, History
- Michael Bourdaghs
- Susan Burns, History
- Kyeong Hee Choi
- Jacob Eyferth
- Yuming He

Assistant Professors

- Paul Copp
- Paola Iovene
- Reginald Jackson

Senior Lecturers

- Fangpei Cai
- Hi Sun Kim
- Hiroyoshi Noto
- Youqin Wang
- Jun Yang

Lecturers

- Yoko Katagiri
- Meng Li
- Yuxiang Liu
- Harumi Lory
- Misa Miyachi
- Ji Eun Kim
- Laura Skosey

Emeritus Faculty

- George Chih Chao Chao
- Harry Harootunian, History
- Ping Ti Ho, History
- Tetsuo Najita, History
- David T. Roy
- Tsuen Hsuin Tsien
- Anthony C. Yu, Divinity

The Department of East Asian Languages \& Civilizations is a multidisciplinary department, with faculty specialists in history, art, philosophy, languages, literature, and religions, offering a program of advanced study of the traditional and modern cultures of China, Japan and Korea. At the same time, students are encouraged to pursue their interests across traditional disciplinary lines by taking courses in other departments in the University.

## Information on How to Apply

The application process for admission and financial aid for all graduate programs in Humanities is administered through the divisional Office of the Dean of Students. The application for Admission and Financial Aid, with instructions, deadlines, and department specific information is available online at: http:// humanities.uchicago.edu/prospective/admissions.html.
Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

Foreign students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).
For additional information about the East Asian Languages and Civilizations program, please see http://ealc.uchicago.edu or call (773) 702-1255.

## THE DEGREE OF MASTER OF ARTS

EALC Requirements for the Master's Degree and for All Students in Scholastic Residence: (The category of Scholastic Residence applies to the first four years of graduate study. These provisions, except for that pertaining to M.A. papers, apply both to students who arrive with master's degrees and to those who have completed only bachelor's degrees.)

## LANGUAGE REQUIREMENT

The mastery of languages is the first, essential step toward the understanding of civilizations. The minimum language requirement for the M.A. is three years of modern Chinese, Japanese, or Korean, which may be fulfilled by completing course work with a grade of $B$ or better or by passing with a grade of high pass a language exam administered by the Department. Students entering with prior training must take this placement exam, the results of which will either ensure their enrollment at an appropriate level or allow them to pass out of additional language course work. Students whose native language is an East Asian Language may be exempt from this requirement. They must, however, fulfill the translation requirement.

## COURSE REQUIREMENT

All full-time students must take 18 courses ( 9 per year) during their first two years of scholastic residence, 1 of which must be EALC 65000 (Directed Translation). No more than 3 courses may be taken for an R or a P grade. Students must take at least two courses in an East Asian civilization other than that in which they are specializing.

All work for incompletes must be submitted to the relevant instructor/s by September 1 prior to the subsequent academic year. In other words, incompletes may not be carried from one academic year into the next. Failure to comply may result in denial of permission to register.

## TRANSLATION REQUIREMENT

All students must satisfy a translation requirement during their first two years of scholastic residence. The translation must be approved by an EALC faculty member. The student should fulfill this requirement by enrolling in EALC 65000 (Directed Translation), and earning a grade of B or better. The translation and faculty approval will be submitted to the department for the student's file.

## MASTER'S PAPERS

In addition to meeting the above requirements, those students who entered the program without an M.A. are required to fulfill the requirements for this degree by submitting an M.A. paper or papers. This requirement may be satisfied in one of two ways.

The student may choose to use two papers that have previously been submitted for course work. Each paper must be approved by at least two different faculty members, at least one of whom must belong to EALC, and at least one paper must demonstrate the ability to use primary materials in Chinese, Japanese, or Korean.

The student may, in consultation with her/his adviser, write a single, longer paper, of the sort more traditionally construed as an "M.A. thesis." This paper too must be read and approved by two faculty members, at least one of whom must belong to EALC. Students who choose to write such a thesis may register for two Thesis Research (EALC 59700) courses and apply them toward their 18 required courses. Papers will be kept in the student's file.

After the student has fulfilled the M.A. requirements, the student may submit a degree application and have the Department certify to the Division of Humanities that all requirements have been met and will recommend the awarding of the degree of Master of Arts.

## ANNUAL REVIEW

All students will be reviewed by the department each spring quarter. The purpose of this review is to monitor and encourage progress, including progress toward or the satisfactory fulfillment of language and course requirements. This is an important opportunity for faculty to communicate with students on such matters as the advisability of continued study for the Ph.D. degree. Annual spring quarter review of students will continue until completion of degree. The provision for redeeming incompletes applies through the completion of the degrees of M.A. and Ph.D.

Students will be asked to complete a self-review in the month prior to the faculty review. The purpose of this review is to have the student track his/her progress and consider projected deadlines. The review gives students an opportunity to express concerns and desires to faculty.
The faculty will report the outcome of the review to students. This will include concerns with incompletes or deadlines. Although the faculty may personalize letters, many students will receive a standard letter notifying him/her that he/ she has satisfactorily passed the review and reminders of department policy. If the student has more specific concerns about his/her review, it is the student's responsibility to discuss these concerns with his/her advisor or the graduate advisor.

## The Degree of Doctor of Philosophy

The requirements for the Ph.D. degree are:

## LANGUAGE REQUIREMENT

Students will be expected to demonstrate mastery of the language of the civilization they are studying. At a minimum, this will normally entail completion of all language courses the Department offers in that language or their equivalent. All students will be expected to acquire or demonstrate competence in a second language, normally an East Asian language, chosen in consultation with their adviser/s as best suited to their research interests. At a minimum, this will normally entail satisfactory completion (with a grade of B or higher) of two years study of a modern language or one year of a classical language, although students are encouraged to take more where possible. If an East Asian or European language is acquired elsewhere, the student must pass an examination designed by the relevant program with a high pass or its equivalent.

In the event that specialization requires the working knowledge of a third language (Asian or non Asian), the student will be asked to certify proficiency through classes and/or examinations.

## The Ph.D. Qualifying Examination

After consulting the faculty adviser, and clearing all incompletes, the student should consult with the desired examination committee. After selection of the committee, the student should notify the Department of his or her wish to take the Ph.D. qualifying examination. The Department Chair, in consultation with student and adviser, will approve a committee of three faculty members (one of whom may be from another unit of the University) who will conduct and grade the examination. The Ph.D. qualifying examination will consist of two sections, one written and one oral, testing the student's knowledge of the field, both specific (usually the field that will be the topic of the student's doctoral dissertation) and general (covering two topics, differentiated either by time period or by discipline).
In consultation with the examination committee, the student will submit, at least two months prior to the date of the examination, three bibliographies of works studied in preparation for these fields. It is expected that these bibliographies will contain some works in the primary language of research.

For the examination, each member of the examination committee will examine the student in one field. The student will have four hours per field (usually on consecutive days). After the examination committee has had a chance to read the written responses (a period usually not to exceed one week), the candidate and committee will meet for a two hour oral examination based upon the completed written examination. Grades in either section will be High Pass, Pass or Fail.

A student who fails in either section may retake it only once, within the next two quarters (summer quarter excepted), and must pass it on the second try in order to continue work in the Department.

The qualifying examination may not be taken later than the ninth quarter of residence after the M.A has been awarded (or, for those with advanced degrees other than the Department's M.A., the ninth quarter after they have been admitted into the Ph.D. program).

## THE DISSERTATION PROPOSAL

After successful completion of the qualifying examination, the student may proceed to invite faculty members of his/her choice to form a dissertation committee. Normally, the membership of the committee consists of an adviser and two readers, but the composition need not be identical to the qualifying examination committee. Occasionally, the student may choose to work with two co-advisers and one reader. As in the case of the qualifying examination, at least two members of the dissertation committee should be from EALC, while the third member may be a faculty member from another unit of the University.

The student will present to the Department a short essay (about seven to fifteen pages) describing his or her dissertation project, its purpose and its method, and its expected contribution to scholarship in the field. To this should be appended a bibliography of relevant materials. This proposal should be written in close consultation with the members of the student's Ph.D. dissertation committee.

The proposal will be evaluated in a meeting of the student and the committee, open to all departmental faculty and graduate students, scheduled at least two weeks after submission.

## ADMISSION TO CANDIDACY

Once the student has passed the dissertation proposal defense, the department will certify that the student has met all the requirements for the Admission to Candidacy (all requirements for degree with the exception of the dissertation). The department will submit paperwork to the Dean of Student's office recommending that the student be admitted to candidacy for the Ph.D. degree.

## The Defense of the Dissertation

With agreement of the dissertation committee, the Department Chair will set a date for the oral defense of the dissertation in an open examination. An abstract of the dissertation will be sent to all department members, and a complete copy of the draft must be filed with the Department coordinator and made available for inspection by faculty members at least three weeks in advance of the oral defense. In addition to the dissertation committee, a Dean's representative from outside the Department will normally attend and will report on the examination to the Dean of the Division of the Humanities. Upon successful completion of this examination (open to all departmental faculty and graduate students), the Department Chair will certify to the Division that all Departmental requirements have been met, and will recommend the awarding of the Ph.D. degree.

EASt Asian Languages \& Civilizations - Chinese Courses CHIN 30100-30200-30300. Advanced Modern Chinese I-II-III. Edit Course Data default
The goal of this sequence is to help students develop advanced proficiency in reading, listening, speaking, and writing. This sequence emphasizes more advanced grammatical structures. We begin with discussion in Chinese on topics relevant to modern China and then shift to authentic Chinese texts in an effort to better prepare students to deal with original Chinese source materials. Discussion in Chinese required. The class meets for five one-hour sessions a week.

CHIN 30100. Advanced Modern Chinese I. 100 Units. Edit Course Data default
Terms Offered: Autumn
Prerequisite(s): CHIN 20300 or placement
Equivalent Course(s): CHIN 20401
CHIN 30200. Advanced Modern Chinese II. 100 Units. Edit Course Data default
Terms Offered: Winter
Prerequisite(s): CHIN 20300 or placement
Equivalent Course(s): CHIN 20402

CHIN 30300. Advanced Modern Chinese III. 100 Units. Edit Course Data default<br>Terms Offered: Spring<br>Prerequisite(s): CHIN 20300 or placement<br>Equivalent Course(s): CHIN 20403

CHIN 31100-31200-31300. Business Chinese I-II-III. Edit Course Data - default This three-quarter sequence aims at improving overall language skills and introduces business terminology. Students learn about companies and their services and/or products, the stock market, real estate market, insurance, and e-commerce. The class meets for three ninety-minute sessions a week.

CHIN 31100. Business Chinese I. 100 Units. Edit Course Data - default Terms Offered: Autumn
Prerequisite(s): CHIN 20300 or placement
Equivalent Course(s): CHIN 20701
CHIN 31200. Business Chinese II. 100 Units. Edit Course Data - default
Terms Offered: Winter
Prerequisite(s): CHIN 20300 or placement
Equivalent Course(s): CHIN 20702
CHIN 31300. Business Chinese III. 100 Units. Edit Course Data - default Terms Offered: Spring
Prerequisite(s): CHIN 20300 or placement
Equivalent Course(s): CHIN 20703
CHIN 33206. Medieval Chinese Visual Cult. 100 Units. Edit Course Data - default Equivalent Course(s): ARTH 22204,ARTH 32004,CHIN 23206,EALC 23206

CHIN 41100-41200-41300. Fourth-Year Modern Chinese I-II-III. Edit Course Data default
This sequence introduces a range of influential literary works and scholarly essays on Chinese cultural and social issues from the 1920s to the 1990s. Students not only expand their vocabulary and knowledge of grammatical structures but also learn sophisticated speaking and writing skills through intensive readings and discussions. The class meets for three one-hour sessions a week.

[^1]CHIN 41300. Fourth-Year Modern Chinese III. 100 Units. Edit Course Data default
Terms Offered: Spring
Prerequisite(s): CHIN 30300 or placement
Equivalent Course(s): CHIN 20503
CHIN 51100-51200-51300. Fifth-Year Modern Chinese I-II-III. Edit Course Data default
This sequence is designed to prepare students for academic research and activities in a Chinese language environment. Modern classic essays, documentary film and TV broadcasts will be included among the teaching materials. Students will learn not only general listening, speaking and reading skills but also academic writing. Class meets for three one-hour sessions each week. Students can arrange two additional one-on-one tutorial sessions to prepare for assigned language projects.

CHIN 51100. Fifth-Year Modern Chinese I. 100 Units. Edit Course Data default<br>Terms Offered: Autumn<br>Prerequisite(s): CHIN 41300 or placement<br>Equivalent Course(s): CHIN 20601<br>CHIN 51200. Fifth-Year Modern Chinese II. 100 Units. Edit Course Data default<br>Terms Offered: Winter<br>Prerequisite(s): CHIN 51100 or placement<br>Equivalent Course(s): CHIN 20602

CHIN 51300. Fifth-Year Modern Chinese III. 100 Units. Edit Course Data default
Terms Offered: Winter
Prerequisite(s): CHIN 51200 or placement
Equivalent Course(s): CHIN 20603

## EAST ASIAN LANGUAGES \& CIVILIZATIONS - JAPANESE COURSES

JAPN 30100-30200-30300. Advanced Modern Japanese I-II-III. Edit Course Data default
The third year marks the end of the basic modern language study. Our goal is to help students learn to understand authentic written and spoken materials with reasonable ease. The texts are all authentic materials with some study aids. Classes conducted in Japanese. The class meets for three eighty-minute sessions a week. All courses in this sequence must be taken for a quality grade.

JAPN 30100. Advanced Modern Japanese I. 100 Units. Edit Course Data default
Terms Offered: Autumn
Prerequisite(s): JAPN 20300 or equivalent, or consent of instructor.
Equivalent Course(s): JAPN 20401

JAPN 30200. Advanced Modern Japanese II. 100 Units. Edit Course Data default<br>Terms Offered: Winter<br>Prerequisite(s): JAPN 20300 or equivalent, or consent of instructor.<br>Equivalent Course(s): JAPN 20402

JAPN 30300. Advanced Modern Japanese III. 100 Units. Edit Course Data -
default
Terms Offered: Spring
Prerequisite(s): JAPN 20300 or equivalent, or consent of instructor.
Equivalent Course(s): JAPN 20403
JAPN 30800-30900-31000. Reading Scholarly Japanese I-II-III. Edit Course Data default
This course focuses on the reading of scholarly Japanese materials with the goal of enabling students to do independent research in Japanese after the course's completion. The materials are selected from a wide range of disciplines covering the past three centuries

JAPN 30800. Reading Scholarly Japanese I. 100 Units. Edit Course Data default
Terms Offered: Autumn
Prerequisite(s): JAPN 20300 or equivalent, or consent of instructor.
JAPN 30900. Reading Scholarly Japanese II. 100 Units. Edit Course Data default
Terms Offered: Winter
Prerequisite(s): JAPN 20300 or equivalent, or consent of instructor.
JAPN 31000. Reading Scholarly Japanese III. 100 Units. Edit Course Data default
Terms Offered: Spring
Prerequisite(s): JAPN 20300 or equivalent, or consent of instructor.
JAPN 34900-34901-34902. Pre-modern Japanese: Kindai Bungo I-II-III. Edit Course Data - default
This course focuses on the reading of scholarly Japanese materials with the goal of enabling students to do independent research in Japanese after the course's completion. Readings are from historical materials written in the eighteenth and nineteenth centuries.

JAPN 34900. Pre-modern Japanese: Kindai Bungo I. 100 Units. Edit Course Data - default
Terms Offered: Autumn
Prerequisite(s): JAPN 20300 or equivalent, or consent of instructor.
Equivalent Course(s): JAPN 24900

JAPN 34901. Pre-modern Japanese: Kindai Bungo II. 100 Units. Edit Course Data - default<br>Terms Offered: Winter<br>Prerequisite(s): JAPN 20300 or equivalent, or consent of instructor.<br>Equivalent Course(s): JAPN 24901<br>JAPN 34902. Pre-modern Japanese: Kindai Bungo III. 100 Units. Edit Course Data - default<br>Terms Offered: Spring<br>Prerequisite(s): JAPN 20300 or equivalent, or consent of instructor. Equivalent Course(s): JAPN 24902

JAPN 39000. Introduction to Classical Japanese. 100 Units. Edit Course Data default
Introduction to the grammar and style of premodern Japanese through a variety of literary texts. Emphasis will be placed on extensive grammatical analysis and translation. Work with original manuscripts will also be introduced as the course progresses.
Instructor(s): R. Jackson Terms Offered: Winter
Prerequisite(s): Three years modern Japanese or consent of instructor Equivalent Course(s): JAPN 19000,EALC 19001,EALC 39001

JAPN 40500-40600-40700. Fourth-Year Modern Japanese I-II-III. Edit Course Data default
This course is intended to improve Japanese reading, speaking, writing, and listening ability to the advanced high level as measured by the ACTFL (American Council on the Teaching of Foreign Languages) Proficiency Guidelines. Weekly assignments require students to tackle modern Japanese texts of varying length and difficulty. Organized around a range of thought-provoking themes (from brain death and organ transplants to Japanese values on work and religion), reading assignments include academic theses in psychology and anthropology, literary texts, and popular journalism. After each reading, students are encouraged to discuss the topic in class. Videos/DVDs are used to improve listening comprehension skills. There are also writing assignments. The class meets for two eighty-minute sessions a week.

JAPN 40500. Fourth-Year Modern Japanese I. 100 Units. Edit Course Data default
Terms Offered: Autumn
Prerequisite(s): JAPN 30300 or equivalent
Equivalent Course(s): JAPN 20500
JAPN 40600. Fourth-Year Modern Japanese II. 100 Units. Edit Course Data default
Terms Offered: Winter
Prerequisite(s): JAPN 30300 or equivalent
Equivalent Course(s): JAPN 20600

JAPN 40700. Fourth-Year Modern Japanese III. 100 Units. Edit Course Data default<br>Terms Offered: Spring<br>Prerequisite(s): JAPN 30300 or equivalent<br>Equivalent Course(s): JAPN 20700

## East Asian Languages \& Civilizations - Korean Courses

 KORE 30100-30200-30300. Advanced Korean I-II-III. Edit Course Data - default This course introduces a wide selection of authentic reading materials from Korean newspaper articles, college-level textbooks, and literary prose as an entry point to discuss topics and issues in Korean society, culture, and history. The primary objective is further enhancement of advanced reading comprehension, composition writing, and presentational skills. In addition, Chinese character (Hanja) lessons are incorporated into each lesson with the purpose of expanding vocabulary to the advanced level. The class meets for two eighty-minute sessions a week. All courses in this sequence must be taken for a quality grade.KORE 30100. Advanced Korean I. 100 Units. Edit Course Data - default Terms Offered: Autumn
Prerequisite(s): KORE 20300 or equivalent, or consent of instructor. Equivalent Course(s): KORE 20401

KORE 30200. Advanced Korean II. 100 Units. Edit Course Data - default Terms Offered: Winter
Prerequisite(s): KORE 20300 or equivalent, or consent of instructor. Equivalent Course(s): KORE 20402

KORE 30300. Advanced Korean III. 100 Units. Edit Course Data - default
Terms Offered: Spring
Prerequisite(s): KORE 20300 or equivalent, or consent of instructor.
Equivalent Course(s): KORE 20403
KORE 42100. Korean Contemporary TV and Language. 100 Units. Edit Course Data - default
KORE 42100 is a content-based language course designed to meet the needs of high-advanced level students of Korean, including international/heritage language students who have studied in Korea up to the primary school levels. We study and analyze genres of Korean TV programs on the internet (e.g., such dramas as soap operas and sitcoms, entertainment talk shows, children's shows, news programs). Main discussion topics are sociolinguistics and socio-cultural issues (e.g., speech levels, honorifics and address terms, language and gender, pragmatics and speech acts, language and nationalism).
Terms Offered: Autumn
Prerequisite(s): KORE 30300 or equivalent, or consent of instructor.
Equivalent Course(s): KORE 22100

KORE 42200. Contemporary Korean Society and History through Fiction and
Film. 100 Units. Edit Course Data - default
KORE 42200 is a content-based language course designed to meet the needs of high-advanced level students of Korean, including international/heritage language students who have studied in Korea up to the primary school levels. We analyze cultural and historical issues in contemporary Korea through four contemporary short novels and related film and media. Other goals are to foster fluency, accuracy, and comprehension in reading authentic contemporary texts, as well as advancing language skills for formal presentation, discussion, and writing.
Terms Offered: Winter
Prerequisite(s): KORE 30300 or equivalent, or consent of instructor.
Equivalent Course(s): KORE 22200
KORE 42300. Changing Identity of Contemporary Korean through Film and Literature. 100 Units. Edit Course Data - default
KORE 42300 is a content-based language course designed to meet the needs of high-advanced level students of Korean, including international/heritage language students who have studied in Korea up to the primary school levels. In particular, we deal with how contemporary Korean society can be understood through the diverse perspectives of emergent minority groups. Topics include Korean language and identity, gender and sexuality, and Korea as a multi-ethnic society. Class activities include watching contemporary films featuring minorities in Korea. We also read essays written by minorities (e.g., Korean-Japanese, Russian-Korean) and Korean social activists. Student are encouraged to foster their own views on contemporary social issues through diverse activities of discussion, debate, presentation, and writing.
Terms Offered: Spring
Prerequisite(s): KORE 30300 or equivalent or equivalent or consent of instructor Equivalent Course(s): KORE 22300

EAST ASIAN LANGUAGES \& CIVILIZATIONS COURSES
EALC 31850. Zhuangzi: Lit, Phil, or Something Else. 100 Units. Edit Course Data default
Instructor(s): H. Saussy
EALC 31851. Zhuangzi: Lit, Phil, or Something Else. 100 Units. Edit Course Data default
Instructor(s): H. Saussy
Equivalent Course(s): CMLT 31851

EALC 34323. The Martial Arts Tradition in Chinese Cinema. 100 Units. Edit Course Data - default
This year's course focuses on the martial arts film in Hong Kong cinema, in conjunction with a special quarter-long series on this topic at Doc Films. We will pay particular attention to the wuxia genre, tracing the genealogy of the chivalric code in the Chinese literary and performing tradition, and examining its continuous reinvention in the films of masters like King Hu, Chang Cheh, Bruce Lee, and Tsui Hark. Recurrent issues to be examined include the representation of violence, fantasy, and nationalism; the interplay between body, film style, and technology; the performance of masculinity and femininity; and the complex interactions between the global and local in today's trans-national film culture.
Instructor(s): J. Zeitlin Terms Offered: Autumn
Equivalent Course(s): EALC 24323
EALC 34500. Reading Qing Documents. 100 Units. Edit Course Data - default Reading and discussion of nineteenth- and early twentieth-century historical political documents, including such forms as memorials, decrees, local gazetteers, diplomatic communications, essays, and the like.
Instructor(s): G. Alitto Terms Offered: Autumn
Equivalent Course(s): HIST 24500,EALC 24500,HIST 34500

## EALC 34626. Japanese Cultures of the Cold War: Literature, Film, Music. 100

 Units. Edit Course Data - defaultThis course is an experiment in rethinking what has conventionally been studied and taught as "postwar Japanese culture" as instances of Cold War culture. We will look at celebrated works of fiction, film, and popular music from 1945 through 1990, but instead of considering them primarily in relation to the past events of World War Two, we will try to understand them in relation to the unfolding contemporary global situation of the Cold War. Previous coursework on modern Japanese history or culture is helpful, but not required. All course readings will be in English.
Instructor(s): M. Bourdaghs Terms Offered: Autumn
Equivalent Course(s): EALC 24626
EALC 34710. Japan and the World in 19th Century Art. 100 Units. Edit Course Data - default

This seminar will explore artistic interaction between Japan and the West in the late 19th century. Topics include: changing European and American views of Japan and its art, the use of Japanese pictorial "sources" by artists such as Monet and Van Gogh, Japan's invocation by decorative arts reformers, Japanese submissions to the world's fairs, and new forms of Japanese art made for audiences within Japan. Class sessions and a research project are designed to offer different geographical and theoretical perspectives and to provide evidence of how Japonisme appeared from late 19th-century Japanese points of view.
Instructor(s): C. Foxwell Terms Offered: Spring
Equivalent Course(s): ARTH 24710,ARTH 34710,EALC 24710

EALC 34805. 20th Century China Local Community and Oral History. 100 Units. Edit Course Data - default
After a general survey of local and oral history studies in 20th century Chinese history, students will examine secondary scholarly literature and primary documents from three ongoing local rural history research projects (a country history, a regional history and a village history). Documents including transcripts of oral interviews and individual life histories, local gazetteers, memorials, edicts, biographies, social surveys, household registrations, essays, and recent county histories. Some of these Chinese documents have English language translations appended. Students will examine two oral history cases studies in detail.
Instructor(s): G. Alitto Terms Offered: Spring
Equivalent Course(s): HIST 24805,EALC 24805,HIST 34805
EALC 34901. Greece/China. 100 Units. Edit Course Data - default
This class will explore three sets of paired authors from ancient China and Greece: Herodotus/Sima Qian; Plato/Confucius; Homer/Book of Songs. Topics will include genre, authorship, style, cultural identity, and translation, as well as the historical practice of Greece/China comparative work.
Instructor(s): Tamara Chin Terms Offered: Spring
Equivalent Course(s): CMLT 24903,CLAS 37612,CLCV 27612,EALC 24901

## EALC 36601. East Asian Language Acquisition in Society. 100 Units. Edit Course

Data - default
This course will address significant issues in teaching and learning an East Asian language through identification and analysis of specific sociolinguistic and linguistic characteristics of Korean, Japanese, and Chinese. The course will begin with the introduction of linguistic structures of the three East Asian languages to begin discussing the interaction between language acquisition and society. Then, we will explore sociolinguistic issues common to the three languages that underlie the linguistic diversity (and similarities) of East Asia, such as the following topic: (i) the use of Chinese characters, the history of writing reform, and its relation to literacy in East Asian languages; (ii) loan words in East Asian languages, in particular, the use of Chinese characters in modern Japanese and Korean in age of colonialism; (iii) the development and use of honorifics in China, Japan, and Korea, etc. For a comparative approach and perspective to these topics, students will read academic papers for each language on a given topic and discuss the unique sociolinguistic features of each language. Such an approach will allow us to analyze the language influence and interaction among the three languages and how that shapes the culture, society, and language acquisition. Finally, this course will also introduce the field of second language acquisition focusing on how social factors influence L2 learning and acquisition.
Instructor(s): H. Kim Terms Offered: Spring
Equivalent Course(s): EALC 26601

EALC 36800. Korean Literature, Foreign Criticism. 100 Units. Edit Course Data default
Course descriptions: Ever since the introduction of the modern/Western concept of "literature" to the early twentieth century Korea, literary production, consumption, and reproduction have gone hand in hand with the reception of the trends of "criticism" and "theory" propagated elsewhere, in the West in particular. This course examines the relationship between the ideas of "indigenous" and "foreign" as embodied by Korean writers in the fields of creative writings, journalism, and academia with a view to engaging and interrogating the idea of "national literature" and its institutional manifestations. It further examines artistic and theoretical endeavors by Korean writers and intellectuals to critically reflect upon and move beyond the unquestioned linguistic, ideological, and ethno-national boundaries. Instructor(s): K. Choi Terms Offered: Spring
Equivalent Course(s): EALC 26800
EALC 37907. Asian Wars of the 20th Century. 100 Units. Edit Course Data - default This course examines the political, economic, social, cultural, racial, and military aspects of the major Asian wars of the 20th century: the Pacific War, the Korean War, and the Vietnam War. At the beginning of the course we pay particular attention to just war doctrines, and then use two to three books for each war(along with several films) to examine alternative approaches to understanding the origins of wars, their conduct and their consequences.
Instructor(s): B. Cumings Terms Offered: Spring
Equivalent Course(s): HIST 27900,CRES 27900,EALC 27907,HIST 37900

## EALC 38200. Reading the Revolution: Chinese Social History in Documents. 100

Units. Edit Course Data - default
How can we reconstruct the life experience of "ordinary" people at a time of revolutionary change? What are the sources for a history of the Chinese revolution? What can we learn from newspaper articles and official publication? What kind of information can we expect to find in unpublished sources, such as letters and diaries? How useful is oral history, and what are its limitations? We will look at internal and "open" publications and at the production of media reports to understand how the official record was created and how information was channeled, at official compilations such as the Selections of Historical Materials (wenshi ziliao), at "raw" reports from provincial archives, and finally at so-called "garbage materials" (laji cailiao), i.e. archival files collect from flea markets and waste paper traders.
Instructor(s): J. Eyferth Terms Offered: Spring
Equivalent Course(s): EALC 28200,HIST 24505,HIST 34505

EALC 38800. Class and Inequality in Contemporary China. 100 Units. Edit Course Data - default
In the past thirty years, income distribution in China changed from one of the most equal in the world to one of the most unequal ones. This course looks at the roots of inequality in Maoist developmental strategies that favored the cities over the countryside, at the decline of the socialist working class since the 1990s, the emergence of a new working class composed of migrants and of a new urban bourgeoisie, at the administrative structures and ideologies that support inequality in a nominally socialist state, and at protests by workers, farmers, and other disenfranchised social groups. All readings are in English.
Instructor(s): J. Eyferth Terms Offered: Winter
Equivalent Course(s): EALC 28800,HIST 24106,HIST 34106
EALC 39001. Introduction to Classical Japanese. 100 Units. Edit Course Data default
Introduction to the grammar and style of premodern Japanese through a variety of literary texts. Emphasis will be placed on extensive grammatical analysis and translation. Work with original manuscripts will also be introduced as the course progresses.
Instructor(s): R. Jackson Terms Offered: Winter
Prerequisite(s): Three years modern Japanese or consent of instructor
Equivalent Course(s): JAPN 19000,EALC 19001,JAPN 39000
EALC 40455. Selected Readings in Modern Chinese History. 100 Units. Edit Course Data - default
We will read and discuss important English-language works on modern Chinese history that have appeared in the past five years or so. The emphasis is on social and cultural history, with some flexibility to accommodate interests of participating students. The aim of the course is to introduce graduate students in EALC, history, and related disciplines to current debates in the field. Expect to read two books per week.
Instructor(s): J. Eyferth Terms Offered: Spring
EALC 42512. The Painter's Project in Japan, 1750-1930. 100 Units. Edit Course Data - default

This course examines the varied and changing positions of the painter in Japan from the 18th through early 20th centuries. We will consider approaches to the negotiation of artistic selfhood, historical consciousness, copying and the archive, tropes of originality and eccentricity, as well as limitations placed on painters based on gender, socioeconomic background, and region. Painters under investigation include Jakuchu, Hokusai, Takahashi Yuichi, Kyosai, Uemura Shoen, Foujita, Kishida Ryusei, and early Japanese-American artists. Students interested in pursuing comparative work between Japan and another region are encouraged to do so
Instructor(s): C. Foxwell Terms Offered: Winter
Equivalent Course(s): ARTH 42512

EALC 43000. Censorship in East Asia: The Case of Colonial Korea. 100 Units. Edit Course Data - default
This course examines the operation and consequences of censorship in the Japanese Empire, with focus on its effects in colonial Korea. It begins with two basic premises: first, both the Japanese colonial authorities' measures of repression, and the Korean responses to them, can be understood as noticeably more staunch and sophisticated when compared to any other region of the Empire; and second, the censorship practices in Korea offers itself as a case that is in itself an effective point of comparison to better understand other censorship operations in general and the impact of these operations across different regions. With a view to probing an inter- and intra-relationship between censorship practices among a variety of imperial/colonial regions, this course studies the institutions related to censorship, the human agents involved in censorship-both external and internal-and texts and translations that were produced in and outside of Korea, and were subject to censorship. Overall, the course stresses the importance of establishing a comparative understanding of the functions of censorship, and on the basis of this comparative thinking we will strive to conceptualize the characteristics of Japanese colonial censorship in Korea.
Instructor(s): K. Choi Terms Offered: Winter
EALC 44411. Japanese Literary Discourses of Furusato. 100 Units. Edit Course Data - default

The "furusato" (rural hometown) has played an important, sometimes fraught, role in modern Japanese literature, whether as an invented tradition, as a locus of emotional attachment, or as a site of resistance against the dislocations of modernity. This course will survey a number of important modern Japanese literary texts depicting "furusato," as well as recent scholarship on the topic. It will also look at similar formations in other countries, including Germany and China. A large portion of the course readings will be in Japanese, although some selections will be provided in English.
Instructor(s): M. Bourdaghs Terms Offered: Autumn
Prerequisite(s): undefined
Note(s): undefined
EALC 44415. The Philosophy of Money in Japanese Literature. 100 Units. Edit Course Data - default
This course will survey works of Japanese fiction and poetry revolving around issues of money stretching from the late 17th through the late 20th century. We will also read key works in the philosophy of money (Adam Smith, Karl Marx, George Simmel, Karatani Kojin), works of critical theory on the relationship between literature and money, and recent scholarship on the history of money in Japan. All readings will be available in English, although some texts will also be provided in Japanese.
Instructor(s): M. Bourdaghs Terms Offered: Winter
Prerequisite(s): undefined
Note(s): undefined

EALC 45401. Western Zhou Bronze Inscriptions. 100 Units. Edit Course Data default
This seminar is designed to introduce the student to the use of bronze inscriptions in interpreting the history of the Western Zhou dynasty (1045-771 B.C.). While much of the seminar will be spent in attaining the methodological skills necessary to read the inscriptions, historical issues will also be discussed. In this year's seminar, we will focus particularly on the reign of Xuan Wang (r. 827/25-782 B.C.).
Instructor(s): E. Shaughnessy Terms Offered: Autumn
EALC 45820. Chinese Buddhist Texts and Thought. 100 Units. Edit Course Data default
This course is intended as an introduction to the major textual and philosophical currents of Chinese Buddhism for Ph.D. students of Chinese art, history, and literature (though it is in principle open to anyone who can read literary Chinese). We will read sections from important scriptures such as the Vimalakirti, Lotus, and Heart sutras, as well as from Chan literature, with the primary goal of understanding basic Buddhist doctrines (such as "expedient means," "emptiness," "conditioned arising," "Buddha-nature," etc), as well as to gain familiarity with the language and styles of Chinese Buddhist texts and thought
Instructor(s): P. Copp Terms Offered: Winter
Note(s): A companion course dealing with basic texts and doctrines of Daoism will be offered in alternate years.

## EALC 45830. Sources and Methods in the Study of East Asian Buddhism. 100

Units. Edit Course Data - default
This course is intended for graduate students with research interests in Buddhism in East Asia. We will critically examine the approaches modern scholars have taken to the subject (the sources they have focused on, the methods they have employed, the kinds of things they have construed Buddhism to be) as a way to both learn the field and develop our own skills as scholars. Ability in Chinese and/or Japanese helpful but not required.
Instructor(s): P. Copp Terms Offered: Autumn
Prerequisite(s): undefined
Note(s): A companion course dealing with basic texts and doctrines of Daoism will be offered in alternate years.

EALC 45855. Readings in Tang and Song Texts. 100 Units. Edit Course Data default
This quarter the focus is on the genre of religious/philosophical exegesis. We will read representatives commentaries of the Laozi and the Heart Sūtra.
Instructor(s): P. Copp Terms Offered: Winter
Prerequisite(s): Ability in Literary Chinese.
Note(s): undefined
EALC 59700. Thesis Research. 100 Units. Edit Course Data - default
For course description contact East Asian Languages.

EALC 65000. Directed Translation. 100 Units. Edit Course Data - default For course description contact East Asian Languages.

## DEPARTMENT OF ENGLISH Language and Literature

## Chair

- Elaine Hadley

Professors

- Lauren G. Berlant
- Bill Brown
- James K. Chandler
- Maud Ellmann
- Leela Gandhi
- Elaine Hadley
- Elizabeth Helsinger
- Loren A. Kruger
- William J. T. Mitchell
- Michael J. Murrin
- Joshua Keith Scodel
- Richard Allen Strier
- Kenneth W. Warren


## Associate Professors

- Bradin Cormack
- Janice Knight
- James Lastra
- John Mark Miller
- Deborah Lynn Nelson
- Lawrence Rothfield
- Lisa C. Ruddick
- Jay Schleusener
- Eric Slauter
- Christina von Nolcken


## Assistant Professors

- Adrienne Brown
- Timothy Campbell
- Hillary Chute
- Raúl Coronado
- Heather Keenleyside
- Benjamin Morgan
- John Muse
- Srikanth Reddy
- Jennifer Scappettone
- Richard So

Emeritus Faculty

- David Bevington
- George Hillocks, Jr.
- J. Paul Hunter
- Janel Mueller
- Richard G. Stern
- Stuart M. Tave
- William Veeder
- Anthony C. Yu, Divinity

Professor of Practice

- John Wilkinson

Visiting Professors

- Jane Taylor, Autumn 2012, Autumn 2013, Autumn 2014


## Postdoctoral Fellows

- Patrick Jagoda, Mellon Postdoctoral Fellow, 2011-12
- Nicole Wright, Provost Postdoctoral Fellow, 2011-12

Graduate students in English work with a distinguished faculty of critics and scholars to develop their own interests over a broad range of traditional and innovative fields of research. The program aims to attain a wide substantive command of British, American, and other English language literatures. In addition to specializations in the full range of chronologically defined fields, the program includes generous offerings in African American Studies, Latino/a Studies, gender studies, and cinema and other media studies. Students are also trained in textual studies, editing, literary and cultural history, and a variety of critical theories and methodologies. The interests of both faculty and students often carry through to neighboring disciplines like anthropology, sociology, history, art history, linguistics, and philosophy. The University provides a supportive environment for advanced studies of this kind.

## The Degree of Doctor of Philosophy

The program leading to the Ph.D. degree aims primarily to prepare students for independent work as teachers, scholars, and critics by developing their abilities to
pose and investigate problems in the advanced study of literatures in English and in film. Departmental requirements are designed to lead to the doctorate in five to six years. Course work, the preparation of oral fields examinations, workshops, teaching, and the dissertation introduce students to a variety of textual modes, critical methodologies, and historical/cultural problems; provide extensive practice in research, discussion, argument, and writing; and develop pedagogical skills through supervised teaching. While a student's progress will be carefully monitored and periodically evaluated by individual advisors and the department, all students will be accepted into the program on the assumption that they will proceed to the Ph.D.

In the first two years of the Ph.D. program, students are required to enroll in six graduate courses each year (including at least two seminars the first year and three the second year). All first-year students also participate in a one-quarter colloquium designed to introduce theoretical and practical questions posed by the study of literature (through readings in a range of theoretical and literary texts). In the autumn of their third year students will also take a one quarter course in various approaches to the teaching of literature and composition.

Note: Students entering with an M.A. degree in English will be asked to complete at least one year of coursework (six courses, including at least three seminars) plus two additional courses in their second year, participate in the fall quarter colloquium, and take the fall quarter course on teaching in either their second or third years.

Students in their third and fourth years will normally teach at least one quarterlong course each year: initially as course assistants in departmental courses for undergraduates; then as lecturers in the departmental methods and issues course for majors; as bachelor's paper supervisors; or as instructors in courses of their own design. Students may also be employed as writing tutors, assistants in introductory humanities and social sciences core courses, instructors in the College Writing Program course in expository writing (which provides its own training in the teaching of composition), or as teachers at other area colleges and universities. The department believes that both training and experience in teaching is an important part of the graduate program.

## The Degree of Master of Arts

Students seeking a master's degree should apply to the Master of Arts Program in the Humanities (MAPH), a three-quarter program of interdisciplinary study in a number of areas of interest to students, including literature and film. MAPH permits students to take almost all of their courses in the English Department, sharing classes with students in the Ph.D. program. The resulting degree is equivalent to a master's in English.

Further details about the MAPH program are available from the Dean of Students for the Division of the Humanities, to whom students should apply for admission.

## INQUIRIES

For more information on the department's programs and requirements, please see the Department of English website at http://english.uchicago.edu/ or call the Department Coordinator, at (773) 702-8537.

## INFORMATION ON HOW TO APPLY

The application process for admission and financial aid for all graduate programs in the Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http:// humanities.uchicago.edu/prospective/admissions.html.

Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

International students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). (Current minimum scores, etc., are provided with the application.) For more information, please see the Office of International Affairs website at https://internationalaffairs.uchicago.edu/, or call them at (773) 702-7752.

## EnGlish Language \& Literature Courses

ENGL 30201. Advanced Theories of Sex/Gender: Ideology, Culture, and Sexuality. 100 Units. Edit Course Data - default
Beginning with the extension of the democratic revolution in the breakup of the New Left, this seminar will expore the key debates (foundations, psychoanalysis, sexual difference, universalism, multiculturalism) around which gender and sexuality came to be articulated as politically significant categories in the late 1980s and the 1990s. (A)
Instructor(s): L. Zerilli Terms Offered: Autumn
Prerequisite(s): Completion of GNSE 10100-10200 and GNSE 28505 or 28605 or permission of instructor.
Equivalent Course(s): PLSC 21410,ARTH 21400,ARTH 31400,ENGL 21401,GNSE 31400,MAPH 36500,PLSC 31410

ENGL 31000. History and Theory of Drama I. 100 Units. Edit Course Data - default This course is a survey of major trends and theatrical accomplishments in Western drama from the ancient Greeks through the Renaissance: Aeschylus, Sophocles, Euripides, Aristophanes, medieval religious drama, Marlowe, Shakespeare, and Jonson, along with some consideration of dramatic theory by Aristotle, Horace, Sir Philip Sidney, and Dryden. The goal is not to develop acting skill but, rather, to discover what is at work in the scene and to write up that process in a somewhat informal report. Students have the option of writing essays or putting on short scenes in cooperation with other members of the class. End-of-week workshops, in which individual scenes are read aloud dramatically and discussed, are optional but highly recommended.
Instructor(s): D. Bevington, D. Dir Terms Offered: Autumn
Note(s): May be taken in sequence with ENGL 13900/31100 or individually. This course meets the general education requirement in the dramatic, musical, and visual arts.
Equivalent Course(s): CLCV 21200,CLAS 31200,CMLT 20500,CMLT 30500,ENGL 13800,TAPS 28400

ENGL 32302. War and Peace. 100 Units. Edit Course Data - default
Instructor(s): W. Nickell Terms Offered: Autumn
Equivalent Course(s): RUSS 22302,CMLT 22301,CMLT 32301,ENGL 28912,FNDL 27103,HIST 23704,RUSS 32302

ENGL 32311. Transmedia Game. 100 Units. Edit Course Data - default
This experimental course explores the emerging game genre of "transmedia" or "alternate reality" gaming. Transmedia games use the real world as their platform while incorporating text, video, audio, social media, websites, and other forms. We will approach new media theory through the history, aesthetics, and design of transmedia games. Course requirements include weekly blog entry responses to theoretical readings; an analytical midterm paper; and collaborative participation in a single narrative-based transmedia game project. No preexisting technical expertise is required but a background in any of the following areas will help: creative writing, literary or media theory, web design, visual art, computer programming, performance, and game design.
Instructor(s): P. Jagoda Terms Offered: Autumn
Equivalent Course(s): ENGL 25953,ARTV 25401,CMST 25953,CMST 35953,CRWR 26003,CRWR 46003,TAPS 28455

ENGL 33000. Academic and Professional Writing (The Little Red Schoolhouse) 100 Units. Edit Course Data - default
Instructor(s): L. McEnerney, K. Cochran, T. Weiner Terms Offered: Winter, Spring Prerequisite(s): Third- or fourth-year standing
Note(s): This course does not count towards the ISHU program requirements. May be taken for P/F grading by students who are not majoring in English. Materials fee \$20.
Equivalent Course(s): ISHU 23000,ENGL 13000

ENGL 34901. Cosmopolitanisms. 100 Units. Edit Course Data - default
This course explores notions of cosmopolitanism in philosophy, historiography, and literature. Topics to be addressed include world literature, hospitality, hybridity, Silk Road history. Readings will draw from Hellenistic philosophy, the Alexander Romance, Kant, Yasushi, Arendt, Bhabha, Cheah.
Instructor(s): Tamara Chin Terms Offered: Winter
Equivalent Course(s): CMLT 24901,ENGL 24305
ENGL 36302. Renaissance Romance. 100 Units. Edit Course Data - default Selections from a trio of texts will be studied: Ovid's Metamorphoses (as the recognized classical model), Boiardo's Orlando innamorato (which set the norms for Renaissance romance), and Spenser's Faerie Queene. A paper will be required and perhaps an oral examination.
Instructor(s): M. Murrin Terms Offered: Autumn
Equivalent Course(s): ENGL 16302,CMLT 26500,CMLT 36500,RLIT 51200
ENGL 42800. Chicago. 100 Units. Edit Course Data - default
In this course we will sample some of Chicago's wonders, exploring aspects of its history, literature, architecture, neighborhoods, and peoples. We begin with study of the 1893 World's Columbian Exposition and the early history of Chicago as a mecca for domestic and international immigrants. In subsequent weeks we will examine the structure of neighborhood communities, local debates about cultural diversity and group assimilation, and the ideology and artifacts of art movements centered in Chicago. This is an interdisciplinary course focusing not only on literary and historical texts, but also analyzing Chicago's architecture, visual artifacts and public art forms, local cultural styles, museum collections and curatorial practices. We will first explore Chicago sites textually, then virtually via the web, and finally in "real time": Students will be required to visit various Chicago neighborhoods and cultural institutions.
Instructor(s): J. Knight Terms Offered: Winter
Note(s): Cross listed courses are designed for advanced undergraduate and graduate students.
Equivalent Course(s): ENGL 22800,AMER 40800,MAPH 42800

ENGL 44600. Introduction to Cultural Policy Studies. 100 Units. Edit Course Data - default

The course is designed to move beyond the values debate of the culture wars in order to focus on how culturehere defined as the arts and humanitiescan be evaluated analytically as a sector, an object of policy research. In what sense can it be said that there is a national interest or public interest in culture? What is the rationale for government intervention in or provision for the arts and humanities? Is it possible to define the workings of culture in a way that would permit one to recommend one form of support rather than another, one mode of collaboration or regulation over another? Is it possible to measure the benefits (or costs)economic, social, and politicalof culture? We will begin by reading some classic definitions of culture and more recent general policy statements, then address a series of problematic issues that require a combination of theoretical reflection and empirical research.
Equivalent Course(s): PPHA 39600

## ENGL 48700. History of International Cinema I: Silent Era. 100 Units. Edit Course

 Data - defaultThis course introduces what was singular about the art and craft of silent film. Its general outline is chronological. We also discuss main national schools and international trends of filmmaking.
Instructor(s): J. Lastra Terms Offered: Autumn
Prerequisite(s): Prior or concurrent enrollment in CMST 10100. Required of students majoring in Cinema and Media Studies.
Note(s): This is the first part of a two-quarter course.
Equivalent Course(s): CMST 28500,ARTH 28500,ARTH 38500,ARTV 26500,ARTV
36500,CMLT 22400,CMLT 32400,CMST 48500,ENGL 29300,MAPH 36000
ENGL 48900. History of International Cinema II: Sound Era to 1960. 100 Units.
Edit Course Data - default
The center of this course is film style, from the classical scene breakdown to the introduction of deep focus, stylistic experimentation, and technical innovation (sound, wide screen, location shooting). The development of a film culture is also discussed. Texts include Thompson and Bordwell's Film History: An Introduction; and works by Bazin, Belton, Sitney, and Godard. Screenings include films by Hitchcock, Welles, Rossellini, Bresson, Ozu, Antonioni, and Renoir.
Instructor(s): Y. Tsivian Terms Offered: Winter
Prerequisite(s): Prior or concurrent registration in CMST 10100 required. Required of students majoring in Cinema and Media Studies.
Note(s): CMST 28500/48500 strongly recommended
Equivalent Course(s): CMST 28600,ARTH 28600,ARTH 38600,ARTV 26600,CMLT
22500,CMLT 32500,CMST 48600,ENGL 29600,MAPH 33700

ENGL 52401. The Policing of Culture. 100 Units. Edit Course Data - default
We will discuss a) the historical rationales for governmental intervention in culture; b) the objects of policing action (producers, distributors, consumers, products, practices. etc.); c) the objectives of policing; d) the tools of governmental policing (negative tools such as regulation, prohibition/censorship, etc., but also positive tools such as incentives, allocation of property rights; information); and d) the political economy of cultural policy (how does one measure the impact of a governmental action on institutions, artists, audiences, or art works?). We will focus on three very different efforts at policing: the National Endowment for the Humanities' programs; attempts to develop cultural districts; and initiatives to stem the looting of archaeological sites.
Terms Offered: Spring 2006
Equivalent Course(s): PPHA 43300

## DEPARTMENT OF Germanic Studies

Chair

- David E. Wellbery

Professors

- David Levin
- Eric L. Santner
- David E. Wellbery

Associate Professors

- David Levin
- Susanne Luedemann
- Christopher J. Wild

Senior Lecturers

- Catherine Baumann
- Kimberly Kenny

Emeritus Faculty

- Reinhold Heller
- Samuel Jaffe
- Kenneth J. Northcott
- Hildegund Ratcliffe


## Affiliated Faculty

- Philip V. Bohlman, Ph. D., Mary Werkman Professor of the Humanities and of Music; Chair of the Committee on Jewish Studies
Interests: German-Jewish and German-American ethnomusicology; theory and history of folksong.
- John W. Boyer, Ph. D., Martin A. Ryerson Distinguished Service Professor of History; Dean of the College
Interests: German and Austrian history, 18th century to the present; religion and politics in modern European history; European urban history.
- Daniel Brudney, Ph. D., Associate Professor of Philosophy Interests: Marx, German philosophy, Frankfurt School.
- James Conant, Ph. D., Professor of Philosophy Interests: Kierkegaard, Heidegger, Wittgenstein.
- Kathleen Conzen, Ph. D., Professor of History Interests: German-American history and the history of international migration.
- Constantin Fasolt, Ph. D., Karl J. Weintraub Professor of History; Master of the Social Sciences Collegiate Division; Deputy Dean of the Division of the Social Sciences; Associate Dean of the College
Interests: Early modern German history.
- Michael Forster, Ph. D., Professor of Philosophy Interests: Herder, Hegel.
- Michael Geyer, Ph. D., Samuel N. Harper Professor of German and European History
Interests: German history of the 19th and 20th centuries with special interest in contemporary German and European affairs.
- Andreas Glaeser, Ph. D., Associate Professor of Sociology

Interests: Theories of culture and identity; with reference to Germany mostly post-unification controversies, social memory and architecture, reality construction processes among civil servants in authoritarian regimes.

- Miriam Hansen, Ph. D., Ferndinand Schevill Distinguished Service Professor in Humanities; Professor, Department of English, Cinema and Media Studies Interests: Frankfurt School, film theory, German cinema, contemporary German intellectual life, Alexander Kluge.
- John Haugeland, Ph. D., Professor of Philosophy Interests: Heidegger, philosophy of language.
- Gary Herrigel, Ph. D., Associate Professor of Political Science Interests: Political economy of advanced industrial states (Germany, USA, Japan), German political and industrial history in the 19th and 20th centuries, social and political theory.
- Berthold Hoeckner, Ph. D., Associate Professor of Music and the Humanities Interests:19th century Austro-German music; Lyrik und Lied; Romantische Musikästhetik; Wagner; Adorno and music.
- Loren Kruger, Ph. D., Professor, Department of English; Department of Comparative Literature; Committee on African Studies; Committee on Cinema and Media Studies; Committee on Theatre and Performance Studies Interests: German literature 18th century to present (esp. drama); GDR and contemporary Germany; Brecht, Heiner Müller, Marxism; the Cold War; Frankfurt School; "Das andere Deutschland."
- Jonathan Lear, Ph. D., John U. Nef Distinguished Service Professor at the Committee on Social Thought and in the Department of Philosophy Interests: Freud, Wittgenstein, Heidegger.
- Francoise Meltzer, Ph. D., Mabel Greene Meyers Professor of French, Comparative Literature, and the Divinity School; Acting Director of the Franke Institute for the Humanities
Interests: German romanticism, philosophy.
- Paul Mendes-Flohr, Ph. D., Professor of Modern Jewish Thought in the Divinity School, Committee on Jewish Studies; Associate Faculty in the Department of History Interests: German-Jewish intellectual history.
- Glenn W. Most, Ph. D., Visiting Professor in the Committee on Social Thought Interests: German literature and philosophy since the 18th century.
- Robert B. Pippin, Ph. D., Raymond W. and Martha Hilpert Gruner Distinguished Service Professor; Committee on Social Thought and Department of Philosophy Interests: Kant; German Idealism; Nietzsche; Heidegger; Modernity Theory.
- Moishe Postone, Ph. D., Raymond W. and Martha Hilpert Gruner Distinguished Service Professor of History; Committee on Jewish Studies Interests: Marx, Frankfurt School, contemporary European social theory, contemporary German affairs (with particular focus on issues of anti-semitism and the relation of the Nazi past to postwar German society and culture).
- Robert Richards, Ph. D., Morris Fishbein Professor of the History of Science and Medicine; Professor in the Departments of Philosophy, History, Psychology, and the Committee on Conceptual and Historical Studies of Science Interests: German Romanticism, history and philosophy of science.
- Jerrold Sadock, Ph. D., Glen A. Lloyd Distinguished Service Professor, Department of Linguistics Interests: Germanic languages (Scandinavian, Yiddish).
- Malynne Sternstein, Ph. D., Associate Professor of Slavic Languages and Literatures
Interests: Central European Studies, Literary, Psychoanalytic and Cultural Theory; Art and Media Theory
- David Tracy, Ph. D., Andrew Thomas Greeley and Grace McNichols Greeley Distinguished Service Professor of Catholic Studies and Professor of Theology and the Philosophy of Religion in the Divinity School; Committee on Social Thought
Interests: 19th century German philosophy and theology.


## OVERVIEW

The graduate program in Germanic Studies at the University of Chicago stresses an interdisciplinary model of study, long an emphasis at this University, which allows students to construct fields of research in fresh ways. In order to draw on the University's strengths, both inside and outside the department, students are encouraged to work not only with departmental and affiliated faculty but with faculty throughout the University whose courses are of relevance to their particular interests.
The University's Workshops (non-credit, interdepartmental seminars that meet biweekly) offer a further avenue for interdisciplinary work. Students are also encouraged to participate in the department's colloquia and lecture/discussions.
Language courses taught in the department include German, Norwegian, and Yiddish.

## Application and Financial Support

Applicants to the Department of Germanic Studies should have a solid background in German language and culture. Students with undergraduate degrees in other fields are encouraged to apply, but must include with their application a list of relevant German/Germanic courses as well as a letter of recommendation from a faculty member able to evaluate their level of German language competency. Such students will be asked to make up deficiencies in their language preparation before entry into the graduate program. All entering students whose native language is not German are required to pass an ACTFL (American Council on the Teaching of Foreign Languages) oral proficiency examination in German during their first quarter in the program.

Admission to the department is competitive. Fellowships awarded by the Department of Germanic Studies for a small number of highly qualified students combine stipend and teaching salary to provide support beyond tuition amounting to $\$ 23,000$ per year, two summer stipends in the amount of $\$ 3,000$ each, and University student health insurance. These awards are renewable for up to five years. In addition, departmental funds are used to support students in summer projects, travel, and research. In addition, the Norwegian Culture Program Endowment Fund provides some money for research and travel support for students interested in Norwegian language and culture. Finally, competitive university grants are available for dissertation-level teaching, research, and writing.

Applications to the program must include a writing sample of not more than twenty pages, in German or English; Graduate Record Exam scores from the general examination; TOEFL (Test Of English as a Foreign Language) scores, if applicable; and three letters of recommendation.
The application process for admission and financial aid for all graduate students is administered through the divisional office of the Dean of Students (http://humanities.uchicago.edu/prospective/). The Application for Admission and Financial Aid, with instructions, deadlines and department-specific information is available on the Graduate Student Online Application page. Please note that the application and all supporting materials are to be submitted online. Questions pertaining to admissions and aid should be directed to: humanitiesadmissions@uchicago.edu or (773) 702-1552.

## DEGREE REQUIREMENTS

The following is an outline of the main features of the graduate program. If you need additional information, please write directly to the Department of Germanic Studies (http://german.uchicago.edu/03_contact/contact.html).

Students in the Department of Germanic Studies are as a rule admitted to the entire Ph.D. sequence of study. Students interested in a one-year interdisciplinary Master's program in Germanic Studies may want to contact the Master of Arts Program in the Humanities (http://humanities.uchicago.edu/depts/maph/). Study towards the M.A. degree, normally completed after the first year, is intended as an
introductory period, a time for both faculty and students to decide on the suitability of an extended graduate program. All students entering the Ph.D. program with a master's degree from another institution will undergo an informal evaluation at the end of their first year in the department to assess their progress and to plan their further course of study.

## Degree of Master of Arts

## COURSE WORK

Three quarters of course work and a total of eight courses are required during the first year of study. These include the mandatory pedagogy course ("Acquisition and Teaching of Foreign Languages"). A completed M.A., which includes the pedagogy courses and a "superior" rating on the German oral proficiency test, are prerequisites for teaching appointments. Besides the pedagogy course, students must take at least one course each quarter from departmental faculty, and at least two additional courses from departmental faculty during the year. The remaining courses could contain little or no Germanic material and may be taken primarily for methodological, theoretical, or historical interest. Course selections must receive the approval of the Director of Graduate Studies (http:// german.uchicago.edu/03_contact/contact.html). All courses must be taken for a letter grade. We expect students to develop a broad historical sense of German culture through coursework as well as their own background reading. The primary aim of the master's year is for students to explore a variety of materials, approaches and problems.

## LANGUAGE EXAMINATION

Students who do not achieve a "superior" rating on the oral proficiency examination in German (to be taken early in their first quarter) will be advised to undertake further language training or to take other steps to improve their skills; they will be re-tested during the second quarter.

## M.A. EXAM

The purpose of the M.A. exam is to test students' ability to work with concepts central to the discipline, to articulate literary-historical arguments, to discuss significant patterns that extend beyond individual texts, and to articulate how such concepts relate to the interpretation of individual works. In addition, the exam establishes a useful foundation of knowledge upon which the student can build in later studies.

The examination takes place in the eighth week of Spring Quarter of the student's first year of graduate study. Its basis is a list of some twenty to twenty-five texts selected by the student in consultation with the two members of the student's M.A. exam committee. (The committee-consisting of two members of the department's core faculty - is to be designated by the Director of Graduate Studies (http:// german.uchicago.edu/03_contact/contact.html) in consultation with the student.) This list reflects a category of literary research such as a genre, a period, or a
general concept bearing on a mode of writing. Examples of the former might be "The Bourgeois Tragedy" or "Modern Urban Short Prose" or "The Elegy." Periods can be variously conceived: Enlightenment, Realism, Weimar Republic. General concepts are more abstract categories such as "narrative" or "performance" or "argumentative writing." Lists could also be organized along thematic lines or in terms of a traditional narrative subject. The point is that the list be designed so as to sustain a process of coherent intellectual inquiry. In addition to the 20-25 primary texts, the list includes a representative cross-section of secondary literature addressing the topic under study.
The examination itself has two components:
a) a take-home written examination, and
b) an oral examination approximately one hour in length.

The take-home component consists of three essays (of two and one half, never more than three double-spaced pages) written in answer to questions devised by the faculty. These questions offer the student an opportunity to demonstrate her/his ability to explore various intellectual issues raised by the list as a whole as well as by specific works on the list. Students will receive these questions on Friday morning of the eighth week of classes and hand in their completed essays by 5:00 p.m. the following Monday. The oral examination is devoted to a critical discussion of the students' three essays as well as to works included on the list but not addressed in the written part of the examination. It will take place one week after the written exam. Following a forty-minute discussion of the essays, the student and the faculty examination committee will assess the student's overall progress, including course work.

A crucial aspect of the M.A. examination is planning and advising. Students should choose their examiners and have one planning meeting with each examiner by the eighth week of Autumn Quarter. Students should choose examiners and design the lists with a view to the seminars they plan to attend throughout the year. Students must submit their lists for approval at the end of the fourth week of Winter Quarter. Two weeks after submission, they should meet with their examiners to discuss preparation for the exams. During Spring Quarter, students should meet with their examiners twice prior to the exam in order to discuss questions arising from their readings. Of course, throughout the process students are encouraged to discuss questions arising from their readings with other faculty members, both inside and outside the Department of Germanic Studies.

First Year: Time Schedule for M.A. Exam

Fall, Week 8 - Choose examiners
Winter, Week 4-Submit exam list for approval
Winter, Week 7 - Arrange to meet with examiners to discuss exam preparation
Spring, Week 8 - Written exam
Spring, Week 9 - Oral exam

## The Degree of Doctor of Philosophy

The Ph.D. phase of study will be self-designed to a greater extent than the M.A. Students who enter with an M.A. from another university will be required to take one pedagogy course in their first year ("Acquisition and Teaching of Foreign Languages"). This requirement may be waived by the department if a student can demonstrate that equivalent work was successfully completed at another institution. Completion of the course (or a departmental waiver), together with a "superior" rating on the oral proficiency interview in German taken early in the first quarter (or re-taken later if necessary), are prerequisites for teaching appointments.

## COURSE WORK

Students will establish that balance of course work and individual preparation that best suits their intellectual agenda. Course selections, however, must be approved by the Director of Graduate Studies (http:// german.uchicago.edu/03_contact/contact.html). A minimum number of eight courses over two years, not including the pedagogy course, is required. All of these courses must be taken for credit. Six must be taken for a letter grade. The remaining two may be taken Pass/Fail. Typically, the two post-M.A. years (during which students will also be teaching) will look as follows: two seminars each quarter the first year; at least one seminar each quarter for the fall and winter quarters of the second year; exams in the spring quarter of the second year. In this way students will have ample time during the second Ph.D. year to prepare for the exams.

## LANGUAGE EXAMINATION

All students are required to pass one university foreign language reading examination (usually in French, ancient Greek, Latin, Russian, Spanish, Turkish, or Italian) before taking their Ph.D. oral exams. Students whose dissertation work requires them to read original texts in a language not listed above may petition the department and division to accept that language instead.

## PH.D. EXAMINATIONS

Students will complete the Ph.D. exams in three stages. During the last quarter of the first Ph.D. year and the following summer, students are asked to begin assembling a Ph.D. major field list (of about 50 works) and two annotated syllabi for future courses-one undergraduate, one graduate-that they would like to teach. An important part of the job market portfolio, the syllabi are to demonstrate the student's ability to 'translate' some of their research interests into viable seminars and to explain their choices. The syllabi should include a rationale for the design of the course. The two courses should be on topics other than the major field, although they may intersect with it. The major field list should be organized around a broad topic such as "Discourses of Madness from Kant to Musil", "Worldly Provincialism: German Realism 1850-1900", or "The Aesthetics of Sacrifice in Post-war German Literature and Art." Students should then group their 50 works into several clusters according to particular themes or sets of questions. Students are invited to consult with as many faculty members as possible as they work on these materials. They
should also arrange for an exam committee of three faculty: two faculty members (normally both members of the department) to compose and evaluate the written examination questions, and a third faculty member (from either the departmental or affiliated faculty) to serve as an additional examiner for the oral exam.

At the beginning of the fall quarter of the second Ph.D. year, students will submit preliminary exam lists and both syllabi to the faculty committee they have chosen and to the graduate advisor. (In many cases, students will actually wish to submit one of these syllabi for the annual Tave competition in the winter quarter. (The Stuart Tave Teaching Fellowship allows graduate students to teach a free-standing, self-designed undergraduate class.)

The four-hour, open-book, written exam will be taken no later than the 7th week of spring quarter. Six weeks prior to the exam, each student will submit to the exam committee and to the graduate advisor a list of categories and questions that indicate what he or she considers to be the salient issues of the major field. Faculty will use this list as a guide in preparing the exam. Within two weeks of the exam, the committee, joined by the third member, will meet with the student for an hour-long discussion that will encompass the exam, the two syllabi, and plans for the dissertation. Students should work on their dissertation proposals over the summer and schedule the formal proposal defense at the beginning of the fall quarter of the third Ph.D. year. For further details regarding the Ph.D. examinations, students are encouraged to consult with the graduate advisor.

## Second Ph.D. Year: Time Schedule for Ph.D. Exam

Fall, Week 3 - Preliminary exam list and syllabi

Spring, Week 2 - Submit list of questions/categories designed to help you organize and think about the texts on your major field; these should be submitted to the exam committee and the DGS
Spring, Week 7 - Written exam
Spring, Week 9 - One hour long discussion of written exam, syllabi, major field list, and dissertation plans

## Dissertation Proposal

After the Ph.D. examination, a student should identify and select a dissertation committee. One member of the committee is chosen as the dissertation advisor and primary reader, and the others as second and third readers. A proposal ought not attempt to predict the final conclusions of the project before the research is fully under way. Instead, it should attempt to divide the project into subordinate questions and to rank the parts of the project in terms of priority. It should include a preliminary bibliography, a potential chapter structure and should indicate a rough timetable for the research and writing of the dissertation. The proposal of 20-25 pages should be problem-driven, question-oriented, and should contextualize the project within current debates in the field. The student will then have an opportunity to discuss the project in a PROPOSAL DEFENSE with the dissertation committee. This should be done not later than one quarter after the Ph.D. examination. Students should file copies of their examination lists and proposal with the department administrator.

The dissertation proposal is due no later than one quarter after passing Ph.D. examinations.

## WRITING THE DISSERTATION

After the proposal has been approved by the readers, the student should plan on spending the remainder of the fourth year researching and reading. Some students may spend this time away; others may choose to remain in Chicago to work closely with their readers. We encourage students to try to complete the dissertation during the fifth year, if possible. All students should complete the dissertation by the end of the sixth year.

## Teaching in the College

Graduate students in the Department of Germanic Studies at the University of Chicago will enter the job market with a solid basis in current pedagogical theory and practice as well as a range of teaching experiences in a variety of classroom settings. Teaching in the undergraduate language program is an integral part of the graduate program.

Before they begin teaching, graduate students must participate in a graduate seminar on pedagogy ("Acquisition and Teaching of Foreign Languages"). This course is an introduction to foreign language acquisition and to the theoretical models underlying current methods, approaches and classroom practices. Syllabus and test design and lesson planning are also treated. All participants do two days of observation and two days of supervised teaching in a first-year class.

Graduate students have the opportunity to teach in the beginning and intermediate German language program (http://german.uchicago.edu/12_language/ language.html). They have full responsibility for the courses they teach, including syllabus design, day-to-day instruction, test design, grading and all other record keeping. Input from the graduate students is also critical in the ongoing implementation and revision of the curriculum. Internal grant monies have been made available to support the development of an on-line writing project designed by graduate students, as well as other curricular innovations.

Graduate students also have the opportunity to work as on-site coordinators and/or instructors in study-abroad programs in Vienna and Freiburg (http:// german.uchicago.edu/11_studyabroad/studyabroad.html). The preparation of students for study-abroad and their reintegration into the curriculum is an ongoing process in which graduate students, in their roles as instructors, are deeply involved.

Each fall there is an orientation for all graduate students who will teach that year. It is held in conjunction with the Center for Teaching and Learning (http:// teaching.uchicago.edu/) and deals with general procedural and pedagogical issues as well as specific course objectives and practices. This inter-departmental cooperation also includes jointly held workshops and seminars on different topics in
the field of second language teaching, offered by University of Chicago faculty and experts from other institutions.

## COURSES

## German Courses

## 30209. Film Aesthetics: Agency and Fate in Film Noir. (=SCTH 30209)

This course is a discussion of how philosophical issues are raised and addressed by movies through an examination of a particular film genre. The genre to be considered: film noir. We focus on ten Hollywood film noirs from the 1940s and 1950s. Topics include the pictorial and dramatic representation of the relation between thought and action, the nature of agency, and the problem of fate. We also secondarily touch on questions concerning the ontology and aesthetics of film (e.g., What is a movie? What is it to give a reading of a movie? What is a film genre?). We see and discuss a film each week and read several pieces of criticism about each film. R. Pippin and J. Conant, Autumn, 2009.

## 32900. Beowulf. (=ENGL 15200, ENGL 35200, FNDL 28100).

This course will aim to help students read Beowulf while also acquainting them with some of the scholarly discussion that has accumulated around the poem. We will read the poem as edited in Klaeber's Beowulf (4th ed., Univ. of Toronto Press, 2008). Once students have defined their particular interests, we will choose which recent approaches to the poem to discuss in detail; we will, however, certainly view the poem both in itself and in relation to Anglo-Saxon history and culture in general. Prerequisite: Eng 149/349 or equivalent. M. Von Nolcken, Winter 2009.

## 33300. For German for Research Purposes.

This rigorous course begins with an introduction to grammar and vocabulary enabling students to read and comprehend German. Students then perform a series of process exercises designed to practice the specific skills they need to use German for research. Students are able to work with texts and journals in their own discipline to complete these exercises. Graduate students who take and perform well in this course will be able to read in a foreign language reading, and will also master skills they useful as scholars in their field. The course also prepares student for the graduate reading exam. No previous knowledge of German necessary. Spring2010.

## 35100. Newberry Library: Law \& Literature in Anglo-Saxon England. (=ENGL 15104/35104).

Law and literature are both narratives that reveal much about the community that produces them. This seminar will explore legal issues such as feud, marriage and status of women, and theft. We will read and translate the legal texts that discuss these issues and then see how literary texts incorporate legal elements to create tension and drive the narrative. Some texts include laws from Aethelberht, Alfred, Edmund, and Cnut, as well as selections from Beowulf, the Anglo-Saxon Chronicle, Juliana, and the Wife's Lament. J. Schulman, Winter 2010.
35109. Literary Case Studies.

Since the French lawyer Francis Gayot de Pitaval published his famous collection of criminal cases ("Causes célèbres et intéressantes", 1734-1743), the case study as a specific genre has basically been developed in the fields of clinical and juridical anamnesis. At the same time, this genre has always been very close to literature: Not only have lawyers and psychiatrists always used literary techniques to present their cases, but literature itself has picked up these 'real' cases and made them the initial basis for investigating the hidden mainsprings of crime and madness. However, the objectives of literary case studies are neither clinical nor juridical in the narrower sense of these terms: whereas medicine and law aim at subsuming the individual case under general categories of disease or crime (such as "schizophrenia" or "murder"), the cognizance of literature is more directed at bringing out the stress ratio between singular case and general norm. In literary texts, an individual becomes a 'case' just because his or her singular fate cannot be subsumed under general rules, because he or she remains excluded and / or exempt from the law. If deviant subjectivity in modern literature can nevertheless be called exemplary, this exemplarity is paradoxically due to its state of exception. In this course we will read literary case studies from Schiller to Handke to examine how they deal with this paradox of a 'particular general' or an 'exemplary singularity'. We will also read selected clinical and juridical case studies with regard to the mutual interferences of law, literature and medicine. Readings will include Friedrich Schiller, „,Der Verbrecher aus verlorener Ehre" / „Schillers Pitaval" („Merkwürdige Rechtsfälle als ein Beitrag zur Geschichte der Menschheit, verf., bearb. u.hg. v. Friedrich Schiller") / Carl Philipp Moritz, „Magazin zur Erfahrungsseelenkunde" [excerpt] / Heinrich v. Kleist, „Michael Kohlhaas" / E.T.A. Hoffmann, „Der Einsiedler Serapion"; ,,Der Sandmann" / Georg Büchner, „Lenz" / Theodor Fontane, „Unterm Birnbaum" / Sigmund Freud, ,,Studien über Hysterie" / Michel Foucault, „Der Fall Rivière" / Ingeborg Bachmann, „Der Fall Franza" / Peter Handke, „Die Angst des Tormanns beim Elfmeter". The course will be given in German. S. Lüdemann,Spring 2009.

## 35209. Literary Realism.

Realism in German literature reached its peak in the period between 1850 and 1890 when authors increasingly focused on the literary representation of bourgeois experience and everyday life. However, programs of realism are in a way as old as literature itself: Mimesis, imitation of the contemplated or experienced reality, and verisimilitude have been ideals in Arts and Literature since antiquity and have seen numerous revivals and transformations throughout history. Yet it was only in the 19th century that the "realistic impulse" (Richard Brinkmann) became so explicit that a whole generation of artists and writers now called itself "realists". However, this "programmatic realism" came along with the withdrawal of reality itself that no longer appeared a simple 'given' or self-evident to human perception. Thus, "realism" is not only a category of style or the designation of a period but also the indication of a problem: the problem of how to bridge the gap between representation and what is represented, between the 'subjectivity' of an observer and the supposed 'objectivity' of the observed. The more sophisticated the literary techniques of description and hypotyposis became, the more reality revealed itself to be dependent on the media in which it is described. In this course we will reconstruct the history of the 'realistic problem' through a range of literary and
theoretical texts from the 18th to the 20th centuries. Readings will include Goethe, E. T. A. Hoffmann, Franz Grillparzer, Gottfried Keller, Adalbert Stifter, Theodor Fontane and Robert Musil. The course will be given in German. S. Lüdemann, Winter 2009.

## 35210. Literary Landscapes.

Landscape is to literature what setting is to theatre. "Where should something take place, if not in the landscape?" as Matthias Goeritz put it. Thus, even the first book of Genesis opens with a pastoral scene, in fact with the opening up of landscape per se as a backdrop to humanity. The first book of Genesis also shows that the creation of landscape is the creation of a symbolic order where things and beings are placed in specific spatial and social relations to each other. However, landscape as a concept and aesthetic object (rather than just a 'region' or a 'tract of land') only arose in the $16^{\text {th }}$ century, when the poetic act of 'staging' or opening up of fictional spaces through words or images became self-reflective, i.e., artists no longer saw themselves as replicating God's creation, but rather as creators of their own artificial settings. In this course we will examine landscapes and their topologies from the late $18^{\text {th }}$ to $20^{\text {th }}$ centuries. Although the course will focus on (German) literature, it will also take the interrelationship of literature and painting into account. Readings will include Goethe, Schiller, Kleist, Jean Paul, Eichendorff, Fontane, Stifter and others. Reading will be mainly in German and discussion in both German and English. S. Lüedemann, Winter 2010.

## 35509. Media and Theology. (= CMST 35509, THEO 35509).

Theology as the discourse of the divine is predicated on the deep chasm between God and man, transcendence and immanence, as well as the assumption that communication across this divide is simultaneously possible and problematical. At different historical junctures the problem of mediation and communication came especially to the fore. Beginning with the Old and the New Testaments we will examine some of these junctures, but we will focus in particular on the European Reformation and its cultures of communication. Arguably, at the center of the Reformation was a crisis of mediation to which it responded and which it helped to perpetuate. Religious media were thought to be fundamentally corrupted and corruptive and hence in need of reform. To name only a few examples, priesthood, liturgy, worship, and scripture had all been perverted and had to be restored to their original state of 'pure communication.' Consequently, media were as much instruments of reform as they were its targets. Likewise, the various theologies of the Reformation offered different solutions to the perceived crisis of mediation. It will be one of the working assumptions of this course that theology and Reformation theology in particular are one of the major tributaries of modern thinking about media and communication. Readings and discussions in English. C. Wild, Winter 2009.

## 35809. Jacques Derrida: Early Writing.

Jacques Derrida, Early Writings Deconstruction can be conceived as both a philosophical project and a practice of reading. As a philosophical project, deconstruction inscribes itself in the tradition of the critique of metaphysics, from Nietzsche via Heidegger and Adorno to post structuralism. As a practice of
reading (and, consequently, of writing), deconstruction performs the movement of a decentering and a displacement of traditional concepts which is to challenge classical figures of identity, being, sense and others. Both the philosophical project and the practice of reading belong together: According to Derrida, 'to be an heir' means to assume responsibility for one's own reading of the texts of the metaphysical tradition; 'Reading' means to follow a significant trace which has to be produced by the act of reading itself. In this course, we will examine the exposition of the project and the practice of reconstruction in Derrida's early books: "Of Grammatology", "Writing and Difference", and "Margins of Philosophy". We will not only deal with important concepts such as 'writing', 'trace' and 'différance', but also with the political and ethical commitment underlying Derrida's attack on logocentrism. All reading and discussion will be in English. Recommended editions: "Of Grammatology", translated by Gayatri Chakravorty Spivak, Johns Hopkins University Press, corrected paperback edition 1998. "Margins of Philosophy", translated by Alan Bass, The University of Chicago Press, paperback edition 1985. "Writing and Difference", translated by Alan Bass, The University of Chicago Press, paperback edition 1978. S. Lüedemann, Autumn 2009.

## 36009. Translations. Figurations of Trans-Nationality in Texts of Goethe and Political Romanticism.

What is now called by historians as "the long 19th century" (the period from the French Revolution to the end of World War One), was mostly interpreted as the main period of modern European nation building. But nevertheless, already at its very beginning, this period is also a time of thinking the trans-national structure of Europe in a new way. Especially in the 'Age of Goethe,' the number of attempts viewing and conceiving Europe as an entity of mutual translations (and transfers) in the domains of culture and politics are increasing. But on the other hand, thinking Europe as an entity of translation means something different in this time: to take up the traditional doctrine of translatio imperii, which had its origins in the Christianity of the Middle Ages. Against the background of current philosophical theories concerning the future of Europe (Rémi Brague, Massimo Cacciari, Peter Koslowski), the course will investigate the contemporary combination of as well as the contemporary tension between these two models of cultural and political translation. It will be devoted to close readings of texts of Goethe, Kant, Novalis, and Friedrich Schlegel in their cultural and political aspects and implications. Readings in German (and English); discussion in German. U. Hebekus (Bosch Fellow), Spring 2009.

## 36409. Interpreting Goethe's Faust. (=CMLT 36400, SCTH 47011).

Intensive study of Goethe's Faust, Parts I and II. The major task of the seminar is to develop a synthetic reading of the entire Faust drama, as Goethe conceived it. What are the leading concepts of a contemporary interpretation of Faust? Discussion will address the major lines of interpretation as developed especially in the philosophical literature and in the major recent studies commentaries. Selective consideration of the tradition of Faust-representations (from the so-called Volksbuch to Valery will enable us to circumscribe the historical and aesthetic specificity of Goethe's work. Sound reading knowledge of German required. D. Wellbery, Autumn 2009.

GRMN 36709. Shakespeare, Marlowe, Benjamin, and Brecht. In this course, we will read several plays of Shakespeare and Marlowe in relationship to the theoretical writings of two twentieth-century critics, Walter Benjamin and Bertolt Brecht. Why did Benjamin and Brecht think Shakespeare and Marlowe were radical, avant-garde playwrights? What conclusions did they draw from Shakespeare and Marlowe for their own political moment? How were Brecht's own plays and dramatic theory influenced by these earlier writers? Texts will include Shakespeare, Hamlet; Marlowe, Edward II and Tamburlaine; Benjamin, The Origin of German Tragic Drama and Understanding Brecht; Brecht, Selected Plays and his Short Organon for the Theater. Intended for students with an interest in Renaissance literature and European modernism, as well as a strong interest in literary theory. V. Kahn, Autumn, 2009

## 36710. Literature in the "Age of Extremes."

This course examines literary responses and philosophical reflections on what the historian Eric Hobsbawm has called the "Age of Extremes": the twentieth century, its radical aspirations and its terrors. Our starting point are two recent theoretical works that seek to reassess, from two diametrically opposed angles, the totalitarian experience which has marked the century, Alain Badiou's Le siècle (2005) and Peter Sloterdijk's Zorn und Zeit (2006). The main focus of the course is on a series of literary works that embody the century's exalted aspirations and their price. Readings, in German and English, include Kafka, Brecht, Ernst Jünger, LouisFerdinand Céline, Varlam Shalamov, Danilo Kiš, Peter Weiss, and Heiner Müller. R. Buch, Winter 2010.

## 37610. Theater and Tragedy in the (German) Baroque.

Most Benjamin scholars have only a limited knowledge of the dramas discussed in his seminal work, the "Ursprung des deutschen Trauerspiels;" and most scholars of the German Baroque theater don't take Benjamin's failed Habilitationsschrift seriously enough in order to engage its insights in a sustained manner. The major task of the seminar will be to reconcile both by first acquiring first-hand knowledge of major works of seventeenth-century German drama. We will not restrict ourselves to the two best known dramatists, Andreas Gryphius and Daniel Casper von Lohenstein, but will, following Benjamin's lead, peak at the second and third tier and read Haugwitz, Hallmann and others. In order to contextualize the Protestant theater of the 17th Century, we will, as far as time permits, survey other theatrical cultures (Jesuit, English, Spanish et al.). In a second step we will use the historical and textual knowledge gained to seriously engage Benjamin's book in its own right. As one of the profoundest examinations of theater and theatricality in the German Baroque and beyond it has much to offer in way of understanding theater's formal semantics and structure. A sound reading knowledge of German is required. If you are preparing for the seminar by (re-)reading "Ursprung des deutschen Trauerspiels" you may skip the "Erkenntniskritische Vorrede." C.Wild, Spring 2010.

## 37909. Poor World: Walsher, Kafka, Beckett.

The seminar will focus on a series of modernist authors whose project would appear to be to discover the possibilities of human life and expression at the point of a radical impoverishment of one's world or form of life. The seminar will begin
with a discussion of Melville's Bartlbeyand and move on to novels and short prose by Walser, Franz Kafka, and Samuel Becket. E. Santner, Winter 2009.
41100. The Noise of Imperial Cities. (= CDIN 41700, MUSI 42109, SALC 43100, ENGL 47110, RLIT 41700, HIST 44902).

The soundscapes of empire converge in the cities of empire to unleash a complex cacophony and counterpoint of colonial encounter, appropriation, and subversion. Center and periphery collapse in upon themselves, transforming the traditional arts of power and powerlessness into modern mixes, in which history's telos falters before the avant-garde and edge of multiple modernisms and postmodernisms. The cosmopolitan noise the imperial city remixes contains the sounds of the local and the global, the classical monumentality of the colonial capital and the postcolonial experimentation of the displaced. P. Bohlman and L. Koch, Spring 2009.

## 41200. Richard Wagner and Critical Theory (=CMST 41200, MUSI 45509).

PQ: Advanced standing and consent of instructor. This course examines the intersection of Wagner and contemporary critical theory. We read a broad range of Wagner's writings and a broad range of writings on Wagner; we explore a number of the stage works on paper and in production. In addition to Wagner's own writings, we read critical works by: Carolyn Abbate, Theodor Adorno, Elisabeth Bronfen, Catherine Clement, Carl Dahlhaus, Friedrich Kittler, Barry Millington, Jean-Jacques Nattiez, Michel Poizat, Michael Steinberg, Hans-Rudolf Vaget, Samuel Weber, Marc Weiner and Slavoj Zizek. D. Levin, Winter 2009.

## 45300. Colloquium: Marx (=HIST 64600, PLSC 46400).

This course will undertake an intensive examination of Karl Marx's mature social theory. Although it will also consider the development of Marx's thoughts, the course will primarily focus on a close reading of Capital. That text will not be approached as a positive science of economics, but as an attempt to formulate a critical and reflective theory of social mediation that would be adequate to the character and dynamic of modern social life. M. Postone, Autumn 2009.

## 45510. Affect and Embodiment in $17^{\text {th }}$ Century Opera (=MUSI 45510).

This seminar will deal with issues of affect and embodiment in $17^{\text {th }}$ Century opera, approached in a grounded historical way but also through the lens of the present. Course taught in English. C. Risi (Bosch Fellow), Spring 2010.
48910. From the Rubble: Art, Architecture, and Design in the Era of European Reconstruction. (=ARTH 48910). This class examines the art, architecture, and design produced in Western Europe from the end of World War II and into the 1960s, with an eye to understanding the ways in which these forms of expression grappled with the horrors of World War II, the reconstruction of cities, the so-called "economic miracle," and the continent's emerging role in the Cold War. A central question will be the way in which art and design practices central to modernism such as essentialism, organism, abstraction, self-expression, or the ready-made resonate with the reconstruction era in ways that go beyond its more obvious representations. Focusing on the art of France, Italy, the Benelux and German speaking countries, we will also consider the redefinitions of national identified and the emergence of a continental, pan-European identity. Permission of instructor
only. Limited to 14 students. Solid reading knowledge of German, French, or Italian required. Please send an e-mail to Prof. Mehring per instructions given in the first class meeting. C. Mehring, Winter 2009.

## 49100. Acquisition/Teaching of German. Independent Reaching Course.

An introduction to foreign language acquisition and to the theoretical models underlying current methods, approaches and classroom practices, as well as their practical applications. Required of all graduate students who wish to teach in the College German Program. C. Baumann, Autumn, Winter, Spring.

## 51200. Translating Theory. (= CDIN 51200, CMLT 51200, ENGL 59303, SLAV 40200).

This seminar uses the theory and practice of translating texts of theory, criticism, philosophy and other genres of disciplinary inquiry to explore the boundaries between disciplines. Authors may include: T.W. Adorno, Walter Benjamin, Jacques Derrida, Umberto Eco, José Ortega y Gasset, Roman Jakobson, Friedrich Schleiermacher and Viktor Shklovsky, and current theorists whose work raises questions of translation directly or indirectly such as Franz Fanon, Nestor García Canclini, and Philip Lewis. Topics include the translation of sacred and quasi sacred texts (including Marx) as well as contemporary theory. Open to all humanities *PhDs* including philosophy, visual art, and all language departments, as well as the divinity school and the committee on social thought. Cultural social sciences (e.g. anthropology or history) by application. PQ ACTIVE working knowledge of at least one source language: French, German, Italian, Russian, Spanish; possibly Dutch. Admission to seminar based on a short in-class translation. Requirements: formal presentation on an existing translation and final translation of an as yet untranslated text of theory, philosophy or criticism. L. Kruger and R. Bird, Spring 2009.

## 51400. Arabesque Narrative: A Hybrid Form of the Imaginary. (=CDIN 51400, ARTH 46210, SCTH 51400).

This seminar takes as its object of study the arabesque narrative, a form located between verbal and pictorial modes of representation. Our task will be twofold: 1) to analyze a specific tract in the history of pictorial-literary relations that extends, roughly, from the seventeenth to the twentieth century; 2) to develop an analytical vocabulary for the analysis of verbal-pictorial relations that will support productive intellectual exchange between literary and art history. From Gotthold Lessing to Clement Greenberg, a predominant tendency in the theory of the relationship between the arts has been to emphasize their mutually exclusive character. One correlate of this oppositional mode of thought is an emphasis on "purity" in representation: that is, the proscription of modes of interference and interlacing between the artistic media. The tradition of "arabesque narrative" is an intriguing theme just because it represents a counter-trend to the purist tendency in, broadly speaking, 'modern' aesthetics. For this very reason, of course, arabesque narrative constitutes a privileged zone in which to explore the relations between art-historical and literary-historical inquiry. We will discuss texts by Sterne, Lichtenberg, E.T.A. Hoffmann, Baudelaire among others and the work of artists such as Hogarth,

Runge, Menzel, and Klinger. Sponsored by the Center for Disciplinary Innovation at the University of Chicago. D. Wellbery and R. Ubl, Winter 2010.
55300. Coll. Marx.: Critical Theory and 20th Century - 1. The ensemble of approaches developed by theorists of the Frankfurt School, and critically extended by Habermas and others - is arguably one of the richest and most powerful attempts to formulate a social and historical theory adequate to the twentieth century. Eschewing conventional disciplinary boundaries and orthodox Marxist understandings of social life, critical theory sought to grasp the large-scale transformations of the twentieth century by synthesizing various dimensions of modernity - political, social, economic, cultural, legal, aesthetic, psychological systematically and intrinsically, rather than eclectically and extrinsically. These theorists reject the notion of a social-scientific standpoint independent of its social and historical context, by insisting on epistemological self-reflection as a condition of an adequate historical/social theory. This two-quarter colloquium considers this tradition in depth, the theoretical difficulties it encountered, and some possible theoretical responses to the dilemmas of critical theory. We begin by examining the "first generation" theorists of the Frankfurt School, focusing on works by Horkheimer, Marcuse, and Adorno; the second quarter will concentrate on later works by Adorno, as well as the theoretical trajectory of Habermas.
M. Postone, Winter 2009 55400. Coll. Marx.: Critical Theory and 20th Century -
2. The second quarter of this two-quarter colloquium concentrates on later works by Adorno, as well as the theoretical trajectory of Habermas. M. Postone, Spring 2009

## Yiddish COURSES

33709. Singer and Bellow: Jewish Novelists of the 20th Century. (= GRMN 23709/33709, CMLT 22801/32801, ENGL 28909/48917).

The American novelist Saul Bellow and the Yiddish storyteller I.B. Singer, two of the most innovative writers of the twentieth century, created artful fiction that articulated the search for a spiritual realm in a starkly secular world. They both rejected political and religious utopias, which they vehemently exposed in their work. Their writings encompass the major seismic changes in modern Jewish life in the twentieth century: migration, urbanization, war, Holocaust, marital breakup, sexual freedom, alienation, and exile. In this course we will compare and contrast the novels of Bellow and Singer. Both came of age as writers in the polarized political and cultural climate of the interwar period. They were indebted to the Eastern European Jewish culture in Yiddish that continued to inspire them. The Yiddish-American context will be discussed in connection with their only collaboration in print, Bellow's translation of Singer's short story "Gimpel the Fool," which became the latter's introduction to a mass readership in English. We will examine how Bellow and Singer developed a neo-conservative world view that articulated their disillusionment with modernity and the political and cultural isms of the twentieth century. The secularization of Jewish life became the backdrop against which the two writers created individual characters who, often in monologue form, elaborated on their discontent with modernity and quest for spiritual meaning. Both writers were at the forefront of the Jewish
literary renaissance of the 1950s and 1960s. We will examine how they artistically addressed the aftershock of the Holocaust in their novels of the 1960s, Bellow's Mr. Sammler's Planet (1969) and Singer's Enemies: A Love Story (1972). Bellow and Singer reinvented the novel as a poetic universe of self reflection that gave voice to the Jewish urban experience. As such, to quote Murray Baumgarten, they created "city scriptures"; novelistic styles that aspired to "higher" transcendental meanings beyond the market driven conditions of modern life. The novels of these two belated neo-Romanticists encapsulate the central intellectual and spiritual ferments of their times: the secularization of Jewish life and its impact on the individual in the break-up of traditional religious life, the urban experience, and the destruction of European Jewry in World War II. J. Schwarz, Winter 2009.

## Department of Linguistics

Chair

- Chris Kennedy

Professors

- Diane Brentari
- Victor Friedman, Slavic Languages \& Literatures
- Susan Gal, Anthropology
- Anastasia Giannakidou
- John Goldsmith
- Lenore Grenoble, Slavic Languages \& Literatures
- Chris Kennedy
- Jason Merchant
- Salikoko Mufwene
- Michael Silverstein, Anthropology

Associate Professors

- Karlos Arregi
- Amy Dahlstrom
- Jason Riggle
- Alan Yu

Assistant Professors

- Itamar Francez
- Greg Kobele
- Ming Xiang

Emeritus Faculty

- Howard I. Aronson, Slavic Languages \& Literatures
- Bill Darden, Slavic Languages \& Literatures
- Gene B. Gragg, Oriental Institute
- Paul Friedrich, Anthropology
- Eric P. Hamp, Linguistics
- Carolyn G. Killean, Near Eastern Languages \& Civilizations
- Colin P. Masica, South Asian Languages \& Civilizations
- G. David McNeill, Psychology
- Jerrold Sadock, Linguistics

Since 1926, the Department of Linguistics at the University of Chicago has been at the center of the development of the field, counting among its faculty
linguists of the first rank such as Sapir and Bloomfield. It is theory-oriented with a deep empirical interest in languages. One of its outstanding characteristics is its commitment to a wide range of approaches to the study of language. Interdisciplinary, interdepartmental study is encouraged, and students regularly work with faculty in several other departments. Students are expected to become active researchers as soon as possible after their arrival here. Many students come with strong undergraduate training in linguistics, or with a Master's degree; others come with strong training in fields such as philosophy, mathematics, or a particular language or language group. The faculty are involved in synchronic and diachronic research on languages from around the world. These varied interests are reflected in the topics of the dissertations that have been written in the Department.

## Program

The University of Chicago operates on the quarter system. The graduate program in linguistics leading to the PhD degree is intended to be completed in five years. Graduate students normally register for three courses per quarter, three quarters per year. They generally take three to four years of coursework. In the first year, students take nine courses, three of their choosing as well as the following six obligatory courses: Phonological Analysis 1-2, Syntactic Analysis 1-2, and Semantics and Pragmatics 1-2; they must also enroll in the colloquium series course (P/F). In subsequent years, students have a great deal of flexibility in course selection, though their programs of study must include the following: one course each in historical linguistics and morphology; a "methods" course (field methods, mathematical methods, etc.); and one advanced course in each of the following areas:

- Phonetics/phonology
- Syntax/semantics/pragmatics
- Socio-historical linguistics

In years two and three, when students are writing qualifying papers, they must also take the Research Seminar.

A large proportion of courses offered in the Linguistics Department are advanced courses that are open to all students. The topics of these courses change from year to year, in reflection of the ongoing research interests of both faculty and graduate students, and cover areas of current interest in the field at large. Students are also free to take courses related to their research interests that are offered by other departments in the University.
In the second and third years, students continue taking courses and write two qualifying papers under faculty supervision. In addition to these major landmarks, students are required to pass reading examinations in two scholarly languages (normally French, German, Spanish, Chinese, Japanese, or Russian, though others may be substituted upon petition to the department), and to satisfy a non-Indo European language requirement. Upon completion of the qualifying papers and language requirements and defense of a dissertation proposal, students
are admitted to candidacy for the PhD ; the only remaining requirement is the dissertation.

The University of Chicago offers several joint doctoral programs. Such options currently exist between the Department of Linguistics and the Department of Anthropology, the Department of Comparative Human Development, the Department of Psychology, the Department of Near Eastern Languages and Civilizations, the Department of Slavic Languages and Literatures, and the Department of Philosophy. Students from other departments who wish to apply for a joint PhD in Linguistics may do so only after completing the six foundational courses (Phonological Analysis 1, 2; Syntactic Analysis 1, 2; and Semantics and Pragmatics 1, 2).

## Application and Admission

Completed applications for admission and aid, along with all supporting materials, are due in mid-December for the academic year that starts in the following Autumn.
Four parts of the application are critically important and should accompany the application: the student's academic record, letters of recommendation submitted by persons able to describe the student's achievements and promise, the student's statement of purpose, which describes the intellectual issues and subjects which they hope to explore at Chicago, and a sample of pertinent written work that demonstrates the applicant's research interests or capabilities. The sample may consist of published essays, class term papers, or a B.A. or M.A. thesis, or some combination of all of these. The student's academic record is documented through official transcripts, but applicants are also encouraged to submit as supplemental material an 'annotated transcript': a file they create that lists all the courses they have taken which are relevant to graduate study in linguistics, with the grade received, the full name of the instructor, major texts used or studied, and a brief (no more than five sentences) description of the material covered in the course. Such a supplemental file is more informative for judging the preparation of an applicant than is the official transcript.
Students whose first language is not English must submit scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Information about these tests may be obtained from the Educational Testing Service, Princeton, NJ 08540.

When completing the application form, it is of benefit to the applicant to be as specific as possible in describing his or her research interests. General comments are of relatively little use; applicants are encouraged to discuss specific linguistic subject matters that they are interested in or have worked on.
If an applicant knows faculty members with whom he or she might work, the latter's names should be given as well. The faculty of the Linguistics Department would be happy to answer any questions that prospective students may have. Please contact them individually regarding their research or classes, or contact the Director of Graduate Studies for more general or administrative questions.

The application process for admission and financial aid for all graduate programs in Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http:// humanities.uchicago.edu/prospective/admissions.html.

Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

## LINGUISTICS - LINGUISTICS COURSES

LING 30721. Dynamic Semantics. 100 Units. Edit Course Data - default
An introduction to the foundations and applications of dynamic approaches to natural language semantics. We will study the formal details and empirical motivations of various major dynamic semantic frameworks such as File Change Semantics, Discourse Representation Theory, Dynamic Predicate Logic, and Update Semantics, and see how they address a number of puzzling natural language phenomena such as donkey anaphora and presupposition projection. In parallel to the formal component, the empirical and theoretical advantages and drawbacks of dynamic semantics will come under scrutiny, and we will also pay close attention to the philosophical repercussions of a dynamic approach to discourse and reasoning. (B)

Instructor(s): M. Willer Terms Offered: Autumn
Prerequisite(s): Knowledge of first-order logic with identity strongly recommended. Students will benefit most if they have taken classes in semantics or philosophy of language before.
Equivalent Course(s): PHIL 20721,LING 20721,PHIL 30721
LING 31100. Language in Culture I. 100 Units. Edit Course Data - default
Among topics discussed in the first half of the sequence are the formal structure of semiotic systems, the ethnographically crucial incorporation of linguistic forms into cultural systems, and the methods for empirical investigation of "functional" semiotic structure and history.
Instructor(s): M. Silverstein Terms Offered: Not offered 2012-13; will be offered 2013-14
Prerequisite(s): Consent of instructor
Equivalent Course(s): ANTH 37201,CHDV 37201,PSYC 47001
LING 31200. Language in Culture II. 100 Units. Edit Course Data - default
The second half of the sequence takes up basic concepts in sociolinguistics and their critique.
Instructor(s): C. Nakassis Terms Offered: Not offered 2012-13; will be offered 201314
Prerequisite(s): Consent of instructor
Equivalent Course(s): ANTH 37202,PSYC 47002

LING 36400. Introduction to Slavic Linguistics. 100 Units. Edit Course Data default
The main goal of this course is to familiarize students with the essential facts of the Slavic linguistic history and with the most characteristic features of the modern Slavic languages. In order to understand the development of Proto-Slavic into the existing Slavic languages and dialects, we focus on a set of basic phenomena. The course is specifically concerned with making students aware of factors that led to the breakup of the Slavic unity and the emergence of the individual languages. Drawing on the historical development, we touch upon such salient typological characteristics of the modern languages such as the rich set of morphophonemic alternations, aspect, free word order, and agreement.
Terms Offered: Autumn 2012
Note(s): This course is typically offered in alternate years.
Equivalent Course(s): SLAV 20100,LING 26400,SLAV 30100
LING 36700. Intro to Cognitive Linguistics: Human Being, Language, and Mind.
100 Units. Edit Course Data - default
Instructor(s): Y. Gorbachov Terms Offered: Winter 2012
Equivalent Course(s): SLAV 21700,LING 26700,SLAV 31700

## DEPARTMENT OF MUSIC

## Chair

- Robert L. Kendrick


## Professors

- Philip V. Bohlman
- Thomas Christensen
- Martha Feldman
- Robert L. Kendrick
- Marta Ptaszynska
- Shulamit Ran
- Anne Walters Robertson
- Augusta Read Thomas


## Associate Professors

- Berthold Hoeckner
- Travis A. Jackson
- Lawrence Zbikowski

Assistant Professors

- Seth Brodsky
- Melvin Butler
- Steven Rings

Senior Lecturers

- Howard Sandroff
- Barbara Schubert


## Lecturers

- James Kallembach
- Amy Briggs

Emeritus Faculty

- Easley R. Blackwood
- John Eaton
- Philip Gossett


## Programs of Study

The Department of Music at the University of Chicago offers both the degree of Master of Arts and the degree of Doctor of Philosophy in three areas: composition, ethnomusicology and the history and theory of music.

The program in composition is designed to develop students' creative and technical abilities at writing new music. Students take individual composition lessons with faculty members, often studying with more than one faculty member in the course of their residence. Students also receive training in a wide variety of related areas and skills, including score reading and conducting, orchestration, musical analysis, twentieth century styles, historical periods and (optionally) computer generated sound synthesis. A portion of this training will lead to the development of a minor field in ethnomusicology, musicology, theory and analysis or research in computer music. There is a weekly seminar for all of the students in the composition program, designed to broaden the perspectives and address the problems of aspiring composers.

The program in ethnomusicology prepares students to carry out scholarship and writing about the place of music in various cultures. Students receive grounding in cultural theory, anthropology, ethnographic methods, problems in cross-cultural musical analysis, and a variety of world and popular musics. They also conduct fieldwork on some of these musics. The program is interdisciplinary, drawing upon course offerings in music, anthropology and a variety of area studies.

The program in music history and theory prepares students to carry out various kinds of scholarship and writing about music, especially (but not solely) in traditions of European and American repertories. Students may emphasize either the historical or theoretical side of scholarship, according to their interests, and may also choose to pursue a minor field in composition. Students emphasizing music history typically concentrate on varieties of musicology that include cultural history, textual criticism, stylistic studies, institutional history, hermeneutics and critical theory. Students emphasizing music theory typically concentrate on detailed analysis of individual works, clusters of works (by genre or composer, for example), theoretical systems and the history of theory. Most students who complete the Ph.D. in music history and theory seek academic employment, but others have gone on to work in fields such as publishing, operatic production, and commercial editing.

## COURSES

The following provides a general outline of educational opportunities and degree requirements in the programs, but in no way replaces the detailed information given to all prospective students and enrolled students in the department. Up to date information about academic programs and courses is available on the website of the Music Department at http://music.uchicago.edu.
During the first two years of study students take a number of required offerings (numbered between 30000 and 39900) including analysis courses, proseminars in historical periods and in ethnomusicology, courses on particular skills and individual composition lessons, depending on their programs of study. At the same time they take seminars (numbered above 41000), which tend to be more specialized and more advanced. About half of a student's schedule consists of electives, which may include non-required courses in the department, courses given outside the department and reading courses (i.e. independent studies).

Students entering the program without a master's degree in music from another institution take fifteen courses during the first two years of scholastic residence (before taking comprehensive exams). Those entering with a master's degree from another institution normally take nine courses in the first year of scholastic residence (before taking comprehensive exams).

In addition to courses and other requirements (listed below), students who wish to obtain an M.A. must submit two seminar papers, or a composition of at least eight minutes, for approval by the faculty.

Students who continue in the program beyond the first half of scholastic residence enter the remainder of scholastic residence (through the fourth year), during which students in the scholarly programs are required to take three seminars, and students in composition are expected to develop a minor field of four courses. Standard minors for composition students include ethnomusicology, musicology, theory and analysis, or computer music research. In addition, students in the second part of scholastic residence (after the comprehensive exams) fulfill remaining requirements and begin work on the dissertation (see below).
Thus students entering their program of study without a master's degree in music can expect to complete their course work in three or four years. Those entering with a master's can expect to complete their course work in two or three years.

## COMPREHENSIVE EXAMINATIONS

Students ordinarily take comprehensive exams just prior to the beginning of the third year in the program. Students entering with a master's degree in music from another institution have the option of taking their exams at the beginning of their second year.
Students in composition take three comprehensive examinations:

- The composition of a work based on a set of given guidelines
- An oral examination on ten compositions from the repertory
- A close analysis of a single work or movement

Students in ethnomusicology take five comprehensive exams:

- A close analysis of a single piece of music
- Tthe identification, from notation and by ear, of music from both European historical and world music traditions
- Essays covering:
- The conceptual foundations of musical scholarship
- A broad area of world music (e.g. Middle East, Africa)
- A historical period of European music corresponding to one of the three given to students in history and theory (see below)

Students in history and theory take five of the following eight examinations (within some distribution guidelines):

- Analysis of tonal music
- Analysis of atonal music
- The identification of music scores of from all periods of music in the European tradition
- Historical essays on music before 1600
- Historical essays on music from 1600 to 1800
- Historical essays on music since 1800
- Essays on the conceptual foundations of musical scholarship, including ethnomusicology
- Essays in music theory

While course work helps prepare students for comprehensive exams, students are expected to be enterprising in their efforts to determine both areas of weakness that they need to work on, and ways to synthesize and interrelate knowledge about history, repertory, theory, and so forth. Students should expect to spend an extended period of time engaged in intensive individual study in preparation for comprehensive exams, particularly during the summer before taking them.

## Special Field Examination/ Dissertation Proposal

After having passed the comprehensive exams, students in music history and theory and in ethnomusicology also take a two-part oral exam at some time during the remainder of scholastic residence. For students in ethnomusicology, the first part of the oral tests the student's knowledge of, and ability for, synthetic thought within a selected area of world music. For all students, the exam is a defense of the dissertation prospectus, demonstrating the propriety and feasibility of the topic and the student's knowledge of the existing literature about it. Normally students take this exam in the third or fourth year. The exam is administered by the student's dissertation committee (often including a person from outside the department), with additional faculty members sometimes attending as well.

## DISSERTATION

For students in music history and theory and in ethnomusicology the dissertation for the Ph.D. consists of a book length study that makes an original contribution to research and thought. Students in composition must complete a large scale composition that shows professional competence, as well as a paper demonstrating ability to do advanced work in an area of musical scholarship (ordinarily the student's minor field), normally 30-50 pages in length. All students are required to defend the dissertation before receiving the degree.

## LANGUAGE EXAMINATIONS

Language requirements are fulfilled through examinations testing the student's ability to translate about 400 words of a passage of medium difficulty from source materials or other musicological literature, using a dictionary. Three times per year the department administers examinations in French, German, Italian, and Latin. The department arranges for students to take other languages related to their research or compositional interests.

For the Ph.D. program in composition, one foreign language is required. (This requirement cannot be met by the composer's language of origin.) For the Ph.D. program in ethnomusicology and music history, three languages are required, one of which must be German. Students concentrating in theory are examined in German and one additional language. All master's degrees require one language.

## MUSICIANSHIP EXAMINATIONS

Examinations in practical musicianship skills are administered by the Department of Music. These include examinations in basic musicianship skills and advanced musicianship skills. Examinations in basic musicianship include musical dictation, sight singing, and sight reading at the piano or another instrument in the Western musical tradition. Advanced musicianship skills include three skills to be realized at the piano (for students with advanced keyboard skills) or realized in written form (for students with no advanced keyboard skills): figured bass, reading of open vocal scores in old clefs and orchestral score reading (with a 24 -hour preparation period). Other advanced musicianship skills are atonal dictation, transcription of music from oral or improvisatory traditions, improvisation in an improvisatory tradition, and playing in a University ensemble for at least one year concluding with a public concert. Students may petition to play in a recognized performing group other than official University ensembles. Students may also petition to fulfill the ensemble requirement through a solo performance in a university concert.

The number and kind of musicianship examinations for composition, ethnomusicology, history, and theory vary according to the respective programs as specified in the department's Graduate Curriculum. Musicianship examinations are given during each of the three quarters. There is no limit to the number of examinations a student may take at a single sitting, and no limit to the number of times that a student may retake a musicianship examination. The Department offers free, informal, non-credit instruction in these skills. Instruction will be offered on an individual basis. The Department is not obligated to offer instruction in the area chosen by the student.

All departmental master's degrees require successful completion of two musicianship examinations, except composition, which requires successful completion of three.

## Colloquium

The Department sponsors a colloquium series that typically includes four or five presentations each quarter, normally on Friday afternoons. Colloquium presentations are made by students and faculty in the Department and by visiting scholars or composers from elsewhere. As the most regular departmental occasion for intellectual dialogue and one of the most important opportunities for outside professional contact, colloquium is viewed as an important part of academic life in the Department. It is normally taken for credit during the second part of Scholastic Residence.

## GRaduate Teaching

There exist a number of opportunities for teaching during students' graduate careers. The various teaching opportunities range from assistantships to individual course assignments for which students have virtually full responsibility. The kinds of courses taught or assisted by graduate students include those in history, appreciation, theory, ear training, and world music. In addition to these assignments, students may be nominated for Stuart Tave Teaching Fellowships in the Humanities Collegiate Division, which allow advanced graduate students in the humanities to teach upper level undergraduate courses in their own areas of research.

## MUSIC TheOry Mentoring Partnership

This program provides opportunities for graduate students in the Department of Music to serve as part time faculty at colleges and universities in the Chicago area. Participants will be hired by the institution to teach or assist in an undergraduate course in music theory or aural skills, and will be compensated at that institution's pay scale for part time faculty. Participants will be assigned a mentor who is a permanent member of the institution's theory faculty, and whose role will be to orient participants to the culture of the institution, and to provide guidance and feedback on syllabi, classroom presentations, grading, and so forth. Eligibility requirements for this program are two years of course work at U of C (one year if you entered with an MA); AND prior service as a Lecturer or a Course Assistant in a music course at the University of Chicago, or comparable experience at another institution. The program is open to students in ethnomusicology, composition, and historical musicology, as well as to those who are specializing as theorists. In addition to the music theory mentoring program, Advanced students frequently secure part time teaching at other local institutions, or in the Graham School of General Studies.

## PERFORMING ACTIVITIES

Candidates for degrees are encouraged to perform in one of the many groups sponsored by the department or in one of its recital venues. Performing organizations include the University Symphony Orchestra, the University Chamber

Orchestra, the University Wind Ensemble, the New Music Ensemble, the University Chorus, the Motet Choir, the Jazz X-tet, the Central Javanese Gamelan and the Middle East Music Ensemble. Abundant professional and semi-professional opportunities exist throughout the metropolitan area for students who are accomplished performers. Recent departmental students have performed in the University's Rockefeller Chapel Choir, the Civic Orchestra of Chicago, the Chicago Sinfonietta, the Newberry Consort, and Contempo (the University of Chicago Chamber Players), among others.

## WORKSHOPS

Students in the department frequently attend one of the many interdisciplinary workshops that are organized throughout the University as forums for intensive intellectual exchange between faculty and graduate students. Those that have recently attracted students in music have included (for example) the workshops on Medieval Art, Liturgy, and Music; the Renaissance; Music and Language; African American Studies; Chicago Public Spaces; History and Philosophy of Science, Economies of the Senses, and the Ethnomusicology Workshop (Ethnoise).

## Application

Applicants to the programs in music history and theory and in ethnomusicology will be asked to submit two papers as samples of their previous works in addition to the usual application forms, transcripts, letters of recommendation, and GRE scores. Applicants in composition will be asked to submit scores, preferably three, and tapes when they are available.

In addition to their scholastic skills, students need at least a modicum of proficiency in fundamental musical skills in order to succeed in the program. It is expected that entering students have competence in playing a musical instrument or singing, as well as possess basic skills in ear training and music theory.

Prospective applicants seeking more detailed information about the course requirements, exams, etc. than is given here should write to the chair of the admissions committee in the Department of Music for a copy of the Graduate Curriculum. The address is: Department of Music, 1115 E. 58th Street, Chicago, IL 60637, telephone: (773) 702-8484. We will also send more detailed materials on faculty interests and activities and (upon request) on performing groups.

Further information about the various aspects of the graduate program, such as course descriptions, the Graduate Curriculum, and the Graduate Student Handbook, can also be obtained from the Department of Music's home page on the World Wide Web, http://music.uchicago.edu. Students interested in the program can apply online.
The application process for admission and financial aid for all graduate programs in Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions,
deadlines and department specific information is available online at http:// humanities.uchicago.edu/prospective/admissions.html.
International students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

## Music Courses

MUSI 31801. The Analysis of Song. 100 Units. Edit Course Data - default This course focuses on the art song of the nineteenth century, with special attention to the relationship between tonal structure and song text. Both individual songs and song cycles are considered, with the main emphasis on works by Schubert, Schumann, and Brahms. Student projects include comparative analyses of settings of the same text by different composers, analyses of a song and its later arrangement as an instrumental work, or the analysis and performance of a song.
Instructor(s): L. Zbikowski Terms Offered: Autumn
Prerequisite(s): MUSI 15300 or equivalent
Note(s): This course typically is offered in alternate years.
Equivalent Course(s): MUSI 25801
MUSI 31901. Introduction to Cognitive Musicology. 100 Units. Edit Course Data default
This course surveys recent research in music cognition and cognitive psychology and explores how it can be applied to music scholarship. We begin with a general review of research on categorization, analogy, and inferential systems. This review is paired with close readings of empirical literature drawn from cognitive science, neuroscience, and music psychology, as well as theoretical work in cognitive linguistics and cognitive anthropology. Student projects focus on applications of research in cognitive science to historical musicology, ethnomusicology, music theory, or music analysis. Weekly lab meetings required.
Instructor(s): L. Zbikowski Terms Offered: Winter
Prerequisite(s): MUSI 15300 or equivalent. Open to nonmajors with consent of instructor.
Note(s): This course typically is offered in alternate years.
Equivalent Course(s): MUSI 25701

## MUSI 33300. Introduction to the Social and Cultural Study of Music. 100 Units.

 Edit Course Data - defaultThis course provides an introduction to ethnomusicology and related disciplines with an emphasis on the methods and contemporary practice of social and cultural analysis. The course reviews a broad selection of writing on non-Western, popular, vernacular, and "world-music" genres from a historical and theoretical perspective, clarifying key analytical terms (i.e., "culture," "subculture," "style," "ritual," "globalization") and methods (i.e., ethnography, semiotics, psychoanalysis, Marxism). In the last part of the course, students learn and develop component skills of fieldwork documentation and ethnographic writing.
Terms Offered: Autumn
Note(s): Prior music course and ability to read music notation not required.
Equivalent Course(s): MUSI 23300
MUSI 33503. Introduction to the Musical Folklore of Central Asia. 100 Units. Edit Course Data - default
This course explores the musical traditions of the peoples of Central Asia, both in terms of historical development and cultural significance. Topics include the music of the epic tradition, the use of music for healing, instrumental genres, and Central Asian folk and classical traditions. Basic field methods for ethnomusicology are also covered. Extensive use is made of recordings of musical performances and of live performances in the area.
Instructor(s): K. Arik Terms Offered: Spring
Prerequisite(s): Knowledge of Arabic and/or Islamic studies helpful but not required Equivalent Course(s): NEHC 20765,ANTH 25905,EEUR 23400,EEUR 33400,MUSI 23503

MUSI 34700-34800. Introduction to Computer Music. Edit Course Data - default This two-quarter course of study gives students in any discipline the opportunity to explore the techniques and aesthetics of computer-generated/assisted music production. During the first quarter, students learn the basics of digital synthesis, the Musical Instrument Digital Interface (MIDI), and programming. These concepts and skills are acquired through lecture, demonstration, reading, and a series of production and programming exercises. Weekly lab tutorials and individual lab time in the department's computer music studio are in addition to scheduled class time.

MUSI 34700. Introduction to Computer Music. 100 Units. Edit Course Data default
Instructor(s): H. Sandroff Terms Offered: Autumn
Prerequisite(s): Consent of instructor. Rudimentary musical skills (but not technical knowledge) required.
Note(s): Basic Macintosh skills helpful. This course is offered in alternate years. Equivalent Course(s): MUSI 26300

MUSI 34800. Introduction to Computer Music. 100 Units. Edit Course Data default<br>Instructor(s): H. Sandroff Terms Offered: Winter<br>Prerequisite(s): Consent of instructor. Rudimentary musical skills (but not technical knowledge) required.<br>Note(s): Basic Macintosh skills helpful. This course is offered in alternate years. Equivalent Course(s): MUSI 26400

MUSI 35800. Tuning Theory. 100 Units. Edit Course Data - default
This course begins with a description of the logarithmic perception of pitch increments. We then cover the historically important tunings of the diatonic scalejust intonation, Pythagorean and meantone tunings, and twelve-note equal tuning. A parametric representation is described that reveals that the historic tunings are particular members of a general family of diatonic tunings. We also discuss the individual chromatic properties of certain equal tunings, focusing on the tunings of $12,15,17,19$, and 31 notes.
Instructor(s): E. Blackwood Terms Offered: Spring
Prerequisite(s): Ability to read music
Note(s): This course typically is offered in alternate years.
Equivalent Course(s): MUSI 25800
MUSI 38200. Multiple-Media Composition. 100 Units. Edit Course Data - default Equivalent Course(s): MUSI 28200

# Department of Near Eastern Languages and Civilizations 

Chair

- Theo P. van den Hout, Oriental Institute


## Professors

- Fred M. Donner
- Walter T. Farber, Oriental Institute
- Cornell Fleischer
- McGuire Gibson, Oriental Institute
- Norman Golb
- Janet H. Johnson, Oriental Institute
- Dennis G. Pardee
- Robert K. Ritner, Oriental Institute
- Martha T. Roth, Oriental Institute
- Gil Stein, Oriental Institute
- Matthew W. Stolper, Oriental Institute
- Theo P. van den Hout, Oriental Institute
- John E. Woods, History

Associate Professors

- Orit Bashkin
- Hakan Karateke
- Franklin D. Lewis
- Brian Muhs, Oriental Institute
- Tahera Qutbuddin
- David Schloen, Oriental Institute
- Ada Holly Shissler
- Christopher Woods, Oriental Institute
- K. Aslihan Yener, Oriental Institute

Assistant Professors

- Ahmed El Shamsy
- Petra Goedegebuure, Oriental Institute
- Rebecca Hasselbach, Oriental Institute
- Nadine Moeller, Oriental Institute
- Na'ama Rokem
- Andrea Seri, Oriental Institute

Professorial Lecturer

- Farouk Mustafa

Senior Lecturers

- Ariela Finkelstein
- Saeed Ghahremani

Lecturers

- Osama Abu-Eledam
- Kagan Arik
- Stuart Creason
- Muhammad Eissa
- Noha Forster
- Hripsime Haroutunian
- Kay Heikkinen Research Associates (Associate Professors)
- W. Raymond Johnson, Oriental Institute
- Donald S. Whitcomb, Oriental Institute Research Associate (Assistant Professors)
- Scott Branting

Emeritus Faculty

- Lanny D. Bell, Oriental Institute
- Robert D. Biggs, Oriental Institute
- Menachem Brinker
- John A. Brinkman, Oriental Institute
- Richard L. Chambers
- Miguel Civil, Oriental Institute
- Robert Dankoff
- Peter F. Dorman, Oriental Institute
- Gene B. Gragg, Oriental Institute
- Harry A. Hoffner, Oriental Institute
- Halil Inalcik, History
- Wadad Kadi
- Heshmat Moayyad
- John R. Perry
- Jaroslav Stetkevych
- William Sumner, Oriental Institute
- Edward F. Wente, Oriental Institute

The work of the department encompasses the ancient civilizations of the Near East, Near Eastern Judaica, and the Islamic civilizations of the Middle East, including Egypt and North Africa, and the history, languages, and literatures of the modern Middle East.

The fields of study in which M.A. and Ph.D. programs are currently offered are, in the Ancient Section: Ancient Near Eastern History, Comparative Semitics, Cuneiform Studies (Assyriology, Hittitology, Sumerology), Egyptology, Hebrew Bible and the Ancient Near East, Near Eastern Art and Archaeology (Anatolian, Egyptian, Iranian, Islamic, Mesopotamian, Syro-Palestinian), Near Eastern Judaica, and Northwest Semitic Philology; and in the Medieval and Modern Section: Arabic Language and Literature, Islamic History and Civilization, Islamic Thought, Medieval Judaica and Judeo- Arabic, Modern Hebrew Language and Literature, Persian Language and Literature, and Ottoman and Turkish Studies. The department also has a joint program with Linguistics and offers courses in Armenian and Central Asian studies in collaboration with other departments at the University.
The department has two main objectives. First, it strives to provide the specific course work and training needed for its own students to develop into outstanding scholars in their chosen fields. Second, it offers more general courses that provide its own students a broader background in areas outside their specific fields while presenting students in other departments the opportunity to incorporate relevant Middle Eastern material into their own studies. The department also publishes the Journal of Near Eastern Studies, one of the leading academic journals in ancient Near Eastern and Islamic studies.

## The Oriental Institute

The department is associated with the Oriental Institute, a research institute dedicated to the study of the origin and development of civilization in the ancient Near East. The Institute maintains several expeditions in the field, and research projects are carried on in its headquarters at the University. Its research archives, manuscript collection, documents from Oriental Institute excavations, and similar materials are resources for the students in the department. The department's office is housed in the Oriental Institute building, and many of its members belong to the faculty of the Oriental Institute.

## The Center for Middle Eastern Studies

The department is also associated with the Center for Middle Eastern Studies, which offers a master's degree in Middle Eastern studies and coordinates activities at the University dealing with the Middle East in the Islamic and modern periods. Many members of the department faculty are also members of the Center's executive committee; and the workshops, lectures, language circles, and similar
activities of the Center are, like those of the Oriental Institute, a resource for the students in the department.

## The Degree of Doctor of Philosophy

Students with an undergraduate degree may apply directly to the department's Ph.D. program; a master's degree in a related field is not prerequisite. The department does not admit students for a terminal M.A. degree, although work done in the first two years of the Ph.D. program qualifies students to receive an M.A. degree. This interim M.A. normally requires the completion of 18 courses, of which 15 must be taken for a quality grade while three may be taken on a pass/ fail basis. All students must high pass one of the two required modern research language reading exams (typically French and German) before the beginning of their second year and complete an M.A. thesis in the second year.

At the end of the second year, all students are reviewed and a determination made as to whether they will be allowed to continue in the Ph.D. program. Students who do continue build upon the work used for the M.A. degree; normally the completion of additional 9-18 courses is required, depending on the field, before embarking upon research for the doctoral dissertation. Exact requirements vary by field, but all students must high pass their second modern research language reading exam before the beginning of their third year and pass a battery of comprehensive exams, usually at the end of their fourth year. A dissertation proposal of original research to be undertaken is presented to the faculty at a public hearing, usually in the fifth year; acceptance allows the student to be admitted to candidacy and to continue the research that will lead to the completed dissertation. A formal dissertation defense is required before the $\mathrm{Ph} . \mathrm{D}$. degree is awarded.

Because the department believes that firsthand knowledge and experience of the Middle East are an essential part of a student's training, advanced students are encouraged to apply for grants to support study in a Middle Eastern country, whether for language acquisition, archaeological field work, or dissertation research.

## INQUIRIES

Specific information about the department and its programs may be obtained from our website (http://nelc.uchicago.edu/) or by e-mail (ne-lc@uchicago.edu). Within the framework outlined above, individual requirements are established for each student in consultation with the faculty adviser and the section counselor.

## APPLICATION

The application process for admission and financial aid for all graduate programs in the Division of the Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department-specific information is available online at http://humanities.uchicago.edu/prospective/admissions.html.

Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

Foreign students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

We encourage you to check our website at http://nelc.uchicago.edu/ particularly with regard to your application. The application form has a place to indicate the department/program; from the pull down menu choose Near Eastern Languages and Civilizations. For field of specialization, please be sure to enter one of the fields of study exactly as listed on NELC's web page. We need these fields to sort information in our database. You may wish to specify your area of interest further in your statement of purpose.

## COURSES

Modern Languages: Language acquisition is taught at the elementary and intermediate levels in modern Arabic, Armenian, Hebrew, Kazakh, Persian, Turkish, and Uzbek with advanced level courses in Arabic and Turkish. A wide variety of literature courses are taught in the various languages.

Ancient Languages: Courses are offered in the fundamentals of Akkadian, Ancient Anatolian Languages, Egyptian, Ge'ez, Classical Hebrew, Sumerian, and Ugaritic, while more advanced courses cover specific genres of ancient texts dealing with religion, medicine, law, government, history, etc.

Near Eastern Art and Archaeology: Courses in Anatolian, Egyptian, Islamic, Mesopotamian, and Syro-Palestinian art and archaeology offer grounding in site archaeology and the material culture of the ancient Near East and include instruction on archaeological method and theory, landscape archaeology, computer applications, etc.

Near Eastern History and Civilization: A wide variety of courses cover the history, religion, law, literature (in translation), culture, and thought of the many ancient and modern civilizations of this region.

Please see the University's Time Schedules for specific course offerings in a given quarter.

## Department of Philosophy

Chair

- Candace Vogler

Director of Graduate Studies

- Michael Kremer


## Professors

- Daniel Brudney
- Ted Cohen
- James Conant
- Arnold Ira Davidson
- Michael N. Forster
- Michael Kremer
- Gabriel Richardson Lear
- Jonathan Lear, Social Thought
- Martha C. Nussbaum, Law
- Robert Pippin, Social Thought
- Robert J. Richards, History
- Josef J. Stern
- Candace A. Vogler

Associate Professors

- Jason Bridges
- David Finkelstein

Assistant Professors

- Agnes Callard
- Kevin Davey
- Anton Ford
- Chris Frey
- Ben Laurence
- Marko Malink
- Anat Schechtman
- Anubav Vasudevan
- Malte Willer
- Leonard Linsky
- Howard Stein
- William W. Tait
- William C. Wimsatt

Full-time Lecturer and Philosophy/MAPH Coordinator

- Benjamin Callard

The programs in philosophy are designed to develop skill in philosophical analysis, to enable the student to think clearly, systematically, and independently on philosophical issues, and to achieve a thorough acquaintance with major classics and contemporary works in philosophy. Philosophy classes are conducted so that students may develop philosophical skills by class discussions and by the writing of carefully directed papers.

The following is an outline of the main features of the graduate program. For full details, please write the Department of Philosophy directly.

## Graduate Degrees

The graduate program in philosophy is primarily a doctoral program. Admission as a graduate student normally implies that, in the opinion of the department, the student is a promising candidate for the Ph.D. degree. The Master of Arts degree, however, may be awarded to students in the program who desire it and who meet the requirements specified below.

## The Degree of Master of Arts

The Philosophy Department does not admit students directly into an M.A. program. Master's degrees are awarded only to students who are enrolled in a Ph.D. program at the University of Chicago. These can be either:

- Doctoral students in another discipline who seek a "secondary" M.A. in Philosophy, in conjunction with their doctoral studies in that other discipline; or
- Doctoral students in Philosophy who want an M.A.

The requirements for the degree are the same in either case. The requirements can be satisfied entirely by course-work; no thesis is required. They are specified in five clauses:

- Quality: No course for which the student received a grade lower than a B+ will satisfy any requirement for the M.A.
- Level: Only courses taken at the graduate level (that is, with a course-number of 30000 or higher) can satisfy any requirement for the M.A.
- Quantity: The student must complete at least eight courses in Philosophy at the University of Chicago. (Reading and research courses do not count toward satisfying this requirement, nor do courses taken pass/fail-except the first-year seminar, which counts as one course if passed.)
- Distribution: The student must have taken at least one designated course in each of the Philosophy Department's five "areas" - namely:
- Area I: Value theory
- Area II: Philosophy of science, philosophy of language, and logic
- Area III: Epistemology and metaphysics
- Area IV: Ancient or Medieval philosophy
- Area V: Modern philosophy (17th-19th centuries)
- Elementary Logic: The student must demonstrate competence in elementary logic. This can be achieved by an interview in which the candidate satisfies one of the Department's logicians that he or she has the required competence, or by taking the Elementary Logic course (PHIL 30000 Elementary Logic), or any more advanced logic course offered by the Department. Philosophy 30000 can count as one of the minimum eight courses, but it does not satisfy the Area II requirement. A more advanced logic class does both.


## Application Procedure

Doctoral Students in the Department of Philosophy may apply for the M.A. at any time after they have completed the requirements. 1. Contact the Department Coordinator so that the proper paperwork is submitted verifying your courses (above) and 2. contact the office of the Humanities Dean of Students in order to gain access to the degree application in cMore. Keep your expected graduation date set to the date you anticipate receiving the Ph.D.

Students in a Ph.D. program at the University of Chicago in a department other than Philosophy who wish to receive a "secondary" M.A. in Philosophy must first apply for admission to the M.A. program in the department of Philosophy. No student can apply unless she has taken at least three Philosophy courses, and it is expected that the student will apply soon after completing that number of courses. To initiate the application process, the student should set up an appointment with the Dean of Students in the Division of Humanities who will direct the student through the required paperwork and obtain:

- The applicant's transcript of courses taken for the B.A.
- His/Her GRE scores
- A transcript of the applicant's courses at the University of Chicago taken up to the time of the application.
- A sample of her best philosophical writing. This may but need not be a paper written for one of the applicant's already completed Philosophy courses at the University.
- A brief letter from the chair or director of graduate studies of the applicant's home department supporting the application. The letter should explain why the student is seeking an M.A. in philosophy to complement her doctoral studies.
- Names of two faculty in the Dept. of Philosophy who can comment on work done by the applicant and on her philosophical potential.
- A statement by the applicant that explains why she is seeking an M.A. in Philosophy.


## The Degree of Doctor of Philosophy

The divisional and University requirements for the Ph.D. degree must be fulfilled. Departmental requirements are as follows:

## COURSE REQUIREMENTS

The Course Requirement has seven parts concerning:

- The number of required courses
- The distribution of required courses
- The logic requirement
- Required progress
- Policies concerning incompletes
- Grades
- Transfer credits


## Number of required Courses

Students must complete at least thirteen courses in their first two years of study: the first year seminar and twelve graduate courses.

First-year students must enroll in the first-year seminar. The exact organization and scheduling varies from year to year according to the instructor's discretion. It is graded on a pass-fail basis.
In addition, twelve graduate courses must be completed with a grade of B or better:

- At least ten of these courses must be in the Philosophy Department listings;
- Reading and research courses do not count among these twelve classes
- At least one must be a graduate seminar in Philosophy


## DISTRIBUTION OF REQUIRED COURSES

Students are required to take one course in each of the following three areas of contemporary philosophy:

- Value theory (listed in the course descriptions as I)
- Philosophy of science, philosophy of language, and logic (listed in the course descriptions as II)
- Epistemology and metaphysics (listed in the course descriptions as III) and three courses on the history of philosophy as follows:
- A figure or movement in either Ancient or Medieval Philosophy (listed in the course descriptions as IV)
- A figure or movement in Modern Philosophy from the 17th through 19th centuries (listed in the course descriptions as V)
- One additional course on a figure or movement in either IV or V.

It should be noted that not all graduate courses satisfy a field distribution requirement; those not classified in the published course descriptions as belonging to I-V cannot be used to satisfy the distribution requirement. Nor can Philosophy 30000 (Elementary Logic) be used to satisfy a field distribution requirement.

## LOGIC REQUIREMENT

There is a requirement in logic that can be satisfied in several ways.

- By passing PHIL 30000 Elementary Logic with a grade of B or higher.

Philosophy 30000 is offered every Autumn quarter. It counts toward the twelve course requirement but does not satisfy the field II distribution requirement.

- By passing a course equivalent to or better than Philosophy 30000 (Elementary Logic), at another institution or in another department at Chicago, with a grade of B+ or higher. The equivalence of the course in question to Philosophy 30000 will be determined by the instructor in Philosophy 30000 in the year in question, on the basis of an interview with the student, and such evidence as the syllabus for the course, the textbook for the course, and any other course materials which the student can provide. Note that satisfying the logic requirement in this way will count neither towards one of the twelve required courses nor towards satisfying the field II distribution requirement.
- By passing an advanced graduate course in logic with a grade of B or higher. Passing an advanced graduate course in logic would both satisfy the logic requirement and count towards the field II distribution requirement.


## REQUIRED PROGRESS

Courses must be completed, with a grade of B or better, according to the following timetable.

- Two courses should be completed by the beginning of the Winter quarter of the first year
- Four courses (at least three in the Philosophy Department) should be completed by the beginning of the third quarter
- Six courses should be completed by 30 September of the second year
- Ten courses should be completed by the end of the fifth quarter
- All thirteen courses (twelve plus the first year seminar) must be completed by 30 September following the sixth quarter.

In addition to this timetable, students should keep in mind that because they are expected to be working on their Preliminary Essay over the summer following their sixth quarter, they would be ill-advised not to have completed their course requirements by the early part of the summer.

## INCOMPLETES

At the discretion of the instructor, coursework not completed on time may be regarded as an "incomplete." This means that the instructor will permit a student to complete the work for a course after the normal deadline.

The instructor sets the time period for completion of the incomplete, subject to the following limitation: all coursework must be submitted by September 30th following the quarter in which the course was taken in order to count toward fulfillment of the requirements for the M.A. and Ph.D. This date is an absolute deadline and is not subject to further extensions by individual faculty members.

## GRADES

Satisfactory grades for work toward the Ph.D. in Philosophy are A, A-, B+, and B.
For Philosophy faculty, those grades mean the following. A: pass with distinction; A-: high pass; B+: pass; B: low pass.

## TRANSFER CREDITS

The following policy applies to the Philosophy Ph.D. program. Special requirements of joint programs take precedence over this policy.

1. Of the required 12 graduate courses, no more than 2 can be taken at the University, but outside the Philosophy Department.
2. Of the required 12 graduate courses, no more than 3 can be transferred from other institutions.
3. Of the required 12 graduate courses, at least 9 must be taken within the Philosophy Department's course offerings.
4. Only courses taken while enrolled in a doctoral program in Philosophy can be counted towards the required 12 graduate courses.

For example, a student might transfer 2 courses from another institution and take one course from another department within the University, with the remaining 9 courses taken within the Philosophy Department. Or a student might transfer 3 courses from another institution, with the remaining 9 courses taken within the Philosophy Department. Students wishing to obtain credit for graduate courses taken from the listings of other departments within the Univeristy toward the required 12 course do not need to petition the department, within the two-course limit specified above.

Students wishing to obtain transfer credit for courses taken at other institutions must petition the Graduate Program Committee. Students should be prepared to provide evidence in support of their transfer application at the request of the Committee. Such evidence may include course descriptions, syllabi, assignments, written work completed for the course, and so on. Students who are transferring from other graduate programs must make such a request upon their entry into the Philosophy Department. Students who take a course at another institution while enrolled in the PhD program should consult with the Director of Graduate Studies
beforehand, but must still petition the Graduate Program Committee to have the course accepted for transfer credit upon completion of the course.

Note that elementary logic courses taken outside the department may fulfill the elementary logic requirement but may not be used to meet the 12 course requirement. See "Logic Requirement" above for further details.

## FOREIGN LANGUAGE EXAM

All students must pass an examination in French, German, Latin, or Greek by the end of Spring quarter of the fourth year or before the topical examination, whichever comes first. (There is a special rule for students who wish to write theses on ancient Greek or Roman philosophy; this is detailed below).
There are two kinds of language examinations: those administered by the Department and those administered by the University. Departmental language exams will be given twice a year and may not be taken more than twice.
Students who take the University language examination must receive a "High Pass." These are offered every quarter and there is a fee for taking them.

There is a special requirement for those working in ancient philosophy, since work in these fields depends heavily on one's ability to use the relevant languages.

Any student intending to write a thesis on ancient philosophy must pass the Departmental or University exam in Greek (the latter with a "High Pass"). Any student intending to write a thesis on Hellenistic or Roman philosophy must also pass the Departmental or University exam in Latin (the latter with a "High Pass").

Such students may take the Departmental exam in Greek or Latin a maximum of three times (as opposed to two times, which is the rule for other languages).

## PRELIMINARY ESSAY

In the Spring quarter of their second year students will register for the first quarter of a two-quarter (Spring, Autumn) workshop on the preliminary essay. The workshop involves discussion of general issues in writing the essay and student presentations of their work. Although students do not register for the Summer quarter, they are expected to make significant progress on their preliminary essay over the summer.

By the end of the eighth week of the Spring quarter at the latest each student will submit to the Director of Graduate Studies a proposed topic and a ranked list of possible readers in the Philosophy Department. The Graduate Program Committee will evaluate proposed topics along the following lines:

- Is the topic philosophically interesting?
- Can a paper on the topic be completed within the given time?
- Can a committee be formed to supervise an essay on the topic?

If the topic is approved, the Committee will form a preliminary essay committee consisting of two equal readers, both of whom students are expected to consult regularly. The committee will supervise the writing of the essay, which should be no
longer than 8,000 words, not including the bibliography and, in historical essays, not including long quotations.
The final draft of the Preliminary Essay must be submitted by the first day of the Winter quarter of the student's third year. Essays submitted late are penalized as follows: A letter grade is reduced by one notch if the essay is submitted after the deadline but before the first day of the sixth week of the Winter quarter (e.g., an ' A ' is reduced to an 'A-') A letter grade is reduced by two notches if the essay is submitted after the first day of the sixth week of the Winter quarter but by the end of Exam Week of the Winter quarter (e.g., an 'A' is reduced to a 'B+'). Essays submitted after the end of the Winter quarter do not count toward satisfaction of the requirement.

## TOPICAL EXAMINATION

Following the Preliminary Essay, students begin work toward their dissertations. During the Winter and Spring quarters, they should be meeting with various faculty members to discuss and refine possible dissertation topics, and possible dissertation committees; and, by the ninth week of spring quarter, each student should submit a "dissertation sketch" to those faculty and to the Graduate Program Committee. The character of that sketch will vary from case to case; but, in any case, is not expected to be long or elaborate. Some sketches may be more definitive than others; some may be seriously disjunctive; some students may submit more than one sketch. The point of the sketch and preliminary meetings is to provide some faculty guidance for the more independent research that begins over the summer.

At the beginning of the following fall (fourth year), students will again meet with their (prospective) advisors, to discuss progress and developments over the summer, and make concrete plans for the Dissertation Topical (to be held later that quarter, or, if necessary, early in the Winter quarter). Those plans will include a tentative timetable, a determination of the dissertation committee, and the expected character of the materials to be submitted by the student, and on which the exam/ discussion will be based. Though the details will vary (depending on the subject matter, the state of the research, individual work habits, and so on), these materials must include a substantial piece of new written work by the student (something on the order of twenty-five double-spaced pages)-perhaps a draft of a chapter, an exposition of a central argument, a detailed abstract (or outline) of the whole dissertation, or whatever the committee as a whole agrees upon. (It is expected that students will abide by these agreements; but, if there are unanticipated problems, they may petition their advisors and the Director of Graduate Studies, in writing, for a revision.)

Note: students must have scheduled their Topical Examination by the end of the sixth year to remain in the Program.

Students must finish their language exams by the end of their fourth year in the program (independently of their status with regard to any other requirements).

The Department requires that each student submit a written progress report on his or her progress by the end of the winter quarter of each year, beginning with his or her fourth year in the program. The report should be submitted to the Director
of Graduate Studies and (after the Topical) to the student's dissertation committee. [Beginning in Winter 2013: In addition to this report, students who have advanced to candidacy must submit a substantial piece of new writing (25-30 pages in length) to the chair of their dissertation committee.] The student will be notified whether or not he or she is making good progress following the annual review meetings in spring.

It is very much in each student's own interest to be well along with his or her dissertation early in the fifth year, for several related reasons. First, of course, students with GAI Fellowships are obliged to teach a stand-alone course that year, which is inevitably time and energy consuming. Second, all of those fellowships run out at the end of that year; and many (probably most) students will not get any more support from the University. And, finally, such sixth-year support as there is from the University is systematically directed to those applicants whose work is not only of the best quality, but also the furthest along (as documented not only by faculty testimonials but also by submitted chapters). Keep in mind also that socalled "dissertation-year fellowships" are awarded competitively on a Divisionwide basis, and there are not enough to go around. Though Philosophy students have often done well in this competition, there is no guarantee for the future; and, in any case, not all applications will be successful.
To be sure, supporting oneself without aid, while finishing up a dissertation, is a time-honored academic tradition. But, for most students, the available opportunities are far from deluxe (either inside or outside the University), and it is clearly wise to minimize one's dependence on them, if possible.
NOTE: The Department Coordinator must be informed of the date and time of the Topical Exam. This is so that the Department and University can record the exam and admit the student to candidacy. Students need to email the Department Administrative Coordinator with the names of the members of the committee, the sample chapter on which the Topical examination is based, and the working title of the dissertation.

## TEACHING REQUIREMENTS

The Philosophy Department views the development of teaching competence as an integral part of its overall Ph.D. program and takes various steps to train its doctoral students to become excellent teachers of philosophy. The first teaching opportunities come in the form of course assistantships. The professor responsible for the course in which a doctoral student serves as an assistant is also responsible for monitoring the doctoral student's teaching progress in that course and preparing a written report of her teaching performance therein. Once a doctoral student has proven herself as a teaching assistant, she is permitted to do stand-alone teaching. In these cases, too, however, the design of the syllabus of the course is developed in consultation with a member of the faculty. Here, too, that faculty member is responsible for further monitoring the doctoral student's teaching progress over the duration of the stand-alone course and preparing a written report of her teaching performance as a solo instructor.

The initial guaranteed funding for five years awarded to students admitted to the program includes a teaching obligation. That obligation standardly takes the form of the student serving four times as an instructor -- usually three times as a course assistant and once as an instructor of a stand-alone course. Normally, students complete one teaching assistantship in their third year, after completion of the Preliminary Essay, and two in their fourth year. Normally, students give their stand-alone course in the fifth year. These first four teaching stints are not further compensated: they are owed to the Division of Humanities in return for the initial five-year aid package. This four-time teaching obligation is a requirement of the Department of Philosophy's Ph.D. program.
These first four teaching opportunities are built into the basic requirements of the Ph.D. program in order to ensure that students in the program acquire a certain minimum degree of teaching competence. However, the Department views the teaching obligation as a bare minimum with regard to teaching preparation. Doctoral students in the program are encouraged to do more teaching than this.

The Department's first responsibility with respect to doctoral students is to support their work toward the doctoral degree. Teaching preparation is a crucial aspect of that, but additional teaching must be consistent with timely progress toward the doctoral degree. Accordingly, the policy on teaching beyond the departmental teaching obligation is as follows:

1. In Years $1 \& 2$, when doctoral students are expected to satisfy their course and logic requirements as well as to formulate topics, find readers, and begin research toward their Preliminary Essays, doctoral students are not given departmental teaching and will not be permitted to accept extra-departmental teaching. The students may, however, complete the Training Course for Writing Interns and Lectors offered by the University of Chicago Writing Program before Autumn of Year 3.
2. In Years 3-5, students may petition the DGS for permission to apply for extra teaching. If, and only if, the following conditions are met, the Department (normally through the DGS) may petition the DOS and the Master of the HCD to allow the student to apply for extra-departmental teaching:
A. The student is making exemplary progress toward the degree in Philosophy (that is, the student has met every deadline set in the time to degree expectations and the students' work toward the degree is strong).
B. There is a sound pedagogic reason to allow the student to seek extra teaching.
3. Students must make their petitions to the DGS by the second week of the term prior to the term in which they hope for extra-GAI teaching - students must make their petitions by the second week of Spring quarter for extra teaching in Autumn, by the second week of Autumn quarter for extra teaching in Winter, and by the second week in Winter quarter for extra teaching in Spring. The Department must make its petition to the DOS and Master of the HCD by the end of the third week of the term prior to the term in which students seek extra-GAI teaching.
4. If the DOS and the HCD approve the Department's petition, and if the students are offered extra teaching appointments, funding for these positions cannot be drawn from the students' fellowship teaching obligation monies.
5. Extra teaching permissions may be withdrawn if students cease to make exemplary progress toward their degrees.

Petitions to the DOS and Master of the HCD will attest to the students' progress and provide the rationale for allowing these students to seek teaching beyond the departmental teaching obligation.
Students do not need departmental permission to seek extra teaching assignments after their fifth year of residence.

Over the course of a doctoral student's career, that student together with the Department builds a teaching dossier, containing the syllabuses of the courses that she has taught, written reports by faculty teaching mentors on those courses, and last but not least, undergraduate evaluations of those courses. When doctoral students prepare to go on the job market, the Department sees to it that one member of the faculty undertakes the responsibility of writing a teaching letter for the student that documents and surveys the highlights of her teaching career at the University of Chicago.

## Dissertation and Final Oral Exam

When the Dissertation Committee judges that the dissertation is ready, it requests a final oral examination.
Note: Students must submit the dissertation to their committees at the beginning of the term PRIOR to the term in which they plan to request a defense.
Before taking the final exam, a student should submit, within the timeline noted, to the Department Coordinator:

- the scheduled date, time, and the members of the committee, and any special room requirements, at least 3 weeks prior
- an electronic copy (.doc or .docx) of a 1-2 paragraph abstract, at least 3 weeks prior
- an electronic copy of a 10-page abstract of the dissertation, at least 2 weeks prior

The Philosophy Department asks its graduate students to adhere to the following two rules in requesting a date for a final defense: (1) that they make a rough draft of the entire dissertation available to the members of their dissertation committee prior to entering such a request, and (2) that the request come no later than the second week of the quarter prior to the one in which the student wishes to defend. This ensures that the members of the committee have a reasonable amount of time to study a draft of the dissertation and consult amongst themselves before arriving at a decision as to whether the dissertation is in sufficiently finished form to warrant the fixing of a date for the oral exam. An exam cannot be scheduled for at least two weeks after the Dissertation Committee's formal request and the candidate's materials have been submitted.

The final oral exam is a public event. The examining committee consists of the members of the dissertation committee, along with an appointed member of the Humanities Division faculty who serves as a representative of the Dean's Office. Other faculty and graduate students from the Philosophy Department may and generally do attend. Family members of the doctoral candidate and other members of the general public are also welcome.

If a student passes, then it is customary in the final phase of the exam for the members of the student's dissertation committee to request a final round of revisions to the dissertation. The final granting of the degree is conditional upon the completion of these final revisions. These are to be made promptly after the exam and prior to the formal submission of the PhD document. After the dissertation is submitted, the student is required to provide each member of the dissertation committee with a bound hardcopy version of the document in its final form.

## Philosophy COURSES

PHIL 30000. Elementary Logic. 100 Units. Edit Course Data - default
This course will examine historical and contemporary approaches to the relation of ontological dependence, focusing on Aristotle, Descartes, and among more recent authors, Kit Fine. Questions to be discussed will include: What is ontological dependence and how does it differ from other dependence relations, e.g., causation or priority in definition? How does this relation bear on notions such as substance and essence, and vice versa? What is the historical trajectory from Aristotle onwards concerning these questions?
Instructor(s): M. Malink Terms Offered: Autumn
Note(s): Course not for field credit.
Equivalent Course(s): PHIL 20100,CHSS 33500,HIPS 20700
PHIL 30120. Wittgenstein's Philosophical Investigations. 100 Units. Edit Course Data - default
We'll read and discuss Wittgenstein's Philosophical Investigations. Our central concerns will include: (1) Wittgenstein's metaphilosophy, (2) meaning and rulefollowing, (3) privacy and expression.
Instructor(s): D. Finkelstein Terms Offered: Spring
Prerequisite(s): Two previous courses in the Philosophy Department required; Philosophical Perspectives does not qualify.
Equivalent Course(s): PHIL 20120

PHIL 30640. Ontological Dependence. 100 Units. Edit Course Data - default
This course will examine historical and contemporary approaches to the relation of ontological dependence, focusing on Aristotle, Descartes, and among more recent authors, Kit Fine. Questions to be discussed will include: What is ontological dependence and how does it differ from other dependence relations, e.g., causation or priority in definition? How does this relation bear on notions such as substance and essence, and vice versa? What is the historical trajectory from Aristotle onwards concerning these questions? (B)
Instructor(s): M. Malink, A. Schechtman Terms Offered: Spring
Equivalent Course(s): PHIL 20640
PHIL 30721. Dynamic Semantics. 100 Units. Edit Course Data - default
An introduction to the foundations and applications of dynamic approaches to natural language semantics. We will study the formal details and empirical motivations of various major dynamic semantic frameworks such as File Change Semantics, Discourse Representation Theory, Dynamic Predicate Logic, and Update Semantics, and see how they address a number of puzzling natural language phenomena such as donkey anaphora and presupposition projection. In parallel to the formal component, the empirical and theoretical advantages and drawbacks of dynamic semantics will come under scrutiny, and we will also pay close attention to the philosophical repercussions of a dynamic approach to discourse and reasoning. (B)

Instructor(s): M. Willer Terms Offered: Autumn
Prerequisite(s): Knowledge of first-order logic with identity strongly recommended. Students will benefit most if they have taken classes in semantics or philosophy of language before.
Equivalent Course(s): PHIL 20721,LING 20721,LING 30721
PHIL 31210. Philosophy and Literature. 100 Units. Edit Course Data - default This course is a reading of works by a variety of contemporary authors who deal with the question of whether, and how, fiction and philosophy are related to one another. (A)
Instructor(s): T. Cohen Terms Offered: Autumn
Equivalent Course(s): PHIL 21210
PHIL 31314. The Presocratics. 100 Units. Edit Course Data - default
This is an advanced survey course on the Presocratics. The figures covered will include but will not be limited to Thales, Anaximander, Anaximenes, Heraclitus, Parmenides, Anaxagoras, Empedocles, and the Atomists. The focus will be primarily on issues of metaphysics, epistemology, and natural philosophy, though other topics will be discussed as they arise. (B)
Instructor(s): C. Frey Terms Offered: Spring
Equivalent Course(s): PHIL 21314

PHIL 31503. Ancient Metaphysics. 100 Units. Edit Course Data - default In this course we shall study some of the very different accounts of the world developed by the ancient Greek philosophers. In particular we shall consider the following: Aristotle's ontology of form and matter, actuality and potentiality; Epicurean atomism; the Stoic strange combination of rationalism and thoroughgoing physicalism of all-pervading pneuma; Platonic theories of a transcendent realm.
Instructor(s): E. Emilsson
Equivalent Course(s): PHIL 21503,CLAS 37112,CLCV 27112
PHIL 31605. Justice. 100 Units. Edit Course Data - default
This course will explore a tradition of thought about justice extending from Plato to Kant. We will read selections from Plato's Gorgias and Republic, Aristotle's Nicomachean Ethics and Politics, Aquinas' Summa Theologica, Rousseau's On the Social Contract, and Kant's Groundwork of the Metaphysics of Morals. Open to College and graduate students. (A)
Instructor(s): A. Ford Terms Offered: Autumn
Equivalent Course(s): PHIL 21605
PHIL 31610. Medical Ethics: Who Decides and on What Basis? 100 Units. Edit Course Data - default
Decisions about medical treatment take place in the context of changing health care systems, changing ideas about rights and obligations, and among doctors and patients who have diverse religious and cultural backgrounds. By means of historical, philosophical, and medical readings, this course examines such issues as paternalism, autonomy, the commodification of the body, and the enhancement of mental and/or physical characteristics.
Instructor(s): D. Brudney, J. Lantos, L. Ross, A. Winter Terms Offered: Winter Prerequisite(s): Third- or fourth-year standing Note(s): This course does not meet requirements for the biological science major. Equivalent Course(s): BPRO 22610,BIOS 29313,HIPS 21911,HIST 25009,HIST 35009,PHIL 21610

PHIL 31713. Aristotle on Virtue. 100 Units. Edit Course Data - default Examination of Aristotle's theory of moral virtue as it is developed in the Nicomachean Ethics, Eudemian Ethics, and Politics. How does virtue differ from self-control? In what way is virtue a perfection of both our capacity for non-rational desire and our reason? What does Aristotle mean by saying that virtuous people act for the sake of the beautiful? How is virtue promoted and sustained by political community? What is the relation between virtue and natural flourishing? (A)
Instructor(s): G. Lear Terms Offered: Spring
Equivalent Course(s): PHIL 21713,FNDL 21715

PHIL 32000. Introduction to the Philosophy of Science. 100 Units. Edit Course
Data - default
The natural sciences aim at discovering and explaining truths about the world. This enterprise gives rise to various philosophical questions, among them are: What distinguishes science from other forms of enquiry? Is there anything unique about the scientific method-in both its conceptual and experimental elementsthat enables the discovery of different aspects of reality? Is science a progressive enterprise advancing towards uncovering truths about the world, or does it consist of one theory arbitrarily replacing its predecessor, without ever coming closer to a final truth? Is there such a thing as scientific objectivity, or are scientists trapped in their preexisting theoretical assumptions? What are the criteria for a scientific explanation? What are scientific laws? In discussing these questions, we will engage with some of the most influential views in the philosophy of science, and critically examine their arguments in light of important case-studies from the history of science. (B)
Instructor(s): C. Bloch Terms Offered: Autumn
PHIL 32200. Philosophy of Cognitive Science. 100 Units. Edit Course Data - default Cognitive science is an interdisciplinary field in which theories and methods from psychology, neuroscience, linguistics, artificial intelligence, and philosophy are used to study cognition. Computational models play an increasingly significant role in the understanding of cognitive phenomena such as perception, categorization, concept formation, and problem solving. In this course, students will become familiar with some of the methods and models used in cognitive science, and discuss philosophical issues pertaining to the methodology and basic premises of cognitive science.
Instructor(s): C. Bloch Terms Offered: Spring
PHIL 32500. Biological and Cultural Evolution. 100 Units. Edit Course Data default
Core background in evolution and genetics strongly recommended. This course draws on readings and examples form linguistics, evolutionary genetics, and the history and philosophy of science. We elaborate theory to understand and model cultural evolution, as well as explore analogies, differences, and relations to biological evolution. We also consider basic biological, cultural, and linguistic topics and case studies from an evolutionary perspective. Time is spent both on what we do know, and on determining what we don't. (B)
Instructor(s): W. Wimsatt, S. Mufwene Terms Offered: Spring
Equivalent Course(s): PHIL 22500,NCDV 27400

PHIL 32810. History and Philosophy of Psychology. 100 Units. Edit Course Data default
This lecture-discussion course will trace the development of psychology from the early modern period through the establishment of behaviorism. In the early period, we will read Descartes and Berkeley, both of whom contributed to ideas about the psychology of perception. Then we will jump to the nineteenth centruy, especially examining the perceptual psychology of Wundt and Helmholtz. Next, we will turn to the origins of experimental psychology in the laboratory of Wundt, and follow some threads of the development of cognitive psychology in the work of William James. The course will conclude with the behavioristic revolution inaugurated by Chicago's own John Watson and expanded by B. F. Skinner.
Instructor(s): R. Richards Terms Offered: Winter
Equivalent Course(s): HIST 25302,CHSS 36901,HIPS 26901,HIST 35302,PHIL 22810
PHIL 33015. Darwin's "Origin of Species" and "Descent of Man" 100 Units. Edit Course Data - default
This lecture-discussion class will focus on a close reading of Darwin's two classic texts. An initial class or two will explore the state of biology prior to Darwin's Beagle Voyage, and then consider the development of his theories before 1859. Then we will turn to his two books. Among the topics of central concern will be: the logical, epistemological, and rhetorical status of Darwin's several theories, especially his evolutionary ethics; the religious foundations of his ideas and the religious reaction to them; and the social-political consequences of his accomplishment. 2009 is the 200th anniversary of Darwin's birth and the 150th of the publication of the "Origin." Instructor(s): R. Richards Terms Offered: Autumn
Equivalent Course(s): HIST 24905,CHSS 38400,HIPS 24901,HIST 34905,PHIL 23015
PHIL 33305. History of Aesthetics. 100 Units. Edit Course Data - default
Readings from Plato, Aristotle, Hume, Kant, Nietsche, and Collingwood among others. (A)
Instructor(s): T. Cohen Terms Offered: Winter
Equivalent Course(s): PHIL 23305
PHIL 33502. Introduction to the Philosophy of Mind. 100 Units. Edit Course Data default
Among the principal tasks of philosophy is to understand the position of our minds and our mental activities within the increasingly detailed account of the world that the physical and biological sciences provide. We will survey and critically examine the developments of this philosophical program in the twentieth century. Special emphasis will be given to the nature of consciousness and of mental content. (B)
Instructor(s): C. Frey Terms Offered: Spring
Equivalent Course(s): PHIL 23502

PHIL 33900. Austin. 100 Units. Edit Course Data - default
Our readings are in the works of J. L. Austin, mainly How to Do Things with Words, and essays related to those lectures. If time permits, we consider later developments in the works of Grice and Cavell, among others. (B)
Instructor(s): T. Cohen Terms Offered: Winter
Equivalent Course(s): PHIL 23900
PHIL 35111. Judaism and Philosophy of Religion in Contemporary Thought. 100
Units. Edit Course Data - default
How do distinctive elements in the Jewish tradition contribute to more general issues in the philosophy of religion? We will approach this question through a study of three major twentieth-century Jewish thinkers: Joseph Soloveitchik, Yeshayahu Leibowitz and Emmanuel Levinas. Topics to be discussed include the role of practice in religion, the nature of faith, the relations between ethics and law and between religion and politics, prayer and divine service, the status of tradition and sacred texts. Attention will be given both to debates within the Jewish tradition and to the framework of philosophical and theological issues that characterizes contemporary thought. Priority will be given to students with reading knowledge of French. The course will alternate between lectures and discussions.
Instructor(s): A. Davidson Terms Offered: Winter
Equivalent Course(s): PHIL 25111
PHIL 36100. The Philosophical Interpretation of Scripture in the Middle Ages: The Problems of Evil and the Book of Job. 100 Units. Edit Course Data - default An important genre of philosophical writing during the Middle Ages was the commentary, both commentaries on canonical philosophical works (e.g., Aristotle) and on Scripture. This course is an introduction to medieval philosophical exegesis of Scripture, concentrating on the Book of Job and the philosophical problems of evil and suffering. Authors will include Saadiah, Maimonides, and Aquinas, and readings will include both their commentaries on Job and their systematic philosophical discussions of the problems of evil.
Instructor(s): J. Stern Terms Offered: Winter
Equivalent Course(s): PHIL 26100,HIJD 36100,JWSC 26250,RLST 25902

PHIL 38900. Introduction to History and Philosophy of Biology. 100 Units. Edit Course Data - default
In this course we (1) use the history of biological science to help us identify and solve philosophical problems in biology, and (2) use the tools of philosophical analysis to help us understand the importance of particular episodes in the history of biology. Among other things, we examine historical and philosophical issues associated with the theory of natural selection, macroevolution, and developmental biology.
Instructor(s): C. Haufe Terms Offered: Spring
Note(s): This course does not meet requirements for the biological sciences major.
This course meets the distribution requirement for field ( B ) in the philosophy major.
Equivalent Course(s): BIOS 29320,CHSS 38901,HIPS 28903,PHIL 28900

## Department of Romance Languages and Literatures

## Chair

- Emilio Kouri


## Professors

- Frederick A. de Armas
- Philippe Desan
- Emilio Kouri
- Armando Maggi
- Robert J. Morrissey
- Larry F. Norman
- Thomas Pavel
- Rebecca West

Associate Professors

- Daisy Delogu
- Daniel Desormeaux
- Agnes Lugo-Ortiz
- Mario Santana
- Justin Steinberg

Assistant Professors

- Kelly Austin
- Ryan Giles
- Alison James
- Miguel Martinez
- Alfredo César Melo
- Rocco Rubini

Senior Lecturers

- Nadine Di Vito, College
- Claude Grangier, College
- Ana María Fiuza Lima, College
- María C. Lozada, College
- Janet Sedlar, College
- Veronica Vegna, College

Lecturers

- Antoni Bernadó i Mansilla
- Marie Berg, College
- Céline Bordeaux, College
- Irena Cajkova, College
- Alice McLean, College
- Lidwina Van den Hout-Huijben, College

Emeritus Faculty

- Paolo Cherchi
- René de Costa
- Peter F. Dembowski
- George Haley
- James Lawler
- Elissa Weaver


## Program

The Department of Romance Languages and Literatures offers undergraduate and graduate programs leading to a B.A., M.A. or Ph.D. in French, Italian, and Spanish literatures. These programs include the study of literary history, established and current critical methodologies, literary theory and analysis, Romance philology, the sociology of literature, literature and history, literature and art, literature and film, cultural studies, and foreign language acquisition and pedagogy. An innovative program was developed to increase the number of graduate-level courses cotaught by experts from different languages who are investigating topics that extend beyond traditional disciplinary boundaries. This initiative led to the establishment of the Department's Renaissance and Early Modern Studies program, which began accepting graduate candidates in 2008-2009.
The Department has developed a unique program of theoretical and practical teacher training in Romance languages and literatures. All Ph.D. students are funded with fellowships that allow them to gain teaching experience in the undergraduate language program - first as language assistants, then as autonomous lecturers once their own course work is completed. This system allows for a high degree of professional training and competitive funding, without distracting students from their graduate studies. Our one-year Master's program is designed to familiarize students with the literary history and major works of one or more of the Romance languages, and to provide the critical tools for literary and cultural analysis. Students with an M.A. degree from another institution generally enter the Ph.D. program directly. Ph.D. students enjoy a wide range of specialized department seminars on literature, literary theory, Romance linguistics, and bibliographic research.
Students in the Department are provided opportunities to broaden their knowledge in a variety of ways. Each language program offers students several programs for study and research abroad, and the Department invites distinguished
scholars and writers from the United States and abroad to lecture and to teach. The France-Chicago Center-a Franco-American research institution dedicated to fostering contact among French and American students, professors, and professionals-organizes and sponsors conferences and colloquia, provides fellowships and travel grants, funds visiting faculty members from France, and organizes lectures. The Fulbright Distinguished Chair in Modern Italian Studies enables the Department to invite a prominent visitor from Italy each year; past visiting professors have included Roberto Antonelli, Laura Barile, Gianni Celati, and Gianpiero Brunetta. Each year, the Edward Larocque Tinker Visiting Professorship in Latin American and Iberian Studies brings prominent scholars and other professionals to the University for research and teaching. We have brought poets, playwrights, novelists, and distinguished critics such as José Miguel Wisnik (Brazil), Jorge Edwards (Chile), Luciano García-Lorenzo (Spain), Javier Lasarte (Venezuela), and Anthony Stanton (México). Romance Languages and Literatures also benefits from faculty collaboration in the Department of Cinema and Media Studies, the committees on the History of Culture, Interdisciplinary Studies in the Humanities, and Social Thought, along with the centers for Gender and Sexuality, Latin American Studies, and Race, Politics and Culture.

Students are also encouraged to participate in and coordinate graduate workshops. Some of the current workshops include Caribbean Studies; Gender and Sexuality Studies; Latin American History; Mass Culture; Medieval Studies; Modern France and the Francophone World; Poetry and Poetics; Renaissance; and Reproduction of Race and Racial Ideologies, among others. The Department features its own workshop on Western Mediterranean Culture.

Upon completion of the Ph.D.., students have had great success in finding tenuretrack positions at such institutions as Wesleyan University, The University of Pennsylvania, The University of Colorado, The University of Oregon, The State University of New York at Buffalo, Syracuse University, Victoria University of Wellington (New Zealand), and other excellent colleges and universities.

Further details regarding programs of instruction in each of the literatures or in combined degrees in Romance and other fields (Latin American Studies or Comparative Literature, for example), residency requirements, examinations, etc., can be found online at: http://rll.uchicago.edu/.

The application process for admission and financial aid for all graduate programs in Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http:// humanities.uchicago.edu/prospective/admissions.html.

Questions pertaining to admission and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

## ROMANCE LANGUAGES AND LITERATURES - FRENCH COURSES

FREN 30601. Expression orale et phonétique. 100 Units. Edit Course Data - default This course focuses on developing the tools necessary for advanced oral proficiency in an academic context. Through active class participation involving a number of class presentations, students practice a variety of discourse styles (e.g., debates, lectures, seminars, interviews). Special emphasis is placed on correct pronunciation. Terms Offered: Spring
Prerequisite(s): FREN 20300 or placement
Note(s): This course does not count toward major or minor requirements. Must be taken for a quality grade.
Equivalent Course(s): FREN 20601
FREN 31501. Approches à l'analyse littéraire. 100 Units. Edit Course Data - default This course will focus on the metaliterary production of authors such as Deschamps, Boileau, Verlaine, Breton, Sartre, and Robbe-Grillet in order to see how literature has theorized and reinvented itself across time.
Instructor(s): D. Delogu Terms Offered: Winter
Prerequisite(s): FREN 20500 and one previous literature course taught in French. Note(s): Taught in French.
Equivalent Course(s): FREN 21501
FREN 33600. Littérature et société: Flaubert et Marx. 100 Units. Edit Course Data default
Notre approche de Flaubert sera essentiellement sociologique. Trois romans seront étudiés (Madame Bovary, Un coeur simple et L'Education sentimentale) en relation directe avec des textes de Marx sur l'aliénation, la marchandise, la révolution de 1848 (Capital, Manuscripts de 1844, L'Idéologie allemande et Le 18 Brumaire de Louis Bonaparte).
Instructor(s): P. Desan Terms Offered: Winter
Note(s): Readings and classes conducted in French. Open to French majors and minors, and others with consent of instructor.
Equivalent Course(s): FREN 23600
FREN 33801. Bresson Against Cinema. 100 Units. Edit Course Data - default Robert Bresson is one of the most ambitious, most enigmatic filmmakers. In an era of reflexive, ironic post-classical cinema, it sometimes seemed as though he sought to ignore film history altogether, to defy its habits and conventions - to re-invent the medium in his own terms. Yet Bresson delves deeply into questions of cinema as a mode of perception, of knowledge and belief, as a way to explore social being and singularity: the individual inextricably, often tragically bound in the transactions of modern life. In this course we will consider Bresson's sources, his modes of narration, the relation of text and image, visual style and sound practice; we will seek to define the special mode of attention that his films command. All readings are in English.
Instructor(s): N. Steimatsky
Equivalent Course(s): CMST 23801,FREN 23801

FREN 34000. Travelling in Early Modern Times. 100 Units. Edit Course Data default
We will see how the expansion of commerce in the sixteenth century produces a new form of travel literature, an object for imagination where the Other (in reality or in fiction) helps to reflect on the cultural and moral values of Europe. We will read the primary texts of Marco Polo, Columbus, Las Casas, Sepúlveda, Mendieta, De Acosta, Rabelais, Montaigne, Jean de Léry, André Thevet. We will also read critical studies by Claude Lévi-Strauss and Tzvetan Todorov.
Instructor(s): P. Desan Terms Offered: Winter
Prerequisite(s): Advanced undergraduates accepted with consent of instructor. Note(s): Most readings in French. Papers in French for French grad students and in English for others.
Equivalent Course(s): REMS 34000
FREN 38600. Fiction, Ideals, and Norms. 100 Units. Edit Course Data - default This course will discuss the ways in which fiction imagines a multitude of individual cases meant to incite reflection on moral practices. The topics will include: the distance between the "I" and its life, the birth of moral responsibility, and the role of affection and gratitude. We will read philosophical texts by Elisabeth Anscombe, Charles Taylor, Robert Pippin, Hans Joas, Charles Larmore, and Candace Vogler, and literary texts by Shakespeare, Balzac, Theodor Fontane, Henry James, Carson McCullers, and Sandor Marai.
Instructor(s): T. Pavel Terms Offered: Spring
Equivalent Course(s): FREN 28600,CMLT 28601,CMLT 38601,SCTH 38211
FREN 39200. Edgar Quinet au carrefour de la littérature et de l'histoire. 100 Units. Edit Course Data - default
Thinker, poet, historian, Edgar Quinet had a profound influence in nineteenthcentury France. Very much a European, he had a deep understanding of Vico and was among the very first to introduce German thought into France. He opened new perspectives in the understanding of medieval culture as well as the French Revolution and the Empire. In this course we will study selected works of Quinet such as Ahsvérus, Merlin l'Enchanteur, Histoire de mes idées, and La Révolution, placing them in the broader context of nineteenth-century French culture.
Instructor(s): R. Morrissey Terms Offered: Winter
Prerequisite(s): FREN 20500 and one previous literature course taught in French. Note(s): Readings and discussion in French (but comments in English are also welcome). Papers and student presentations in French or English depending on student's concentration.
Equivalent Course(s): FREN 29200

## Romance Languages and Literatures - Italian Courses

ITAL 33203. Rome in Film and Literature. 100 Units. Edit Course Data - default We shall analyze films and fictional works that reflect both realities and myths about the "Eternal City," Rome. Classical Rome will not be studied; instead the focus will be on a trajectory of works, both written and cinematic, that are set in and explore late nineteenth to late twentieth-century Rome. The goal is to analyze some of the numerous diverse representations of modern Rome that portray historical, political, subjective, and/or fantastical/mythopoetic elements that have interacted over time to produce the palimpsest that is the city of Rome. Books by D'Annunzio, Moravia, Pasolini and Malerba; films by Fellini, Visconti, Rossellini, Bertolucci, Pasolini, and Moretti.
Instructor(s): R. West Terms Offered: Winter
Note(s): Taught in English; Italian majors will read the texts in the original Italian. Equivalent Course(s): ITAL 23203,CMST 23202,CMST 32302

ITAL 34803. Outsiders I: Elsa Morante. 100 Units. Edit Course Data - default One of the most innovative and original writers of the twentieth-century Italy, Elsa Morante (1912-1985) did not enjoy canonization and full integration into the modern Italian novel tradition during her life. From the late 1940s to her death, her works stimulated numerous critical debates, but she remained fundamentally an "outsider" whose art could not find a comfortable place in the prevailing niches into which her more "insider" contemporaries were placed. In this course we shall read and analyze in detail her novels and essays, and consider the earlier and more recent critical reception of her corpus. We shall also consider her influence on subsequent writers, and the ways in which her poetics and practice interact in important ways with feminist, queer, and political theories of current interest. Given that her major novels are translated into English, the course is open to nonspecialists of Italian literature, although students concentrating on Italian literature will read the original versions.
Instructor(s): R. West Terms Offered: Winter
Equivalent Course(s): GNSE 28601,ITAL 24803

## Romance Languages and Literatures - Portuguese Courses

 PORT 32500. The Travels of Fernão Mendes Pinto. 100 Units. Edit Course Data defaultMost people think that pirates have no scientific interests, and that businesspeople lack literary inclinations. They also think that the sciences and the arts are powerful antidote to dubious trading practices. The Portuguese writer Fernão Mendes Pinto (c.1509-1583), however, was a committed pirate, a traveler in Asia and Africa, a dubious tradesman, an inept secret agent, an amateur anthropologist and, not least, a very great writer. The course will discuss his only book, Peregrinação (published posthumously in 1614). The book will be read in Rebecca Catz's English translation. Instructor(s): M. Tamen Terms Offered: Spring Note(s): No knowledge of Portuguese is required. Equivalent Course(s): PORT 22500

PORT 34000. Intérpretes do Brasil. 100 Units. Edit Course Data - default
Nessa aula, iremos estudar os grandes intérpretes da cultura brasileira dos anos 20 e 30. Leremos obras como Retrato do Brasil (1928) de Paulo Prado, Casa-Grande \& Senzala (1933) de Gilberto Freyre, Raízes do Brasil (1936) de Sergio Buarque de Holanda e Formação do Brasil Contemporâneo (1942) de Caio Prado Junior. Instructor(s): A. Melo Terms Offered: Spring Equivalent Course(s): LACS 24000,PORT 24000

PORT 35013. Plato on Poets. 100 Units. Edit Course Data - default
Plato is famous among literary people, though not necessarily among philosophers, for having peppered some of his works with attacks on poets and poetry. The course will argue for a nuanced description of such attacks and for a connection between some of his arguments on poets and poetry and some of his general philosophical arguments (e.g., on knowledge). Among the topics to be discussed will be the relationship between what poets know, what poets can do, and what poets say (namely what they say they know). Of particular interest will also be the connection between Plato's descriptions of poets and Socrates' notions of obeying a voice, a dream or an oracle. Works to be discussed include the Apology and the Ion (in their entirety), as well as substantial sections of the Republic, Phaedo, Phaedrus and, not least, Gorgias.
Instructor(s): M. Tamen Terms Offered: Spring
Note(s): No knowledge of Greek is required.
Equivalent Course(s): PORT 25013,SCTH 30612
PORT 38000. Brazil and the Global South. 100 Units. Edit Course Data - default In this course, we will examine the cultural and literary relationships between Brazil and Lusophone African Countries, and Brazil and Spanish America. As most contemporary comparative studies in literature (Postcolonial Studies, Marxism, World-Systems Theory applied to Literature) have been focused on the dichotomies between colonizer/colonized, western/non-western, center/periphery, North/South, Prospero/Caliban, one question ensues: how should one account for this relationship between two "third-world," "non-western," "underdeveloped" countries? Would this South-South relationship be emulative or collaborative? What kind of power dynamic was engendered among those countries? We will try to answer those questions.
Instructor(s): A. Melo Terms Offered: Winter
Equivalent Course(s): PORT 28000,LACS 28013,LACS 38013

## Romance Languages and Literatures - Renaissance and Early Modern Studies Courses

REMS 33200. Renaissance Epic: Camões, Ercilla, Tasso. 100 Units. Edit Course Data - default
Due to the prestige and cultural ascendancy of its classical models, epic was considered the highest literary genre of the sixteenth-century repertoire, which forced Renaissance authors of epic poetry to explicitly compete against their illustrious predecessors and among themselves. This provides a perfect basis to study some mechanisms of textual production in Renaissance poetry, but it will also help us to raise issues around the European (and global) circulation of literary goods, cultural competition, the relation between epic, nation, and empire, or the contested place of epic among the constitutive discourses of colonialism. We will read three major Renaissance epic poems written and distributed in the same years: Alonso de Ercilla's The Araucaniad (1569-1590), Luís de Camões's The Lusiads (1572), and Torquato Tasso's Jerusalem Delivered (1581). Instructor(s): M. Martínez Terms Offered: Autumn Note(s): Texts will be provided in both the original languages and in English. In order to enrich the discussion, reading in the original will be encouraged for students with different language backgrounds and skills.
Equivalent Course(s): SPAN 23200,SPAN 33200
REMS 34000. Travelling in Early Modern Times. 100 Units. Edit Course Data default
We will see how the expansion of commerce in the sixteenth century produces a new form of travel literature, an object for imagination where the Other (in reality or in fiction) helps to reflect on the cultural and moral values of Europe. We will read the primary texts of Marco Polo, Columbus, Las Casas, Sepúlveda, Mendieta, De Acosta, Rabelais, Montaigne, Jean de Léry, André Thevet. We will also read critical studies by Claude Lévi-Strauss and Tzvetan Todorov.
Instructor(s): P. Desan Terms Offered: Winter
Prerequisite(s): Advanced undergraduates accepted with consent of instructor. Note(s): Most readings in French. Papers in French for French grad students and in English for others.
Equivalent Course(s): FREN 34000

## ROMANCE LANGUAGES AND LITERATURES - SpANISH COURSES

SPAN 30400. Curso de redacción académica. 100 Units. Edit Course Data - default This advanced language course helps students achieve mastery of composition and style through the acquisition of numerous writing techniques. A wide variety of literary, historiographic, and sociological texts are read. Through writing a number of essays and participating in class debates, students are guided in the examination of linguistic structures and organization of several types of written Spanish discourse. This course is also intended to enhance awareness of the cultural diversity within the contemporary Spanish-speaking world and its historical roots. Terms Offered: Autumn, Winter
Prerequisite(s): SPAN 20300 or consent of instructor
Note(s): Must be taken for a quality grade.
Equivalent Course(s): SPAN 20400
SPAN 33200. Renaissance Epic: Camões, Ercilla, Tasso. 100 Units. Edit Course Data - default

Due to the prestige and cultural ascendancy of its classical models, epic was considered the highest literary genre of the sixteenth-century repertoire, which forced Renaissance authors of epic poetry to explicitly compete against their illustrious predecessors and among themselves. This provides a perfect basis to study some mechanisms of textual production in Renaissance poetry, but it will also help us to raise issues around the European (and global) circulation of literary goods, cultural competition, the relation between epic, nation, and empire, or the contested place of epic among the constitutive discourses of colonialism. We will read three major Renaissance epic poems written and distributed in the same years: Alonso de Ercilla's The Araucaniad (1569-1590), Luís de Camões's The Lusiads (1572), and Torquato Tasso's Jerusalem Delivered (1581).
Instructor(s): M. Martínez Terms Offered: Autumn
Note(s): Texts will be provided in both the original languages and in English.
In order to enrich the discussion, reading in the original will be encouraged for students with different language backgrounds and skills.
Equivalent Course(s): SPAN 23200,REMS 33200
SPAN 34103. El mester de clerecía: 1200-1400. 100 Units. Edit Course Data - default This course examines the formation of the clerical mester in the monasteries and nascent universities of medieval Castile and its development over the course of the thirteenth and fourteenth centuries. Of primary concern will be the interplay of profane and sacred themes, oral and textual traditions, the poetic commingling of jularía and clerecía during this period. Texts include Libro de Alejandre, Libro de Apolonio, Milagros de Nuestra Señora, and Libro de buen amor.
Instructor(s): R. Giles Terms Offered: Winter
Equivalent Course(s): SPAN 24103

## Department of Slavic Languages and Literatures

## Chair

- Lenore Grenoble


## Professors

- Victor A. Friedman
- Lenore Grenoble
- Bozena Shallcross

Associate Professors

- Robert Bird
- Malynne M. Sternstein
- Lina Steiner

Assistant Professors

- Yaroslav Gorbachov
- William Nickell


## Senior Lecturers

- Steven Clancy
- Valentina Pichugin

Lecturers

- Angelina Ilieva
- Nada Petkovic Djordjevic
- Tamra Wysocki-Niimi

Emeritus Faculty

- Howard I. Aronson
- Bill Darden
- Norman Ingham
- Samuel Sandler
- Frantisek Svejkovsky
- Edward Wasiolek

Associate Faculty

- Sheila Fitzpatrick, History (emeritus)
- Paul Friedrich, Anthropology (emeritus)
- Eric Hamp, Linguistics (Emeritus)
- Matthew Jesse Jackson, Art History \& Visual Arts
- Boris Maslov, Comparative Literature
- Mark Slouka, English Language and Literature
- Yuri Tsivian, Art History, Comparative Literature \& Cinema and Media Studies
- Adam Zagajewski, Social Thought
- Tara Zahra, History


## Program Description

## The Graduate Program

Our graduate programs are designed to provide a comprehensive preparation in students' major disciplines and prepare them for a career in Slavic studies, while also encouraging them to explore other related fields. Each graduate track therefore has a minimal list of specific requirements and a maximal amount of flexibility in their fulfillment.
While the requirements for each track of study differ, the following are constant across all tracks:

MA: Successful completion of nine courses, including Old Church Slavonic, and of the master's exam or paper; reading knowledge of French or German; a test for advanced proficiency in speaking and writing the principal Slavic language.
PhD: After successfully completing nine more courses, passing the comprehensive examinations and demonstrating reading knowledge of both French and German, each candidate must write an acceptable dissertation that makes an original contribution to the advancement of knowledge in the field.

## RUSSIAN LITERATURE

Courses in Russian literature are taught by internationally renowned faculty with a broad variety of specializations, from medieval Slavic literature to the classic Russian novel to current writing in Russia. Poetry is a particular strength, with detailed coverage of great Russian poetry from Lomonosov, Pushkin, and Akhmatova to Brodsky and beyond. Another strength is Russian intellectual history, from the Slavophiles to Bakhtin. Our offerings also include coverage of contemporary theory and non-verbal media.
MA: Nine quarter courses (including: Proseminar in Literary Theory and Methods; Introduction to Slavic Linguistics; and at least three courses in the literature of specialization) and a comprehensive examination in the literature of specialization, based on a department reading list. This exam also serves as a Qualifying Examination for admission to the Ph.D. program. An exam demonstrating a reading knowledge of French or German is required. Students who intend to go on to the Ph.D. degree are encouraged to obtain preparation in a second Slavic language.
PhD: In addition to the courses required at the Master's level, students must take one course in the history of their language of specialization and one course in its structure. Remaining required courses will be those needed to prepare for the comprehensive examination. Before taking the comprehensive examination,
students in literature must demonstrate a reading knowledge of one Slavic language in addition to their language of specialization; they must also have successfully completed at least one advanced seminar. An exam demonstrating reading knowledge in both French and German is required. The comprehensive examination is given in the following areas:

1. History of the literature in the principal language of specialization and
2. the literature of the second Slavic language or Slavic Linguistics. In exceptional circumstances the department will consider petitions to substitute for this requirement another field which is shown to be particularly relevant to the student's plan of work.

## SLAVIC LINGUISTICS AND LANGUAGES

In addition to general courses and concentrations in East, West, and South Slavic Linguistics, the Department has tracks in Balkan Linguistics and Baltic Linguistics. Language and linguistics-oriented courses are available in Russian, Ukranian, Czech, Polish, Bosnian/Croatian/Serbian, Macedonian, and Bulgarian as well as Albanian, Georgian, Lak, Lithuanian, and Romani. Other Slavic, Balkan, and Baltic languages are also covered in various linguistics courses. The option to pursue a joint degree in the Department of Linguistics broadens the opportunities for students in Slavic Linguistics.

MA: Nine quarter courses (including: Introduction to Slavic Linguistics; Structure of the major Slavic language; History of the major Slavic language, or Comparative Slavic Phonology; and two courses in literature or interdisciplinary studies), a demonstrated proficiency in reading a second Slavic language (this second requirement may be met by satisfactorily completing all work of a one-year language course), and a comprehensive examination based on a departmental reading list. This exam serves also as a Qualifying Examination for admission to the Ph.D. program.
PhD: In addition to Slavic Linguistics, students may specialize in Balto-Slavic or Balkan linguistics and can petition for a joint degree with the Department of Linguistics. Students must take one course beyond the two required for the M.A in a Slavic literature or interdisciplinary studies. Students will also be expected to demonstrate a knowledge of the principles of general linguistics. Successful passing of the Linguistics Department M.A. core courses will meet this requirement. Students may substitute a sequence of three additional courses in a Slavic literature or in interdisciplinary studies for the requirement in general linguistics. Students in Slavic linguistics will be required to demonstrate a reading knowledge of two additional Slavic languages, so that East, West, and South Slavic languages are all represented. Students with a field in Balkan linguistics or Baltic linguistics may substitute a non-Slavic Balkan or Baltic language for one of the Slavic languages. Remaining required courses will be those needed to prepare for the comprehensive examination. The comprehensive examination is given in the following areas:

1. Comparative Slavic and history and structure of the second Slavic language, or for students with special programs, a Baltic or Balkan language.
2. The history and structure of the major Slavic language.

## INTERDISCIPLINARY STUDIES

This cutting edge program offers broad preparation in the relationships among the visual arts, cinema, media, folk and popular culture, as well as Slavic, Balkan, and Baltic languages and literatures. The main thrust of the program is the study of the history and criticism of interdisciplinary approaches to literature and the visual arts. Other emphases include anthropology, language, and intellectual history.

MA: Nine quarter courses (including: Introduction to Slavic and East European Arts and Cultures (proseminar); Words and Images: Introduction to Interdisciplinary Approaches; and three additional courses in a Slavic or East European Literature, art and/or culture). In consultation with the program advisor, students will submit an MA paper (ordinarily based on a term paper) in partial fulfillment of the requirements for the degree. The paper also serves as a Qualifying Paper for admission to the Ph.D. program.

PhD: Students must develop a plan of study by the end of their first year of study, to be approved by their M.A. Paper Committee, and in addition to the courses required at the Master's level must take the following courses: one course in Slavic linguistics (i.e., Introduction to Slavic Linguistics, or a course in the history or structure of a Slavic, Balkan, or Baltic language); the advanced research seminar in Slavic and East European literatures; five approved courses in Slavic or East European arts and cultures; and a second Slavic Department language (1 year of study or reading knowledge) The comprehensive examination is given in the following manner. The field of the exams and their reading lists will be determined in consultation with the examining committee.

1. The major field examination, which covers the history of Slavic and East European arts and cultures as it pertains to the area of the student's dissertation project.
2. Their minor field in Slavic and East European arts and cultures.

## POLISH \& CZECH AND SlovaK STUDies

Since its creation in 1962, the Department's Polish Studies Program has served as one of the eminent academic centers for Polish literature, culture, and linguistics in the United States. The program offers M.A. and Ph.D. degrees in Polish literature and linguistics. The Department also offers students the opportunity to specialize in Czech language and literature. Support for Czech and Slovak language study is provided by annual awards from the Department's Procházka Funds.

## Requirements for All Tracks

MA: Reading knowledge of French or German, one quarter of Old Church Slavonic, and a test for advanced proficiency in speaking and writing the principal Slavic language.

PhD: Reading knowledge of both French and German. Each candidate must write an acceptable dissertation that makes an original contribution to the advancement of knowledge in the field. Reading knowledge of a second Slavic language.

## ADMISSIONS/FINANCIAL AID

The prerequisites for admission are a bachelor's degree or its equivalent and knowledge of written and spoken Russian or of another Slavic language in which the department offers advanced courses sufficient for graduate work, usually equivalent to four years of college study. Entering students are required to take a placement examination in their major Slavic language and to make up any deficiency in their preparation. Foreign students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign language (TOEFL) or the International English Language Testing System (IELTS).

The application process for admission and financial aid for all graduate programs in Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines, and department specific information is available at: http://humanities.uchicago.edu/ prospective/admissions.html.

Questions pertaining to admission and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552. All correspondence and materials sent in support of applications should be mailed to:
The University of Chicago
Division of the Humanities
Walker, Suite 111
1115 East 58th Street
Chicago, IL 60637

## CONTACT INFORMATION

For additional information about the Department of Slavic Languages and Literatures, please see http://slavic.uchicago.edu/ or call (773) 702-8033 or e-mail [slavic-department@uchicago.edu](mailto:slavic-department@uchicago.edu).

## COURSES

The actual offerings for the year will be found in the quarterly Time Schedules (http://timeschedules.uchicago.edu/).

## SLAVIC LANGUAGES AND LITERATURES - GENERAL SLAVIC COURSES

SLAV 30100. Introduction to Slavic Linguistics. 100 Units. Edit Course Data default
The main goal of this course is to familiarize students with the essential facts of the Slavic linguistic history and with the most characteristic features of the modern Slavic languages. In order to understand the development of Proto-Slavic into the existing Slavic languages and dialects, we focus on a set of basic phenomena. The course is specifically concerned with making students aware of factors that led to the breakup of the Slavic unity and the emergence of the individual languages. Drawing on the historical development, we touch upon such salient typological characteristics of the modern languages such as the rich set of morphophonemic alternations, aspect, free word order, and agreement.
Terms Offered: Autumn 2012
Note(s): This course is typically offered in alternate years.
Equivalent Course(s): SLAV 20100,LING 26400,LING 36400
SLAV 30303. Jewish Thought and Literature II: Narratives of Assimilation. 100
Units. Edit Course Data - default
Topic: Narratives of Assimilation. This course offers a survey into the manifold strategies of representing the Jewish community in East Central Europe beginning from the nineteenth century to the Holocaust. Engaging the concept of liminality of a society at the threshold of radical transformation - it will analyze Jewry facing uncertainties and challenges of the modern era and its radical changes. Students will be acquainted with problems of cultural and linguistic isolation, hybrid identity, assimilation, and cultural transmission through a wide array of genres - novel, short story, epic poem, memoir, painting, illustration, film. The course draws on both Jewish and Polish-Jewish sources; all texts are read in English translation.
Instructor(s): B. Shallcross Terms Offered: Winter
Equivalent Course(s): JWSC 20005,FNDL 20414,NEHC 20405,NEHC 30405,SLAV 20203

SLAV 31700. Intro to Cognitive Linguistics: Human Being, Language, and Mind. 100 Units. Edit Course Data - default
Instructor(s): Y. Gorbachov Terms Offered: Winter 2012
Equivalent Course(s): SLAV 21700,LING 26700,LING 36700
SLAV 32000. Old Church Slavonic. 100 Units. Edit Course Data - default
This course introduces the language of the oldest Slavic texts. It begins with a brief historical overview of the relationship of Old Church Slavonic to Common Slavic and the other Slavic languages. This is followed by a short outline of Old Church Slavonic inflectional morphology. The remainder of the course is spent in the reading and grammatical analysis of original texts. Texts in Cyrillic or Cyrillic transcription of the original Glagolitic.
Instructor(s): Y. Gorbachov Terms Offered: Winter
Prerequisite(s): Knowledge of another Slavic language or good knowledge of another one or two old Indo-European languages. SLAV 20100 recommended. Equivalent Course(s): SLAV 22000,LGLN 25100,LGLN 35100

SLAV 39001. Poetic Cinema. 100 Units. Edit Course Data - default
Films are frequently denoted as "poetic" or "lyrical" in a vague sort of way. It has been applied equally to religious cinema and to the experimental avant-garde. Our task will be to interrogate this concept and to try to define what it actually is denoting. Films and critical texts will mainly be drawn from Soviet and French cinema of the 1920s-1930s and 1960s-1990s. Directors include Dovzhenko, Renoir, Cocteau, Resnais, Maya Deren, Tarkovsky, Pasolini, Jarman, and Sokurov. In addition to sampling these directors' own writings, we shall examine theories of poetic cinema by major critics from the Russian formalists to Andre Bazin beyond. Instructor(s): R. Bird
Equivalent Course(s): CMST 25501,CMST 35501,SLAV 29001

## Department of South Asian Languages and Civilizations

Chair

- Gary Tubb


## Professors

- Muzaffar Alam
- Dipesh Chakrabarty
- Steven Collins
- Wendy Doniger
- Ulrike Stark
- Gary Tubb

Visiting Professors

- E. Annamalai

Assistant Professors

- Yigal Bronner
- Thibaut d'Hubert
- Sascha Ebeling
- Rochona Majumdar
- Vasudha Paramasivan

Senior Lecturers

- Elena Bashir
- Philip Engblom
- Jason Grunebaum


## Lecturers

- Mandira Bhaduri
- Whitney Cox
- Nisha Kommattam
- Karma T. Ngodup

Emeritus Faculty

- Kali Charan Bahl
- Ronald B. Inden
- Colin P. Masica
- C. M. Naim
- Frank E. Reynolds
- Clinton B.Seely
- Norman H. Zide

Mellon Fellow:

## - Christopher Ryan Perkins

The following pages briefly describe the requirements of the Department's Ph.D. degree program, sources of financial aid for graduate students, and resources for the study of South Asia at the University of Chicago. Please also refer to the Departmental web pages for updated information. Degree requirements are set out in detail, but the notes on other topics found here are intended to provide only general introductions. Names, and phone numbers, e-mail and office addresses of Departmental and other University personnel mentioned in this Handbook will be found on the University websites.

## The Department

The Department of South Asian Languages and Civilizations is a multidisciplinary department comprised of faculty with expertise in the languages, literatures, histories, philosophies, and religions of South Asia. The examination of South Asian texts, broadly defined, is the guiding principle of our Ph.D. degree, and the dissertation itself. This involves acquaintance with a wide range of South Asian texts and their historical contexts, and theoretical reflection on the conditions of understanding and interpreting these texts. These goals are met through departmental seminars and advanced language courses, which lead up to the dissertation project.

## ADVISERS

Students develop and pursue their individual programs in active consultation with members of the faculty. To advise students on their programs and progress overall, one faculty member acts as the Departmental Graduate Student Adviser (for name and contact details, see the Departmental web pages). Students are required to meet the Departmental Graduate Student Adviser regularly in order to have their academic program choices approved. The main advisory function will eventually be assumed by the dissertation chairperson. Students are encouraged to actively seek a faculty member of the Department of South Asian Languages and Civilizations to fill this role as soon as possible, at the latest before the preparation of the dissertation proposal. It is the responsibility of students to familiarize themselves with the requirements of the degree program. If they have any doubts regarding the requirements in general, or their specific applicability to their particular program, it is important to resolve them promptly in consultation with the Departmental Graduate Student Adviser. Students should also remember that advising is a joint process: they can only receive guidance when they ask for it.

## The Degree of Doctor of Philosophy

To receive the degree of Ph.D. in South Asian Languages and Civilizations, a student must complete a minimum of 18 courses (the actual number of course may be higher depending on the language proficiency of the student). These include the required language courses, the 3 required Departmental seminars, and other courses relevant to the student's chosen specialty. The latter may include courses offered in other departments as well as in SALC. Students may not receive a grade of ' $R$ ' in any of the courses counted among the required 18 courses, and none of these may be an informal reading course.

Students with prior graduate work in South Asian languages and civilizations or those holding a relevant Master's degree may petition at the end of their first year to satisfy a portion of the 18 -course requirement. Only courses taken at accredited institutions will be accepted, and the petition will have to be approved by the Departmental Graduate Student Adviser.

Before being admitted to candidacy, Ph.D. students must, in addition to completing at least 18 courses, also fulfill the following requirements which are given in further detail below:

- Meet general language requirements
- Submit two qualifying papers
- Formulate two reading lists and pass an oral examination based on them during the third year of study
- Write and defend a dissertation proposal

The Ph.D. is awarded following approval and successful defense of the completed dissertation.

Students normally take 3 to 5 years to complete all pre-dissertation. In no case will students be allowed to submit their dissertation after more than 12 years.

## LANGUAGE REQUIREMENTS

The Department encourages varied research devoted to the ancient, medieval, modern, and contemporary cultures of South Asia. All research in the department has as its main prerequisite suitable advancement in the languages appropriate to a student's chosen field of specialization. The languages in which the department offers concentrations are Bangla, Hindi, Malayalam, Marathi, Pali, Sanskrit, Tamil, Telugu, Tibetan, and Urdu. Persian and Arabic are also available through the Department of Near Eastern Languages and Civilizations. Courses may occasionally be offered in other languages; special arrangements must be made in advance with the instructors of these languages, and students must petition the Department in order to count these languages for their requirements.

Three languages are required:

- The South Asian language of concentration (the major language)
- A second South Asian language relevant to the student's program of study (the minor language)
- A third language of scholarship (e.g. French, German, Hindi, Japanese, etc.)

Students are required to achieve highest proficiency in their major language. Students who already possess knowledge of their major language should contact the language instructor for placement at the appropriate level. Two years of advanced language courses in the Department of South Asian Languages and Civilizations have to be attended regardless of the student's level of language competence.

In their minor language, students are required to achieve a proficiency equivalent to at least 2 years of formal study at the University of Chicago. Again, students who already possess knowledge of their minor language should contact the language instructor to determine the level of proficiency. Students who already possess a proficiency level equivalent to 2 years of formal study at the University of Chicago may fulfill the requirement by taking an exam without prior coursework.

The student's selection of the major and minor language will have to be approved by the Departmental Graduate Student Adviser. While the choice of the major language will obviously depend on the student's research projects, students are strongly encouraged to consider for their minor language one that opens up new perspectives and that will help to gain a broader knowledge of South Asia. Students are expected to demonstrate satisfactory progress each quarter in the required language courses.

For the third language, the language of scholarship, students should choose a language on the basis of how useful it will be for their chosen field of study. They should be able to show that a significant body of scholarship has been or is being produced in that language. The choice of the language of scholarship has to be approved by the Departmental Graduate Student Adviser. Proficiency in reading the language of scholarship is assessed by an examination administered by the University Office of Test Administration or by the Department of South Asian Languages and Civilizations, as appropriate to the language in question. A High Pass is required.

## Required Departmental Seminars

Competence in South Asian languages and civilizations is demonstrated as much by close familiarity with South Asian texts as by a broad knowledge of the plurality of South Asian practices and traditions. To this end the Ph.D. program includes three required departmental seminars. These seminars are taught in a two year cycle.

Research Themes in South Asian Studies I and II (SALC 40100/40200)
These two seminars will each approach a broad theme in South Asian studies from a perspective transcending any narrow focus on a specific language or region. The objective is to introduce students to current research themes and methods pertinent but not exclusive to the study of South Asia. Seminar topics could include South Asian court cultures, genres, material aspects of textual culture, poetic theories,
political thought, translation practices, region in South Asia, etc. The two seminars will be offered in sequence every two years.

## South Asia as a Unit of Study (SALC 40000)

This course aims to acquaint students with major historical and methodological questions pertaining to the field of South Asian languages and civilizations. Topics could include the history of Orientalism, colonial forms of knowledge, South Asia in a global context, etc. This course will be offered in alternate years.

## QUALIFYING PAPERS

In their first year of study, students are required to submit a qualifying paper on a subject agreed upon with a faculty member. This paper should demonstrate the student's ability to write scholarly prose, to formulate a clear research argument, and to situate it within the context of secondary literature relevant to the topic. It must be submitted during the third week of the Spring quarter of the first year. The length of this paper is a maximum of 20 pages not including bibliography ( 12 pt font, double-spaced, with 1 inch margins). There are two grade categories for this first qualifying paper:

- No Pass


## - Pass

In their second year of study, students are required to submit a second qualifying paper on a subject agreed upon with a faculty member. This paper should demonstrate the student's ability to formulate a research topic involving primary materials, to argue its importance and to situate it within a history of scholarship, to articulate the principal questions of theory and method relevant to this topic, and to present conclusions in a clear and precise manner. It must be submitted in the third week of the Spring quarter of the second year. The length of this second paper is a maximum of 40 pages (formatted as specified above). There are four grade categories for the second qualifying paper:

- No Pass
- Pass (with progress beyond the M.A. degree not permitted)
- Pass
- High Pass
- There are two readers for each of the qualifying papers. The second reader is appointed by the Chair of the Department. Upon successful completion of the two qualifying papers, students may apply for the M.A. degree. For the degree to be awarded, students must have completed, in addition to the qualifying papers:
- At least two years of the major language
- The three-quarter sequence of departmental courses.
- There can be no outstanding Incomplete grades.

It is very strongly recommended that students avoid Incomplete grades at all times.

## READING LISTS AND ORAL EXAMINATIONS

While the program asks students to pursue specialized research in their area of concentration, it is essential that they do this in relation to a broad understanding of the cultural and historical context in which their objects of specialized study are situated. The Department therefore requires oral examinations on the basis of two reading lists in:

- A major area of study
- A minor area of study

The student's two reading lists are to be designed in consultation with one or more SALC faculty in a given area, and tailored to his or her individual needs. The first must deal with the literary, cultural or other history of the student's major language. The second must pertain to an area of South Asian studies other than his or her field of concentration. The reading lists should not exceed twenty books and should constitute a serious, deep, and broad set of readings in important issues in the area of study. The relative weight of primary as opposed to secondary texts should be a matter of consultation between the student and the faculty member(s) concerned.
The two reading lists in their final form must be approved and signed by the faculty member(s) who supervised their preparation. An approved and signed copy of each will be deposited in the student's permanent file. These signed copies must be submitted to the departmental office by the end of the student's second year or the end of the fall quarter of the third year. It is the student's responsibility to ensure that the reading lists are filed in time.

The faculty members who approve the reading lists serve as examiners for the oral examinations, which are normally taken in the fall or winter quarter of the student's third year. The two exams are administered in one session; each is approximately 45 minutes long. One composite grade - 'No Pass', 'Pass', or 'High Pass' - is awarded for the oral examinations.

## DISSERTATION PROPOSAL AND ADMISSION TO CANDIDACY

In order to be admitted to Ph.D. candidacy, a student must write and orally defend a detailed dissertation proposal prepared under the supervision of the dissertation chairperson. Students must have completed all requirements: at least 18 courses, including the three required departmental seminars, the language requirements, and the qualifying papers. All Incompletes and blanks on the student's transcript for required courses must have been removed and the new grade recorded in the Registrar's Office prior to the date of the proposal defense.

Note that, in accordance with Divisional and Departmental requirements, students must pass the examination in the language of scholarship before being admitted to candidacy. Furthermore, most of the grants which are available to support dissertation research require that a student be admitted to candidacy before taking up the grant.

The proposal should demonstrate a student's awareness of broad theoretical issues and a detailed knowledge of the chosen area of specialization. The dissertation proposal should be 20-25 pages in length. It should provide a clear statement of the scholarly problem to be addressed by the dissertation; the student's theoretical orientation to this problem; a review of previous scholarly work; a provisional outline of the dissertation as a whole; a plan of research, including archives to be consulted, research sites chosen, a timetable, and a bibliography of no more than two pages.

Prior to the proposal defense, the student and the dissertation chairperson (who must be a member of the Department of South Asian Languages and Civilizations) select the two additional members of the student's dissertation committee. One of the two may be, with the approval of the Departmental chair, from outside the University. The third member must be a University faculty member but need not be a member of SALC. The proposal must be deposited in the form of a printed paper copy in the departmental office at least two weeks prior to the date of the defense, and an abstract of it must be circulated to all SALC faculty. It is the responsibility of the student to ensure that the proposal and the abstract are deposited by this deadline. The proposal is defended orally before the committee and the Department, with the Chair of the Department presiding; these proceedings are open to students and faculty of the University. One purpose of the proposal defense is to familiarize all the members of the Department with a student's research agenda, and provide an opportunity for them to offer guidance. With successful completion of the dissertation proposal defense, the student is admitted to Ph.D. candidacy.

## The Dissertation

It is expected that the dissertation will represent a substantial and original contribution to the study of South Asian languages and civilizations. Upon completion of the dissertation, the student defends it orally before the members of the dissertation committee, a Divisional Representative, and the Department, with the Chair of the Department presiding. Students will follow the guidelines of the University's Dissertation Office in planning the date of their defense, and in formatting the dissertation. See http://www.lib.uchicago.edu/e/phd/.

Two weeks before the scheduled defense, the student must submit a hard copy of the dissertation to each member of his/her committee and the departmental administrator. This task is solely the responsibility and expense of the student. This copy will be a complete, formatted dissertation, with the preliminary pages, main body of work, and end matter included in their entirety, and properly formatted. This copy of the dissertation should conform in every way to the requirements outlined by the University's Dissertation Office, with the single exception that it may be submitted to the Department and committee members on standard white paper, instead of the archival quality paper the Dissertation Office requires. The defense will be cancelled if these standards are not met.

The defense proceedings are open only to the University community. Grades awarded for the dissertation are "No Pass," "Conditional Pass," "Pass," and "Pass with Distinction." The "Conditional Pass" requires the student to make revisions
and obtain the committee's final approval before the Departmental Approval Form will be signed. A vote of "Distinction" requires the unanimous recommendation of the dissertation committee and a majority vote of the faculty in attendance at the defense.

## SOURCES OF FUNDING

The information given below lists the most common sources of fellowships and grants for graduate students in the Department. Students may also be eligible for other funding administered by the University, private foundations, or other agencies. For information on the full range of sources of support, contact the following:

Office of Graduate Affairs
Administration Bldg., Rm. 221-A
graduate-affairs@uchicago.edu
http://grad-affairs.uchicago.edu/programs/index.shtml
Humanities Dean of Students Office
Walker Museum, Ste. 111
humanitiesadmissions@uchicago.edu
http://humanities.uchicago.edu/current/grants.html

## FUNDING DURING COURSEWORK

University-based Support
University funds are awarded and administered by the Humanities Division. The Department faculty makes its recommendations to the Division based upon the student's record. There is no separate application for these funds beyond the initial application to the Department. The amount and duration of Universitybased support varies. As of 2007-08, many students will also have teaching service included in their funding packages. Questions concerning University-based support should be directed to the Departmental Graduate Student Advisor and/or the Humanities Dean of Students.

FLAS Fellowships (Foreign Language and Area Studies Fellowships) are another important source of funding. Recipients must be U.S. citizens or permanent residents, enrolled in at least one language course in the language of the award per quarter, and enroll in at least one course in an appropriate area or international studies subject during the academic year in which they hold a FLAS. Additional details regarding FLAS Fellowships may be found at the Office of Graduate Affairs web site. Qualifying languages taught in the Department are Bengali, Hindi, Malayalam, Marathi, Tamil, Telugu, Tibetan, Urdu, and when offered, Khowar and Panjabi. These fellowships currently cover tuition, health clinic fees, student activities fees, and carry a stipend of $\$ 15,000$ for three quarters. A competition for Summer FLAS fellowships for language study takes place concurrently; summer fellowships currently cover program tuition up to $\$ 4000$ and provide a stipend of $\$ 2500$. Summer FLAS fellowships may be used for eligible programs in the United States and abroad.

Contact Tarini Bedi, Assoc. Dir., South Asia Language and Area Center (tbedi@uchicago.edu), for information. Note that Summer FLAS Fellowships also may be available from the institution offering instruction (e.g., SASLI at UW, see below). Contact the institution sponsoring the program for information. Winter Quarter deadline.

## LANGUAGE STUDY FELLOWSHIPS

We strongly encourage all SALC students to participate in a language study program in South Asia, and/or in the summer at the South Asian Summer Language Institute (SASLI) at the University of Wisconsin, at some time in their graduate career. Receipt of a fellowship for participation in a language program does not affect the total amount of your University funding; rather, the University postpones the funding until you return from your language study fellowship year or summer.

The American Institute of Indian Studies (AIIS) offers fellowships for its intensive nine-month language programs in India. See http://www.indiastudies.org/AIIS.html for details and a current list of the languages offered. AIIS summer language programs offer no funding for participants; students often obtain a summer FLAS fellowship through their home university. COSAS funding is also available for this purpose (see below). UC-Berkeley funds special fellowships for the AIIS Urdu program. See http://southasia.berkeley.edu/fellowship_berkeley.php. For information, contact Elise Auerbach, Administrator for AIIS, (aiis@uchicago.edu). Winter Quarter deadline.
aiis@uchicago.edu offers some minimal funding for language study in Sri Lanka.
See http://www.aisls.org/fellowship.html. Rolling deadline.
The Committee on Southern Asian Studies (COSAS). Although primarily awarded for dissertation write-up (see below), COSAS fellowship support is also available for summer language study. For application information contact the Committee Office (Kelly 104, tel. 702-8637, snoble@uchicago.edu). Spring Quarter deadline.
Critical Language Scholarships are available for summer intensive language study with AIIS (see above) and the American Institute of Bangladesh Studies, for U.S. citizens. See https://clscholarship.org/home.php. Winter and Spring Quarter deadlines.
The South Asia Summer Language Institute (SASLI) at the University of Wisconsin-Madison offers FLAS fellowships through UW, with the usual FLAS citizenship restrictions, and Fee Remission Scholarships for which all students are eligible. See http://sasli.wisc.edu/funding/index.htm. Winter Quarter deadline.

## PRE-DISSERTATION RESEARCH SUPPORT

The Social Science Research Council (SSRC), despite its name, funds humanities projects as well, and offers a Dissertation Proposal Development Fellowship. See http://www.ssrc.org/programs/dpdf/. Winter Quarter deadline.
The American Institute of Bangladesh Studies (AIBS) offers a pre-dissertation fellowship for U.S. citizens or permanent residents. See http://www.aibs.net/ predisfellowship.html. Contact AIBS for deadline.

The American Institute of Sri Lankan Studies (AISLS) offers a dissertation planning grant. See http://www.aisls.org/diss-plan.html. Fall Quarter deadline.

The Committee on Southern Asian Studies (COSAS). Although primarily awarded for dissertation write-up (see below), COSAS fellowship support is also available for pre-dissertation research. For application information contact the Committee Office (Kelly 104, tel. 702-8637, so-asian@uchicago.edu). Spring Quarter deadline.

## Funding for Overseas Dissertation Research

These fellowships are for students admitted to Ph.D. candidacy. The following are the most common fellowships received by our students, and some South Asiaspecific fellowships (as well as one Southeast Asia fellowship). There are several other fellowships for which graduate students in SALC are possibly eligible; see the Office of Graduate Affairs and the Humanities Dean of Students Office for complete databases and application information. Students should apply to as many relevant funding sources as possible.

## The American Institute of Bangladesh Studies (AIBS)

Funds dissertation research in Bangladesh. See http://www.aibs.net/ juniorfellowship.html. Winter Quarter deadline.

## The American Institute of Indian Studies (AIIS)

Funds dissertation research in India. Note that the July 1 application deadline is approximately one year to one-and-a-half years prior to the time when a grant recipient would begin residence in India. See http://www.indiastudies.org/.

## The American Institute of Pakistan Studies (AIPS)

Offers a fellowship for research on materials related to the history and culture of Pakistan in any country EXCEPT Pakistan and the U.S. See http:// www.pakistanstudies-aips.org/. Winter Quarter deadline.

## The Center for Khmer Studies (CKS)

Offers a Ph.D. Dissertation Research Fellowship for work in Cambodia and neighboring countries. See http://khmerstudies.org/fellowships/senior-fellowships/. Fall Quarter deadline.

## The Council of American Overseas Research Centers (CAORC)

Offers a Multi-Country Research Fellowship for research of regional or transregional significance. Fellowships require scholars to conduct research in more than one country, at least one of which hosts a participating American overseas research center. See http://www.caorc.org/fellowships/multi/. Winter Quarter deadline.

## Fulbright-Hays Dissertation Fellowship

For research in non-Western countries. See http://www2.ed.gov/programs/ iegpsddrap/index.html. Students apply through the University Office of Graduate Affairs. See http://grad-affairs.uchicago.edu/programs/fulbright.shtml. Fall Quarter deadline.

## Fulbright U.S. Student Program (Through IEE)

This program funds U.S. citizens conducting research abroad. See http:// www.iie.org/Template.cfm?section=Fulbright1. Students apply through the University Office of Graduate Affairs. Contact Advisor Brooke Noonan, brookec@uchicago.edu. Fall Quarter deadline.

## The Nicholson Center for British Studies, University of CHICAGO

This Center offers a short-term graduate fellowship for UC graduate student research in the British Isles and Ireland, generally for three months or fewer. Those who research the former British Empire are eligible. Applicants have to demonstrate their need to conduct research in the British Isles and/or Ireland. See http://british.uchicago.edu/fellowships.html\#gradtravel. Spring Quarter deadline.

## The Social Science Research Council (SSRC)

Despite its name, funds humanities research and offers an International Dissertation Research Fellowship. See http://www.ssrc.org/programs/idrf/. Fall Quarter deadline.

## Dissertation Write-up Fellowships

Please consult the Office of Graduate Affairs and the Humanities Dean of Students Office for information about external fellowships for the dissertation write-up period.

The University offers several fellowships for dissertation write-up which our students have received in recent years, namely, the Franke Institute, the William Rainey Harper, the Mellon Foundation, and the Whiting dissertation-year fellowships. These are residential fellowships which require presence on campus. The Department nominates students for these fellowships, and the competitions are administered by the Humanities Dean of Students Office. Note that students are not eligible for the Franke, Harper, and Whiting Fellowships beyond the tenth year of their program. For the Mellon, students beyond their sixth year are ineligible. See http://humanities.uchicago.edu/current/\#grants for information.
The Martin Marty Center at the Divinity School offers a dissertation fellowship that may interest SALC students. See http://divinity.uchicago.edu/martycenter/ fellowships/marty_dissertation.shtml for application information.

## EXTERNAL FELLOWSHIPS

Please consult the Office of Graduate Affairs and the Humanities Dean of Students Office for information about external fellowships for the dissertation write-up period. In recent years some SALC students have received the following fellowship:

## The American Association of University Women Dissertation Fellowship

Available to U.S. citizen/permanent resident women who will complete their dissertation writing during the fellowship period. Scholars engaged in researching gender issues are encouraged to apply. See http://www.aauw.org/learn/ fellows_directory/. Fall quarter deadline.

## The Andrew W. Mellon Foundation/ACLS Dissertation Completion Fellowships

Awardees can generally hold this Fellowship no later than their seventh year. See http://www.acls.org/grants/Default.aspx?id=510\&linkidentifier=id\&itemid=510;. Fall quarter deadline.

## CONFERENCE GRANTS

SALC students are encouraged to organize panels and present papers at annual conferences such as the University of Wisconsin Annual Conference on South Asia, the annual meetings of the Association of Asian Studies, the American Academy of Religion, the American Historical Association, and the Modern Language Association, and their regional conferences, and conferences abroad, if possible. The following are some funding sources for travel to conferences for students presenting papers.

## The American Institute for Sri Lankan Studies

Offers travel stipends for two annual conferences. See http://www.aisls.org/ fellowship.html

## The Division of the Humanities

Offers a Conference Grant. See http://humanities.uchicago.edu/current/\#grants | conference-travel.

## The Office of Graduate Affairs

Offers the Harrison-Doolittle Conference Grant. See http://gradaffairs.uchicago.edu/programs/doolittle.shtml.

## TEACHInG Opportunities FOR Graduate Students in the Department

As of 2007-08, many students will be required at some point to hold three Teaching Assistantships and two Lectureships, usually beginning in their third year. For Lectureships, preference is given to Ph.D. candidates. Students should discuss these arrangements with the GSA and the student's committee chair, but an
overview of teaching opportunities and teaching development resources is given below.

Departmental courses provide the major venue for teaching. The two-quarter undergraduate course "Introduction to South Asian Civilizations" regularly involves the participation of one or more graduate students as Teaching Assistants, and sometimes as Lecturers. The T.A.s and Lecturer/s are selected by the faculty coordinators for the course, usually late in the spring quarter of the preceding academic year. Departmental faculty teaching language courses also sometimes hire graduate students as Teaching Assistants and Lecturers. Students may teach a course of their own devising as a Lecturer; this arrangement must be coordinated and approved by the Department Chair, who will contact students about proposals for such.

Students may teach a course of their own devising through competitive "prize seminars" offered by the Stuart Tave Teaching Fellowships and Whiting Undergraduate Teaching Fellowships. The Department nominates students for these fellowships. Students can also apply for the Tave through The Center for Gender Studies (see http://genderstudies.uchicago.edu/grad/teaching.shtml).

Students are also encouraged to pursue teaching opportunities not directly related to South Asian studies, such as positions in the University Writing Program (see http://writing-program.uchicago.edu/jobs/index.htm). We especially encourage students to pursue the position of Writing Intern in the Humanities Common Core courses through this program. Being a Writing Intern (functionally a T.A.) in these courses provides valuable generalist experience for the job market.

Consult the Humanities Division Dean of Students for information about other teaching opportunities in the University's Graham School and Chicago generally.

For students teaching beyond their service requirements for their funding, or students who enrolled in the Ph.D. program before 2007, the T.A. positions currently offer a quarterly stipend of $\$ 1500$; Lectureships offer a quarterly stipend of $\$ 3500$.
The University sponsors workshops and forums designed to help graduate students develop pedagogically. Contact the Center for Teaching and Learning (see http://teaching.uchicago.edu/). The South Asian Language Research Center, housed at the University, also offers workshops on South Asian language pedagogy targeted towards advanced graduate students interested in language instruction (see http:// salrc.uchicago.edu/).

## LIbRARY Resources

Over 610,000 volumes of books, journals, government documents, maps, pamphlets, films, and sound recordings from all parts of the South Asian subcontinent are housed in the University of Chicago Library system. Publications are available on all aspects of South Asian life and culture, in all major western languages as well as in over thirty languages from all the nation-states of the subcontinent.

In addition to the Library's on-line catalog (http://www.lib.uchicago.edu/e/ index.html), area-specific informational resources can be found at the Southern

Asia Collection website, http://www.lib.uchicago.edu/e/su/southasia/. A subpage of this site offers cataloging for the 21,000 volumes of Official Publications of the Government of India, deposited with the Regenstein by the British Library: http:// www.lib.uchicago.edu/e/su/southasia/off-pubs.html.

## Office of the Southern Asia Collection

Regenstein Library, Room 560. Bibliographer: James H. Nye, jnye@uchicago.edu. Southern Asia Collection staff members are available for consultation in Regenstein 560 Monday through Friday from 9:00 a.m. to 5:00 p.m. You are encouraged to consult with the South Asia Librarian, Jim Nye, or one of his staff members, to discuss research needs for your dissertation project.

Following is a list of South Asia-related materials in the Regenstein Library and elsewhere on and near campus:

## South Asia Reference Collection

Regenstein Fifth Floor Reading Room (RR5) on the far east side. This collection includes some 4,000 reference tools for most South Asian subjects (bibliographies, indexes, census volumes, gazetteers, atlases, dictionaries, standard histories, etc.), plus a selection of current journals, and daily newspapers.

## South Asia Pamphlet Collection

housed on the south wall of RR5 in vertical files for which a key is available in Room 560 during office hours; collection includes several thousand pamphlets, off prints, unpublished conference papers, reading lists and other ephemera; holdings are listed in special catalog drawers marked by yellow tape in the fifth floor South Asia card catalog.

## Map Collection

JRL 370, includes thousands of maps of all parts of South Asia at various scales, and from various periods.

Audio-visual materials
These include $16-\mathrm{mm}$ films, videos, audio cassettes, DVDs, etc. Many are in the Regenstein collection catalogue, especially audio recordings of a wide variety of South Asian music. A few South Asian film resources are available at the Film Studies Center. A small library of audio-visual materials is available for check out to graduate students from the South Asia Outreach Office in Kelly Hall.

The nearby Center for Research Libraries (http://catalog.crl.edu/) holds multiple resources, including films from the important South Asia Microform Project. These can be obtained through Interlibrary Loan, or at the CRL Reading Room itself, at 6050 S. Kenwood Avenue (see http://www.crl.edu/about).

## SOUTH ASIAN LANGUAGES \& CIVILIZATIONS - SOUTH ASIAN LANGUAGES \& CIVILIZATIONS COURSES

SALC 30508. Radical Cinema in India: A Historical Introduction. 100 Units. Edit Course Data - default
At the same time as Hindi films emerged as the dominant idiom of a "national" cinema, the cinematic landscape of postcolonial India was dramatically transformed by the works of a handful of filmmakers who emerged out of the ranks of newly established film clubs and and the Film Institute in India. Variously described as the proponents of "alternative" "art" or parallel cinema in India, filmmakers like Satyajit Ray, Shyam Benegal, Ritwik Ghatak, Mrinal Sen, Basu Chatterji, Adoor Gopalakrishnan chose cinema as the form through which they commented on politics and society. Their cinematic style and idiom was however markedly different from that of Bollywood. This course introduces students to ideas of cinematic cosmopolitanism through a close reading of these exponents of "radical cinema" in India.
Instructor(s): R. Majumdar Terms Offered: Winter 2013
Equivalent Course(s): SALC 20508
SALC 30602. Reading Panjabi. 100 Units. Edit Course Data - default
This course is intended for people who can already speak Panjabi (either partially or fully), but cannot read and/or write it. It will teach students how to read Panjabi in either Gurmukhi or Perso-Arabic script (Shahmukhi) or both, depending on student interest. Specific materials chosen for the course will depend on the students who enroll.
Instructor(s): E. Bashir
Prerequisite(s): Consent of instructor
Equivalent Course(s): SALC 20605
SALC 30701. Postcolonial Theory. 100 Units. Edit Course Data - default
Equivalent Course(s): SALC 20701,HIST 26601,HIST 36601
SALC 30900. Cultural Politics of Contemporary India. 100 Units. Edit Course Data - default

Structured as a close-reading seminar, this class offers an anthropological immersion in the cultural politics of urban India today. A guiding thread in the readings is the question of the ideologies and somatics of shifting "middle class" formations; and their articulation through violence, gender, consumerism, religion, and technoscience.
Instructor(s): W. Mazzarella Terms Offered: Not offered 2012-13; will be offered 2013-14
Equivalent Course(s): ANTH 25500,ANTH 42600,SALC 20900

# SALC 30901. Indian Philosophy I: Origins and Orientations. 100 Units. Edit Course Data - default <br> A survey of the origins of Indian philosophical thought, emphasizing the Vedas, Upanisads, and early Buddhist literature. Topics include concepts of causality and freedom, the nature of the self and ultimate reality, and the relationship between philosophical thought and ritual or ascetic religious practice. (B) 

Instructor(s): M. Kapstein Terms Offered: Winter
Equivalent Course(s): DVPR 30200,HREL 30200,RLST 24201,SALC 20901
SALC 30902. Indian Philosophy II: The Classical Traditions. 100 Units. Edit Course Data - default
Continuing and building upon SALC 20901/30901, we focus on the development of the major classical systems of Indian thought. The course emphasizes Indian logic, epistemology, and philosophy of language. (B)

Instructor(s): D. Arnold Terms Offered: Spring
Prerequisite(s): RLST 24201
Equivalent Course(s): DVPR 30300,HREL 30300,RLST 24202,SALC 20902
SALC 33002. Gender and Literature in South Asia. 100 Units. Edit Course Data default
Equivalent Course(s): SALC 23002,CMLT 23500,GNDR 23001,GNDR 33001
SALC 33101. Love, Conjugality, and Capital: Intimacy in the Modern World. 100 Units. Edit Course Data - default
A look at societies in other parts of the world demonstrates that modernity in the realm of love, intimacy, and family often had a different trajectory from the European one. This course surveys ideas and practices surrounding love, marriage, and capital in the modern world. Using a range of theoretical, historical, and anthropological readings, as well as films, the course explores such topics as the emergence of companionate marriage in Europe and the connections between arranged marriage, dowry, love, and money. Case studies are drawn primarily from Europe, India, and Africa.
Instructor(s): J. Cole, R. Majumdar Terms Offered: Spring
Note(s): This course typically is offered in alternate years.
Equivalent Course(s): GNSE 23102,ANTH 21525,ANTH 32220,CHDV 22212,CHDV
32212,SALC 23101
SALC 36901. Orality, Literature, and Popular Culture of Afghanistan and
Pakistan. 100 Units. Edit Course Data - default
Instructor(s): C. R. Perkins Terms Offered: Winter 2013
Equivalent Course(s): SALC 26910,CMLT 26901,CMLT 36901,HIST 26905,HIST
36905,NEHC 20901,NEHC 30901

SALC 37701. Mughal India: Tradition and Transition. 100 Units. Edit Course Data - default

The focus of this course is on the period of Mughal rule during the late sixteenth, seventeenth, and eighteenth centuries, especially on selected issues that have been at the center of historiographical debate in the past decades.
Instructor(s): M. Alam Terms Offered: Autumn
Prerequisite(s): Advanced standing and consent of instructor. Prior knowledge of appropriate history and secondary literature.
Equivalent Course(s): SALC 27701,HIST 26602,HIST 36602
SALC 38300. Hindu Mythology. 100 Units. Edit Course Data - default
This course is a survey of the great mythological themes of Hinduism. We begin our reading with the Rg Veda, continue through the Epics and the Puranas, and end with contemporary folk tellings. Texts in English.
Instructor(s): W. Doniger Terms Offered: Spring
Equivalent Course(s): HREL 34700,RLST 27404,SLTH 34700
SALC 39400. South Asia Before the Buddha. 100 Units. Edit Course Data - default South Asia has a rich historical record, from the very beginnings of our species to the present, and yet the earlier part of this record is surprisingly little-known outside specialist circles. This course provides a broad overview of South Asian archaeology and early history, from the beginnings of agricultural production to the expansion of states and empires in the early days of textual records. We cover critical anthropological processes such as the origins and expansion of agriculture, the development of one of the world's first urban societies - the Harappan or Indus civilization- the growth and institutionalization of social inequalities, and changing contexts of social and religious life. While the course actually extends a bit beyond the time of the Buddha, its major focus is on the periods up to and including the Early Historic. No prior experience of either South Asia or archaeology is assumed; indeed, we will think quite a bit about the nature of evidence and about how we know about the more distant past.
Instructor(s): K. Morrison Terms Offered: Spring
Equivalent Course(s): SALC 25900
SALC 39700. Introduction to Buddhism. 100 Units. Edit Course Data - default This course introduces students to some aspects of the philosophy, psychology, and meditation practice of the Theravada Buddhist tradition in premodern and modern South and Southeast Asia, and also in the modern west. It looks at basic Buddhist ideas and practices, and then at the relationships between Buddhism and psychology, in two ways: in relation to the indigenous psychology of the Shan in contemporary Northern Thailand, and in the ways elements from Buddhist meditation have been used by western scientific psychologists. The course ends with an ethnography of a Buddhist meditation monastery in Thailand. Throughout the course attention is paid to the role(s) of gender.
Instructor(s): S. Collins Terms Offered: Winter
Note(s): This course is open to both undergraduate and graduate students.

SALC 40000. South Asia As A Unit Of Study. 100 Units. Edit Course Data - default For course description contact South Asian Languages.

SALC 42501. Many Ramayanas. 100 Units. Edit Course Data - default
This course is a close reading of the great Hindu Epic, the story of Rama's recovery of his wife, Sita, from the demon Ravana on the island of Lanka, with special attention to the changes in the telling of the story throughout Indian history. Readings are in Paula Richman, Many Ramayanas and Questioning Ramayanas; the Ramayanas of Valmiki (in translation by Goldman, Sattar, Shastri, and R. K. Narayan), Kampan, and Tulsi; the Yogavasistha-Maharamayana; and contemporary comic books and films.
Instructor(s): W. Doniger Terms Offered: Winter
Prerequisite(s): Consent of instructor
Equivalent Course(s): FNDL 22911,HREL 42501,SCTH 40701
SALC 48200. The Mahabharata in English Translation. 100 Units. Edit Course Data - default

A reading of the Mahabharata in English translation (van Buitenen, Narasimhan, Ganguli, and Doniger [ms.]), with special attention to issues of mythology, feminism, and theodicy. (C)
Instructor(s): W. Doniger Terms Offered: Autumn
Equivalent Course(s): RLST 26800,FNDL 24400,HREL 35000,SALC 20400
SALC 48400. Second-Year Sanskrit II. 100 Units. Edit Course Data - default
Instructor(s): W. Doniger Terms Offered: Winter
Prerequisite(s): SANS 10300 or comparable level of language skills
Equivalent Course(s): SANS 20200,HREL 36000

## Department of the Visual Arts

## Chair

- Jessica Stockholder, Professor

Professors

- Charles Cohen, Art History
- Elizabeth Holsinger, English, Art History
- Laura Letinsky, Cinema and Media Studies
- Jessica Stockholder

Associate Professors

- Matthew Jesse Jackson, Art History
- William Pope.L

Assistant Professors

- Jason Salavon, Computation Institute
- David Schutter
- Catherine Sullivan
- Karthik Pandian, Harper Schmidt Fellow

Professor of Practice in the Arts

- Geof Oppenheimer

Senior Lecturer

- Judy Hoffman, Cinema and Media Studies

Lecturers

- Katherine Desjardins
- Scott Wolniak

Affiliates

- Bill Brown, English
- Darby English, Art History
- W. J. T. Mitchell, English, Art History
- Rebecca Zorach, Art History

Associates

- Susanne Ghez, Renaissance Society
- Stephanie Smith, Smart Museum

Emeritus Faculty

- Herbert George
- Vera Klement
- Thomas Mapp
- Robert C. Peters

The University of Chicago offers a Master of Fine Arts degree through the Department of Visual Arts, located at The Reva and David Logan Center for the Arts. Our MFA student body comprises artists working in sculpture, photography, painting, installation, performance, video and new media. Our faculty has expertise across all these specific areas and students work with all faculty. We admit students to the program based on the quality of their art and their interest in working in an interdisciplinary program within a university environment. We believe that students/artists benefit from the cross fertilization of daily contact with others dealing with similar sets of issues across different disciplines and media. Art is a cultural product and, as such, we encourage students to explore not only the artistic issues pertinent to their work, but the theoretical, social and historical ones as well.

During the eighteen course program, which normally requires two years in residence (six quarters), students will pursue individual courses of study under the guidance of the faculty.

Although registration and the recording of courses and grades will conform to standard University practices, the program is designed to provide a flexible structure. Studio investigations will continue through the entire period, augmented by quarterly course selections in other academic disciplines. Individual programs will be formulated with the faculty and with the concurrence of the Graduate Student Advisor. But programs may well change in method, media and advisors as students develop their focus of inquiry.

In their two year program of study, MFA students take three specially designed seminars that facilitate the investigation of their own artistic language and the development of community. First and second year students work together to sharpen their skills of critical thinking and writing, and to examine the social and economic aspects of contemporary artistic practice, as well as its theoretical, critical and art historical contexts. Students come to the program with diverse intellectual, cultural and artistic backgrounds as well as different practices. They work together to articulate a common language with which to discuss and make art in a critical and supportive community. Through the examination of their own visual vocabulary and intellectual underpinnings, students develop their analytical and creative skills. As a component of students' intellectual and creative research they are required to take classes in areas other than DOVA. This includes class offerings through the College which are listed in the undergraduate course catalog as well as other relevant advanced seminars listed both through DOVA and other departments.

Throughout the academic year we have a lively schedule of visiting artists. These visitors come to DOVA for anywhere from a few days to a whole quarter and speak about their own work as well as critique student work. The University of Chicago provides an enormously rich intellectual environment and students will find engaging lectures and workshops on a daily basis, especially in some of the interdisciplinary programs such as the Center for Gender Studies, the Center for the Study of Race, Politics, and Culture, the Mass Culture Studies Workshop,
the Department of Cinema and Media Studies, the Department of Art History, and so on. Workshops that focus on professional and pedagogical issues are also offered periodically both by DOVA and by Career and Placement Services to assist students in everything from preparing to find a teaching job to pursuing artistic representation in galleries and museums. Exhibiting one's work and curating are strong topics of interest and courses are offered that examine alternative, traditional, and critical practices. Each year, DOVA helps support a faculty led trip to visit museums and galleries outside of Chicago; past trips have included New York City and Beijing.

Each student meets individually with resident faculty throughout each quarter to discuss his or her practice. This discussion varies from specific technical, formal, and conceptual issues to more general dialogue as suggested by the student and the work. In addition to these meetings each student participates in group critiques that bring faculty, students, and invited guests together to look at, question, and offer constructive criticism. In this public forum, faculty and fellow students offer fresh perspectives and try to bring new insight to the work. This combination of individual and public critiques facilitates students' understanding of their own and others practice and are part of a supportive critical atmosphere that characterizes the DOVA experience.

## CURRICULUM

Listed below are the basic requirements for the degree of Master of Fine Arts. A more detailed description of these requirements is available from the department. The choice of these courses will be determined by the student and the faculty, with the concurrence of the Graduate Student Advisor.

1. Studio courses (9). Students are not required to concentrate in any particular medium. However, their selection of studio art courses should reflect a central focus and a continuous development during their course of study. Entering students will meet as a class during the first quarter. This presents an opportunity to present work in progress and begin to develop a common critical language.
2. Graduate Seminar (3). In order to provide a core of common intellectual experience, each student is required to take a specially designed series of three seminar courses which will focus on perception, the social context of practice, and issues in contemporary theory and criticism.
3. Electives (6). These courses may include any combination of art history, other University, or studio courses, although no more than three may be studio based.
4. Standards of performance. Each graduate student must maintain high standards of studio and academic performance, including evidence of substantial growth in their work. The faculty will review performance on a quarterly basis.

In the final quarter of the two year program degree candidates are assigned a committee to assist with the preparation of an MFA paper and final exhibition.

Exhibitions take place at the University gallery or an alternate location proposed by the student. A Master of Fine Arts statement that clearly articulates a position on issues central in importance to each student's life in the creative arts must be submitted and approved by a faculty committee.

Admission to the program is highly selective. Candidates must demonstrate well developed abilities in dealing with ideas in the visual arts. A broad preparation in the history of art is required as well as a clear indication of the candidate's capacity to participate in the academic aspects of the program.

For additional information, please email: dova@uchicago.edu or see us online: http://dova.uchicago.edu/

## Information on How to Apply

The application process for admission and financial aid for all graduate programs in the Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http:// humanities.uchicago.edu/prospective/admissions.html.
Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu.

# THE Division of the Social Sciences 

## Dean

- John Mark Hansen

Deputy Dean and Master of the Collegiate Division

- Adam Green

Dean of Students

- Patrick Hall

Associate Deans of Students

- Don Dunbar
- Kelly Therese Pollock

The Division of the Social Sciences includes the departments, committees and programs which are engaged particularly in the study of human beings in social and temporal contexts; the origins, development, and structure of institutions and ideas, and the relationships between individuals and among groups of individuals. Research and instruction, which are strongly interdisciplinary, focus on interpreting the complexity of human experience through time and explore the interactions between diverse peoples and the world in which they live.
The division welcomes as students potential researchers, scholars, and teachers, as well as those who seek in the social sciences the enrichment of their cultural preparation for the appreciation of life. The division awards the degrees of Master of Arts and Doctor of Philosophy. The division also cooperates in the undergraduate programs leading to the degree of Bachelor of Arts awarded by the College. Students seeking the Bachelor of Arts degree should consult the College's publication, Courses and Programs of Study.

Programs leading to the Ph.D. are offered by the Departments of Anthropology, Comparative Human Development, Economics, History, Political Science, Psychology, and Sociology, as well as the Committees on Social Thought and the Conceptual and Historical Studies of Science. Programs leading to the M.A. are offered by the Committee on International Relations, the Program in Latin American and Caribbean Studies, the Program in Middle Eastern Studies, and the Master's Program in the Social Sciences.

## ADmission To The Division

The Division of the Social Sciences considers for admission to its graduate programs students who have a minimum of a bachelor's degree from an accredited college, or equivalent training. Students apply for admission to the division through
the Office of the Dean of Students in the Division of the Social Sciences; applications are subsequently evaluated by the faculties of the various programs.

## DEGREES

## MASTER OF ARTS

The degree is awarded for competence in a field of study, not solely for satisfactory completion of a set number of courses.

The general requirements for the master's degree are as follows:

1. In programs that recommend only the awarding of the master's degree, at least nine courses and three quarters of residence in the division. In departments and committees that recommend the awarding of the Ph.D. degree, at least three full time quarters (or their part time equivalent) of Scholastic Residence.
2. Completion of the program of study and other requirements prescribed by the student's department or committee.
3. In almost all departments and committees, presentation of an acceptable master's research paper or thesis.
4. In certain departments and committees, satisfactory performance on a final comprehensive examination.
5. Any additional requirements set by the separate departments or committees.

## DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy is awarded for mastery of subject matter and demonstration of research capacity, not solely for completion of a set number of requirements.
The general requirements for the Doctor of Philosophy degree are:

1. Residence requirement and program requirements. Students in all Ph.D. degree programs must be registered in accordance with the University Doctoral Residence System.
Students must complete the requirements set by their particular academic programs (including courses, seminars, research work, and examinations). These requirements vary from program to program within the division.
Portions of the program requirements may sometimes be satisfied on the basis of equivalent work done at other institutions or in other units of the University. The student's department or committee determines whether previously earned academic credit and degrees will be accepted as partial fulfillment of program requirements.
2. Admission to candidacy at least eight months before the date the degree is to be conferred. The student is admitted to candidacy by the dean of students upon the recommendation of the student's department or committee after completion of the following requirements:
A. Completion of the work required for a master's degree even if the formal M.A. degree is not taken.
B. Successful performance on the departmental preliminary examination(s), if required. Ordinarily, this is taken after the completion of the first year of work.
C. Approval by the department or committee of a dissertation proposal and a program of research.
D. Satisfactory completion of any additional requirements set by the separate departments or committees.
3. Doctoral dissertation. The candidate is expected to submit to the department or committee an acceptable doctoral dissertation which makes an original contribution to knowledge within the field of inquiry. This step is necessary before the final oral examination is scheduled.
4. The final oral examination and defense of the dissertation.

# Master of Arts Program in the Social Sciences 

MAPSS Executive Committee Director

- John J. MacAloon, Social Sciences

Associate Director

- Chad Cyrenne, Social Sciences

Professors

- Ralph Austen, History
- Dipesh Chakrabarty, South Asian Languages and Civilization
- Elisabeth Clemens, Sociology
- Bertram J. Cohler, Human Development
- Jean Comaroff, Anthropology
- Michael P. Conzen, Geographical Studies
- Raymond D. Fogelson, Anthropology
- Morris Fred, Social Sciences
- Rachel Fulton, History
- Rebecca Graff, Social Sciences
- Alan Kolata, Anthropology
- Susan Goldin Meadow, Psychology
- Gary Herrigel, Political Science
- Martha McClintock, Human Development
- Omar McRoberts, Sociology
- Howard Nussbaum, Psychology
- Richard Taub, Human Development and Sociology

Earl S. Johnson Instructors

- Barnaby Riedel, Human Development
- Avinash Sharma, History


## GENERAL INFORMATION

The Master of Arts Program in the Social Sciences (MAPSS) is a one year program of graduate studies leading to the A.M. (Masters of Arts) degree. MAPSS offers a wide variety of disciplinary and interdisciplinary opportunities for advancing academic or career goals, while allowing flexibility unusual among graduate programs. MAPSS makes the resources of a great university available for studentcentered and highly individualized programs of graduate study. Each student works closely with the director and an assigned preceptor on all aspects of the program,
from designing a customized curriculum, to defining the area of scholarly research, to writing the master's paper. MAPSS provides every student with a vibrant and collaborative intellectual community and core course training in social science theory and methodology. Students choose seven additional courses from the full range of regular doctoral and graduate professional offerings of the departments and committees of the Division of the Social Sciences and of the other divisions and professional schools of the University. A dual A.M./M.A. degree with the University of Chicago Harris School of Public Policy is also available.

The program is well suited for those who wish either to take advantage of the resources of several disciplines to study a problem or area of interest, or to strengthen their training and achievement in a single discipline. Some MAPSS students acquire skills and knowledge for careers that make use of the social sciences; others prepare for further graduate work or professional training. The program further provides students an opportunity to explore fields in the social sciences in which they may have little background before making a major professional or educational commitment.

MAPSS offers sophisticated counseling and application support to students who confirm their vocations for doctoral or professional school study. MAPSS graduates have received and presently pursue doctorates in all of Chicago's social science departments and committees, as well as Ph.D., J.D., and M.D. degrees in the various professional schools. They are likewise welcomed into advanced study at other major research institutions in the U.S. And abroad.

Graduates of the program also enter or return to a wide range of careers for which the A.M. is increasingly the entry level degree. Such careers include community organizing, contract research, business consulting, teaching, counseling, publishing, health care, government service, public affairs, nonprofit administration, arts and museum curation. A national network of MAPSS alumni, in concert with the University's office of Career Counseling and Placement Services, enthusiastically assists current students in identifying career possibilities and securing challenging positions.

## PRECEPTORS

Students work closely with one of the preceptors in the Master of Arts Program in the Social Sciences. Preceptors guide students in defining their areas of academic specialization as well as in choosing courses. Preceptors also assist students in selecting faculty sponsors for their A.M. papers and take an active role in guiding and evaluating the research and writing of these papers.

## Program Requirements and Course Work

Students in the Master of Arts Program in the Social Sciences are expected to complete nine graduate level courses with a minimum grade average of $B$, and a master's paper that must be approved by both a faculty sponsor and a MAPSS preceptor.

## COURSE WORK

The nine courses must include the core course and meet the methods requirement, as described below. The core course, Perspectives in Social Science Analysis, provides a critical understanding of the major theoretical approaches used by professional social scientists. It supplies all MAPSS students with a common technical vocabulary and evens out their foundational preparations across the various disciplines. Because Perspectives is offered only in the Autumn Quarter, students may not begin the MAPSS program in any other quarter.

Students must also fulfill a social sciences methods requirement. MAPSS offers courses in historical, ethnographic and political theory methods. Survey research methods courses are sponsored by the Division of Social Sciences. Dozens of other methods courses from statistics and policy methods to interview and case study methods are available to fulfill the requirement in any given year. Students may also fulfill the requirement by demonstrating prior methods course work.

Courses are selected with the guidance and approval of a MAPSS preceptor and the MAPSS director. The full time graduate student registers for three courses each quarter, and completes the nine course requirement in three quarters.

## THE MASTER'S PAPER

Students write the paper under the supervision of a regular faculty member in the University and a preceptor, both of whom provide a written evaluation and a letter grade upon its completion. The Master's paper may be based upon: empirical research testing a social science hypothesis or deploying a specified social science perspective; a theoretical critique of existing social science literature on a selected topic; systematic survey or evaluation research; or any other topic acceptable to the faculty sponsor, the preceptor, and the program director. During the winter quarter, preceptors hold regular thesis proposal writing workshops. Any faculty member from any school, division, or department of the University may serve as the thesis paper sponsor. In any two academic years, as many as 240 individual faculty members supervise MAPSS papers.

A selection of M.A. paper titles may further suggest the range of research interests accommodated within the MAPSS program.
"Democratic Leadership in Athens and its Role in Thucydides Political Thought."
"Holocaust Representation and Memory: The United States Holocaust"
"Memorial Museum, Washington, D.C. And the Belt Hashoah Museum of Tolerance, Los Angeles."
"The Cloning Debate: A Cultural Psychology of Morality."
"Joint Attention, Attention, and Word Learning."
"Queer Nation and the Use of Culture and Symbolism in Contemporary Social Movements."
"Mothers of Capital: the Intersection of Globalization, Naturalization, and Indian Immigrants in Chicago's South Asian Diaspora."
"Learning to Listen: An Investigation into Variables that Augment Perceptual Learning."
"The Gift Horse: International Post Disaster Aid Reconstruction and its Hidden Consequences."
"Everyday Work: The Moral Economy of a Bosnian Black Market."
"Post Philosophical Politics in a Literary Culture: A Critique of Richard Rorty's Twenty first Century Narrative."
"Multinationals, Labor, and the Chinese State: A Comparative Case Study of Motorola and McDonald's in China."
"Sacred Travel Sites in Cyberspace."
"Resolving Trauma Through the Truth and Reconciliation Commission."
"What Does Neuroscience Reveal About the Phenomenon of Freud's Compulsion to Repeat?"
"Chinese and Creole, an Identity in Transition: The Chinese community and Associations in Jamaica, West Indies."
"To Make Georgia Howl: Just War Theory and the Strategy and Tactics of William Tecumseh Sherman, 1861 65."
"Toward the Eradication of the Trafficking of Women: Rectifying Rights and Rescue in Theory and Practice."
"Beyond the Pale of Sovereignty: the Problem of Indigenousness as the Basis of Citizenship in the Post Colonial African State."
"Truman, MacArthur and the Untold Story: 1949 1951."
"Vertebral Wedging of the Lumbar Vertebrae in Primates: Possible Evolutionary Implications for Bipedal Locomotion."
"The Application of UN Refugee Policy: A Case Study of Tanzanian Refugee Policy toward Burundian Refugees from 1993 2002."
"Labor Unions in a Global Economy: Changes, Challenges, and Opportunities."
"Psychological Distress and its Relation to Ethnic Identity among Korean American Youth in Chicago."
"British Public Opinion and Open Diplomacy During the Greek War of Independence, 1821 1829."
"The Public Housing Reform Act of 1998: A Case Study in the Creation of Public Policy in America."
"Mourning, Memory and Memorialisation: Gender and First World War Commemoration in Britain and France, 1918 1929."
"Lost Souls the Persistence of Traditional Belief in Haitian Immigrants Perceptions of Mental Illness."
"The Political Economy of Finance and Corporate Reform in East Asia."
"American Indian Powwows in the 21st Century: Creating Cultural and Ethnic Identity and Community through Dance."

## ADMISSION

Applicants for the Master of Arts Program in the Social Sciences are expected to meet the graduate admissions requirements of the division. Submission of Graduate Record Examination (GRE) scores is required. Applicants from nonEnglish speaking countries must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

MAPSS is designed to be completed in one academic year (three or four quarters on a full time basis). All financial aid is merit based, and the MAPSS program offers partial tuition scholarships on a highly competitive basis. Persons with flexible daytime schedules may make part time arrangements, but such students will not be eligible for financial aid.

## HOW TO Apply

The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: https://gradapplication.uchicago.edu/
Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of applications should be mailed to:
The University of Chicago
Division of the Social Sciences
Admissions Office, Foster 105
1130 East 59th Street
Chicago, IL 60637
For additional information about the program, contact the MAPSS departmental office at: 773-702-8316, visit the MAPSS webpage at: http://mapss.uchicago.edu/ or send an e-mail to mapss@uchicago.edu.

You may also contact E.G. Enbar, Student Affairs Administrator at: 773-702-8312 or egenbar@uchicago.edu.

## Department of Anthropology

## Chair

- Judith B. Farquhar


## Professors

- Jean Comaroff
- John L. Comaroff
- Michael Dietler
- Judith B. Farquhar
- Raymond D. Fogelson
- Susan Gal
- John D. Kelly
- Karin Knorr Cetina, Sociology
- Alan L. Kolata
- Kathleen D. Morrison
- Stephan Palmié
- Michael Silverstein
- Russell H. Tuttle

Associate Professors

- Shannon Dawdy
- Joseph P. Masco
- William T.S. Mazzarella
- Justin Richland
- Kaushik Sunder Rajan


## Assistant Professors

- Hussein Ali Agrama
- Julie Y. Chu
- Michael Fisch
- François G. Richard

Lecturer

- Maria Ceclia Lozada Cerna
- Mark Lycett

Emeritus Faculty

- Manuela Carneiro da Cunha
- James W. Fernandez
- Leslie G. Freeman
- Raymond D. Fogelson
- Paul Friedrich
- McKim Marriott
- Nancy D. Munn
- Ralph W. Nicholas
- Marshall D. Sahlins
- Raymond T. Smith
- George W. Stocking, Jr.
- Michel Rolph Trouillot
- Terence S. Turner

Anthropology seeks an understanding of human nature, society, and culture in the widest comparative and historical framework. The department's teaching program provides Ph.D. training for research workers and teachers in the various branches of anthropological science. Lectures, tutorial guidance, laboratory instruction, and research seminars provide opportunities for advanced study in sociocultural and linguistic anthropology and archaeology. Course work, but not a graduate degree program, is also offered in physical anthropology.

The purpose of the department is the advancement of anthropological research; this goal is achieved in the graduate program by the development of creative scholars and scientists. The various educational guidelines that are established from time to time by the department as a whole as well as by the particular specialized fields are intended to aid in this development. All programs, however, are designed to be adaptable to the specific needs and research interests of individual students. Graduate students are encouraged to go forward as rapidly as previous preparation and special powers permit. The identification of specific research problems and the pursuit of these problems through the writing of original papers are skills that are emphasized and fostered as early as possible. This experience develops gradually into the substantial research project that is undertaken for the doctorate.

Graduate students and faculty in the department regularly participate in a large number of interdisciplinary workshops. Some are regional (e.g., African Studies; Anthropology of Europe; Latin American Studies Working Group; Caribbean Studies; Art and Politics of East Asia; East Asia: Politics, Economy and Society; East Asia: Transregional Histories; Interdisciplinary Approaches to Modern France; Latin American History; Middle East History and Theory; and Theory and Practice in South Asia; Visual and Material Perspectives on East Asia), some thematic (e.g., Interdisciplinary Archaeology; Ancient Societies; City, Society, and Space; Clinical Ethnography; Education; EthNoise: The Ethnomusicology Workshop; Gender and Sexuality Studies; Human Rights; Mass Culture; Medicine, Body and Practice; Knowledge/Value Working Group; Race and Religion; Reproduction of Race and Racial Ideologies; Semiotics: Culture in Context; and Social History), and some theoretically oriented (e.g., Contemporary Philosophy; History, Philosophy and Sociology of Science; Political Theory; Social Theory).

Graduate students beyond the first year may serve as course or laboratory assistants, and later, as lecturers in College programs. The department also awards Starr Lectureships each year, on a competitive basis, to advanced graduate students. Starr Lecturers teach courses on their areas of specialization in the anthropology concentration in the College.

For additional information about the Department of Anthropology and the interests of its faculty members, please see: http://anthropology.uchicago.edu/

## HOW TO APPLY

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## Programs of Study

## SOCIOCULTURAL AND LINGUISTIC ANTHROPOLOGY

Sociocultural anthropology is concerned with the investigation of human society, culture, and the human relation to nature through intensive ethnographic investigation and wide ranging comparison. It is closely related to the other generalizing social sciences and to the interpretive disciplines of the humanities. Cross disciplinary study is encouraged; graduate students in anthropology often include courses from related fields in their programs.

The Ph.D. program in sociocultural and linguistic anthropology has three prefield phases, each normally designed as one year's work, although under certain circumstances accelerated progress through the later phases is possible.

Phase I introduces the student to the development of social and cultural theory and to the scholarly interests of the faculty in the department. First year students also take courses in particular specialist areas of ethnography and theory in order to frame research interests in preparation for the dissertation project. Course requirements in the first year include The Development of Social and Cultural

Theory (two double courses) and Introduction to Chicago Anthropology. In addition students take four other courses dealing with their areas of interest selected in consultation with the first year advisor. The requirements of Phase I apply to all entering graduate students, regardless of whether they hold a master's degree in anthropology from another institution.

Phase II training is directed toward acquiring a deeper knowledge of the special area and theoretical topics on which research will be focused, as well as toward obtaining a broader anthropological understanding in preparation for the Ph.D. qualifying examination. With the exception of those whose master's theses from elsewhere are approved by the department, every second year student completes a master's paper during that year. The Ph.D. qualifying examination is normally taken during the spring of the second year or the autumn of the third year. The department also requires all students in sociocultural and linguistic anthropology to take the course in Anthropological Research Methods and to demonstrate competence in a foreign language by achieving a High Pass on a University foreign language reading examination, preferably by the end of the second year. The language will be specified by the student's advisory committee.

Phase III is a pre research training period during which the student hones a dissertation proposal and grant applications and develops advanced research skills. Upon fulfillment of all pre dissertation academic requirements and the acceptance of the dissertation proposal at a hearing in the department, the student is admitted to candidacy for the Ph.D. degree and proceeds to research and/or field work and the writing of the dissertation.

The linguistic anthropologist is concerned with phonetic, phonological, grammatical, semantic, and paralinguistic systems and with their relations to social, cultural and personal ones. A student who chooses linguistic anthropology as the major sub field within the Department of Anthropology should prepare at least one sub field each in linguistics and anthropology and satisfy the language requirement. Students of linguistic anthropology are generally advised to take at least six courses in technical linguistics.

## Joint Degree in Anthropology and Linguistics

In addition to linguistic anthropology as a sub field within the Department of Anthropology, there is also a joint Ph.D. program available to students who are admitted first to the Department of Anthropology and subsequently to the Department of Linguistics. Joint degree students complete the requirements of both departments, including distinct introductory and advanced courses stipulated by each, the departmental qualifying examinations in appropriate special fields, and the language requirements, including additional foreign languages for the Linguistics Ph.D. The student's dissertation advisory committee consists of three or more members of the faculty; at least one must be a member of the Department of Anthropology but not the Department of Linguistics, and at least one in Linguistics but not in Anthropology. After approval for hearing by the advisory committee, the student's dissertation proposal must be approved in a hearing open to the
faculty of both departments, and similarly for the final defense of the single doctoral dissertation that the student writes.

Admission to the Joint Degree Program in Anthropology and Linguistics cannot be approved until at least the second year, after successful completion of the core (first year) coursework and examinations in Linguistics, although students should declare interest in the joint program on the graduate application and to the chair of the Department of Anthropology and to the linguistic anthropologists soon after arriving on campus.

## ARCHAEOLOGY

The archaeology program emphasizes the comparative study of complex societies throughout the world grounded in a close articulation of archaeology, history and sociocultural anthropology. The program stresses the integration of social and cultural theory in the practice of archaeology and, in particular, forges strong links with the historical anthropology that is one of the recognized strengths of the department. In addition to preparing archaeology students for anthropologically informed fieldwork and interpretation, an important element of this interdisciplinary approach is the inauguration of a training program offering students the methodological skills and theoretical grounding necessary to undertake innovative ethnoarchaeological research.

Current faculty strengths include archaeology of Latin America (focusing on the later prehistory and colonial periods of the Andes and Mesoamerica), the United States (focusing on the historical/urban archaeology of New Orleans and Birmingham, creole societies, race and ethnicity, material culture), Europe (from the Paleolithic to the Celtic Iron Age), the Near East (from the Neolithic through the conquests of Alexander), South Asia and Oceania (state formation in South India, agricultural intensification, precolonial an early colonial periods), and southwest Asia (from late prehistory to late antiquity) as well as ethnoarchaeology in Africa and experimental archaeology in South America. Associated faculty at the Oriental Institute and in other University departments specialize in complex societies of the Near East, Egypt, Greece, Rome, and China.

Research interests include: urbanism, state formation, imperialism, colonial interaction, industrialization, art and symbolism, spatial analysis, politics, ritual and religion, human environment interactions, agricultural systems, material culture, economic anthropology, political economy and the socio historical context and politics of archaeology. Faculty members in archaeology have major, ongoing field research projects in Bolivia, Peru, France, Spain, Cambodia, India, and the southern \& southeastern United States and also have research interests in Kenya and Hawaii.

The archaeology program requires that students complete a total of 18 courses to qualify for the Ph.D., some of which may be reading and research in the field of specialization. Students normally enroll in nine courses per year during their first two years in the program. Within the first two years, students will complete five required courses that are designed to provide a comprehensive grounding in social and cultural theory, as well as the theory and specific methods of archaeology.

In the first year, course requirements include The Development of Social and Cultural Theory offered over the autumn and winter quarters. The two quarter sequence is equivalent to four course credits. In the spring archaeology students take Theory and Method in Archaeology, also a double credit course. The remaining course requirements in the program, to be met in the first or second year, are Introduction to Chicago Anthropology, and a quantitative methods course approved by the faculty. For the rest of their course work, students enjoy a broad range of elective courses in archaeology, sociocultural anthropology, history, physical anthropology, Classical or Near Eastern studies, statistics, computer science and geophysical sciences. In addition, archaeology students are strongly encouraged to gain technical experience in one of the university's regular summer field schools or other research excavations.

By the end of the first year in residence, the archaeology student must form an advisory committee of three faculty members. The committee will be chaired by the faculty member of the student's choice. With the exception of those students with A.M. theses from other institutions which are approved by the department, each student will complete an A.M. paper during the second year. In addition, by the end of year two, each student takes an oral examination from the members of his/ her advisory committee in the areas of chosen specialization. The oral examination, lasting roughly an hour and a half, is designed to test basic command of the literature and methods necessary to pursue Ph.D. research in a chosen area. In the third year, having passed the qualifying exam, archaeology students are required to take the archaeological research design seminar. By the end of the third year, students must defend a dissertation proposal before the faculty and interested students. Upon fulfillment of all academic requirements and the acceptance of the dissertation proposal, students are admitted to candidacy for the Ph.D. degree.

## PHYSICAL ANTHROPOLOGY

Courses in physical anthropology, mainly directed towards evolutionary anthropology and primatology, are offered in the department; but applications for graduate study in Physical Anthropology are no longer accepted.

## COURSES

The department website offers descriptions of graduate courses scheduled for the current academic year: http://anthropology.uchicago.edu/courses/graduate.shtml.
34000. Introduction to Chicago Anthropology. This is a required course for (and enrollment is limited to) first-year graduate students in Anthropology. It is designed to acquaint students with the range of work done by the Department's faculty. During the year, each faculty member gives one seminar based on selected bibliography representative of his/her intellectual biography, current work, and thoughts about the current and future direction of the discipline. This is a year-long course for which students formally register in one quarter. Grading is Pass/Fail.)
Staff. Autumn, Annually.

34101-2. Development of Social/Cultural Theory-I (200 units) PQ: Open only to first-year Anthropology graduate students. This course is designed for (and enrollment is limited to) students beginning graduate study in anthropology. It is intended to provide a broad perspective on the history of social theory in the West, and critical skills for reading in and contributing to social and cultural theory. We will use the history of theorizing about society and culture as a means to discuss the past, present, and future of anthropology and its relations with other scientific and humanistic disciplines. This is the first half of a two-quarter course. Autumn, Annually.

34201-2. Development of Social/Cultural Theory-II (200 units). PQ: Open only to first-year Anthropology graduate students. The second quarter of "Systems" explores the interplay of theory and ethnography, professional practice and historical context, in the development of anthropology as a "modern" (and in some cases "modernist") discipline. Rather than attempt an overview of contemporary theoretical and methodological concerns, we shall examine - in some depth - the relations among several of the major orientations that have shaped the history of Anglo-American anthropology this century. In so doing, we shall be concerned with (1) the historical roots and philosophical foundations of particular perspectives; and (2) their significance for general theoretical concerns in the social sciences at large. Winter Annually
3900. Theory and Method in Archaeology (200 units). The aims of this course are twofold: 1) to examine the logics of archaeological interpretation and 2 ) to investigate the principles of archaeological representation. The course is intended to help students understand the project of archaeology as it has been transformed by the last century of thought and research. The course is organized into two parts. The first, subtitled Archaeology, provides an intensive overview of the dominant positions and problems in modern archaeological theory. In this section of the course, we will explore the major historical movements in archaeological theory since the formalization of the discipline in the 19th century through contemporary post-postprocessualism. It is in these discussions that we will strive to bring forward the rich and subtle logics that underlie archaeological interpretation. The second section of the course, subtitled Archaeography, centers on an exploration of archaeological representation and overlapping issues raised in the sister field of historiography. In this section of the course we will tack between general issues and movements in the philosophy of history as they bear upon the production of landmark archaeological monographs from Schliemann's Troy to Hodder's Çatal Hüyük. By the end of the course, students should have a thorough understanding of the theoretical frameworks that underlie contemporary archaeological research and the unique problems that follow efforts to represent the archaeological record. The ultimate goal of this intensive exploration is to initiate students into the field through critical examinations of foundations works and ideas. Spring, every other year. A.T. Smith
4200. Anthropological Methods. PQ: Second-year anthropology graduate students only. A critical introduction to the methods of anthropology, paying special attention to the ethics of fieldwork; the politics of knowledge involved in ethnography; the problems of "writing" culture; the (so-called) crisis of representation in the social sciences; and the varieties of techniques and methods conventionally used
by anthropologists. JL Comaroff. Autumn 1998. A. Apter. Autumn 1999. JL Comaroff, Autumn 2000, 2001, 2002
4200. Anthropological Methods.PQ: Second-year anthropology graduate students only. This course focuses on the past, present, and future of anthropological research, paying special heed to the ways in which sociocultural anthropologists construct objects of inquiry. We cover a range of techniques of knowledge production, with an aim to understanding the methodological specificity of anthropology and the broader ethical, political, and epistemological issues raised by the work that anthropologist do. We will take as our starting point the inherently contentious nature of anthropological inquiry. But we will explore how this contentiousness can be productive, rather than simply disabling. Key to this exploration will be a series of exercises in ethnographic practice and the formulation of research topics and plans. This course is intended to help students develop the tools needed to develop their own research objects and strategies (and "methods" sections!), while reflecting critically and creatively about anthropology's place among the disciplines. D. Rutherford, Spr'04
52200. Thesis Proposal Preparation. This is a required course for (primarily third-year) graduate students who are preparing field work grant applications and dissertation proposal during the current academic year. The course is taken pass/ fail and provides each student the opportunity to present a pre-circulated draft research proposal for discussion and critique. The course focuses on preparation and discussion of students' draft proposals. Susan Gal E/or Jean Comaroff. Autumn
52210. Archaeological Research Design. Required course for Archaeology students preparing grant and/or departmental research proposals. Usually taken in the 3rd year. N. Kouchoukos.
541. Seminar: Post Field/Professionalization . Discussion of a broad range of topics related to academic professionalization: creating a CV, job letters, job interviewing at the national meetings and on campuses, projection of a professional persona, publication (before and after receipt of the PhD , journal articles, dissertation into book, etc). professional service, entering a new department/first job, creating oneself as a teacher/colleague, second major research project, preparation for tenure, etc. JL Comaroff. Autumn 2000
46900. Archaeological Data Sets. This course focuses on the methodological basis of archaeological data analysis. Its goals are twofold, first to provide students with an opportunity to examine research questions through the study of archaeological data, and second to allow students to evaluate evidential claims in light of analytical results. We will consider data collection, sampling and statistical populations, exploratory data analysis, and statistical inference. The course is built around computer applications and, thus, will also provide an introduction to computer analysis, data encoding, and data base structure. M. Lycett. Offered in Spring of even numbered years.

## Department of Comparative Human Development

## Chair

- John A. Lucy

Professors

- Bertram J. Cohler
- Jennifer Cole
- Susan Goldin Meadow
- Sydney Hans
- Don Kulick
- Susan Levine
- John A. Lucy
- Martha K. McClintock
- Dario Maestripieri
- David E. Orlinsky
- Richard Shweder
- Margaret Beale Spencer
- Nancy Lou Stein
- Richard P. Taub


## Associate Professors

- William Goldstein
- Micere Keels
- Jill Mateo

Assistant Professors

- Guanglei Hong
- Eugene Raikhel
- Lindsey Richland

Faculty Associates

- Kathleen Cagney
- Jean Comaroff
- Judith Farquhar
- Sarah Gehlert
- Salikoko Mufwene
- Linda Waite


## Emeritus Faculty

- R. Darrell Bock
- Mihaly Csikszentmihalyi
- Irene Elkin
- Raymond D. Fogelson
- Eugene T. Gendlin
- Philip W. Jackson
- Susan B. Stodolsky

The Department of Comparative Human Development was originally named the Department on Child Development and then in 1940 the name was changed to Human Development. Ralph Tyler (education) was named chairman of the new department; Robert J. Havighurst (sociologist) and W. Lloyd Warner (anthropologist) added interdisciplinary dimensions to the program. At the end of WW II, Carl Rogers (psychologist), joined the faculty. In October of 1991, the committee celebrated its 50th anniversary of the department as a Ph.D. training program and interdisciplinary research undertaking, making it the oldest unit of its type. The department offers programs of research and graduate study in life course development (including child and adolescent development, adult development and aging, and philosophy of development), personality, emotions and psychopathology, cross cultural studies (including psychological anthropology and cultural psychology), biosocial psychology (including behavioral biology and social neuroscience), language and cognition. The research interests of the faculty represent various disciplines within the social sciences. The primary objectives of the department are to provide education for innovative careers in research and teaching and to contribute to the interdisciplinary understanding of human behavior. Students in the department pursue careers in anthropology, human development, psychology, and sociology.
The program stresses the integration of theoretical interpretations and empirical findings bearing upon human development: the elaboration of the biological potential of the individual during growth; maturity and aging; socialization and adjustment to temporal and environmental changes; psychological change; personality development and psychological functioning in various cultural settings; and reflective consideration of the assumptions of social science theory and research. Emphasis is upon the interrelations of biological, psychological, and sociocultural forces at different points in the life cycle.

Applicants should be prepared to work on the critical edge of thought and research in the social sciences.

## PROGRAMS

Students in consultation with faculty advisors develop an area of specialization (program) appropriate to their professional goals and research interests. Some of the department's central areas of specialization are described below.

## Comparative Life Course

The Department of Comparative Human Development has long had a focus on development throughout the life span. Indeed, one of the unifying principles that cuts across the department is that there is a deep interest, not merely in charting change over time, but in understanding the mechanisms and principles that underlie that change at all levels. Faculty and students in the department conduct developmental research in a wide variety of domains (cognitive, social, emotional, physical) and species (humans, primates, rodents). Ongoing projects include: ethnological studies of biosocial development from infancy though adulthood and aging; effects of psychosocial deprivation on psychological state and risk for disease; parent child relationships across the life course; risk and resilience in development; social emotional development in early childhood; social class and ethnic differences in socialization; genetic and developmental factors in psychosocial development; naturalistic studies of children in school environments; language development as a creative process; studies of how children and adults understand and tell narratives; the role of nonverbal behavior in learning and cognitive development; the role of the linguistic and cultural environment in the child's acquisition of language; language socialization; the role of sociocultural context in cognitive development.

## Clinical Ethnography and Mental Health

This program is designed for students interested in combining normative social science inquiry with focused study in the area of mental health, as preparation for a career of research and teaching. This course of study involves multidisciplinary inquiry into the processes and determinants of personality, social and cognitive development throughout the life course, and the comparative study of suffering and healing systems. Program faculty are presently involved with mental health research in three interrelated fields:

1. The study of psychopathology, vulnerability and resilience across the life course;
2. the study of psychotherapy and comparable systems of personal change;
3. the study of health and optimal functioning, coping strategies and creativity.

Research in the personality area encompasses both traditional perspectives on the study of persons and social life and emerging perspectives focusing on such areas as the interplay of cognition and emotion in personal life and in culture, and language and discourse as relevant in understanding personality and social life. The program includes faculty working from the disciplinary perspectives of personality, social and clinical psychology, anthropology, political science, and biology. Relevant faculty and resources of the University outside the Department of Comparative Human Development will also be available to students. Students requiring clinical expertise for their research should consult with program faculty about relevant professional training opportunities.

## CULTURAL PSYCHOLOGY AND PSYCHOLOGICAL ANTHROPOLOGY

The Department of Comparative Human Development is a leading center for training in psychological anthropology, cultural psychology, the study of culture
and mental health, and the cross cultural study of human development. The aim of the program is to document and explain ethnic and cultural sources of diversity in emotional and somatic functioning, self organization, moral evaluation, social cognition and human development. Ethnographic field work both in the United States and abroad is an important component of this program, although multiple methods (qualitative and quantitative, observational, clinical and experimental) are applied to the study of similarities and differences in psychological functioning across human populations.

Members of the faculty and students have conducted field studies of child socialization practices in the nations of the Pacific; of culture specific and universal structures in cognitive development; identity and self concept of Native American youth; of moral development, conceptions of the life course, and explanations of suffering in India and the United States; of modes of thought and their relationship to linguistic structures in contemporary Mayan communities in Mexico, and among various ethnic groups in the city of Chicago. The program encourages comparative study of psychological functioning (mentalities) in cultures including India, Japan, China, Russia, and the Middle East, as well as research on psychological topics in local communities around the world.

## COMPARATIVE BEHAVIORAL BIOLOGY

This program investigates behavioral processes at the social, psychological and biological levels of organization in both humans and nonhuman animals. Current research is concentrated in three main areas. In the area of behavioral and reproductive endocrinology, research conducted with rodents and humans investigates the social and behavioral control of fertility and reproduction and the role of hormone behavior interactions in development throughout the life span. Specific topics of interest include mechanisms and function of estrous and menstrual synchrony, facultative adjustment of sex ratios, pheromonal communication, reproductive senescence, psychosomatics in obstetrics and gynecology, and the behavioral modulation of the immune function. In the area of comparative development, we use nonhuman primate models of parenting and development to investigate social, emotional, and endocrine aspects of mother infant attachment and infant development, with particular emphasis on interindividual variability both within and outside the normal range. Other topics of interest include affiliative and aggressive behavior, mating strategies, nonverbal communication and social cognition in primates and humans. In the area of social neuroscience, one topic of interest is evaluative processes, e.g., affective, attitudinal, or emotional operations by which individuals discriminate hostile from hospitable environments. Of interest as well is in the role of social and autonomic factors in individuals' endocrine and cellular immune response to stress and illness vulnerability. Throughout, the research approach is characterized by the integration of social and biological levels of analysis.

## Language, Communication and Cognition

This program area supports research and training on how language and other forms of communication relate to cognition. Particular emphases are on the role
of language in thinking and the use of comparative perspectives to address this issue. Among the more important comparisons are those across different languages, institutional settings, cultures, ages, and species drawing in each case on the relevant disciplines concerned with those areas.

## WORKSHOPS

The Department of Comparative Human Development sponsors faculty student workshops, currently the Culture, Life Course, and Mental Health Workshop and a Clinical Ethnography Workshop.

## ADMISSION

Students are eligible for admission if they have received a Bachelor of Arts or Science degree or have completed an undergraduate program equivalent to such a degree. Admission depends upon strength in the general undergraduate record, scores on the Graduate Record Examination, letters of recommendation, personal statement and interests, and relevant research experiences.

## How To Apply

The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: https://gradapplication.uchicago.edu/

Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of applications should be mailed to:
The University of Chicago
Division of the Social Sciences
Admissions Office, Foster 105
1130 East 59th Street
Chicago, IL 60637
Foreign students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

For additional information about the Human Development program, please see http://humdev.uchicago.edu/.

## REQUIREMENTS

## COURSES

Every student is required to take the following courses for a quality grade:

- Human Development Concepts
- Five HD area courses: the area clusters are defined as
- Comparative Behavioral Biology
- Comparative Life Course
- Cultural Psychology and Psychology Anthropology
- Clinical Ethnography and Mental Health
- Language, Communication, and Cognition

Intermediate Statistics

- One additional methods course (not introductory statistics)
- Two trial research seminars (may be taken pass/fail)
- Two additional HD courses in area of specialization

Students are not required to complete all these requirements by the end of their second year. However, they must have five quality grades toward these requirements by the spring of their first year, and ten quality grades by the end of the second year. On average a graduate student should take at least two courses from the required list for quality grades in each quarter of their first two years.

In addition, students will participate in elective courses and workshops in the department, and the University in consultation with their advisors. The HD Concepts course will introduce students to the history, theoretical bases, and concepts of the field of human development, and to the major areas of inquiry in the Department of Comparative Human Development. This is taken during the fall quarter of the first or second year.

The trial research seminars will launch students into their research projects and will guide them from the beginning to the completion of those projects. The trial research seminar is taken in the spring quarter of the first year and the fall quarter of the second year. Trial research papers are due by spring quarter of the second year.

## TRIAL RESEARCH

All students are required to enroll in a Trial Research Seminar in the spring quarter of the first year and the autumn quarter of the second year. The trial research project must be completed and formally approved by the faculty during the spring quarter of the student's second year. Students are expected to report regularly on the progress of their research to the Trial Research Seminars. The trial research is carried out under the direction of the research advisor and is read by two other faculty members.

## EVALUATIONS

All students are evaluated each year in the program. To be considered in good standing and for continuation of financial aid, first and second year students must have earned at minimum five quality grades ( B or better) over autumn and winter quarters by the time of the spring review, with satisfactory spring grades expected to follow. The evaluation at the end of the second year is particularly important, as it determines whether a student will be permitted to conduct dissertation research.

## ADVISORS

Each student is assigned a faculty member at the beginning of the first year of study to serve as a research advisor. Students may change research advisors as their needs and interests evolve, but students are expected to be affiliated with one or more research advisors throughout their graduate careers.

## Committee on Conceptual and Historical Studies of Science

Chair

- Adrian Johns


## Professors

- Lorraine Daston, Social Thought
- Arnold Davidson, Philosophy
- Michael Foote, Geophysical Sciences
- Robert P. Geroch, Physics
- Jan Goldstein, History
- Adrian Johns, History
- Leo Kadanoff, Physics and Mathematics
- Karin Knorr Cetina, Sociology and Anthropology
- Robert J. Richards, History
- Stephen M. Stigler, Statistics
- Alison Winter, History

Associate Professors

- Kevin Davey, Philosophy
- James Evans, Sociology
- Joseph Masco, Anthropology


## Emeritus Faculty

- Robert Perlman, Pediatrics
- George Stocking, Anthropology
- William C. Wimsatt, Philosophy

The Committee on Conceptual and Historical Studies of Science (CHSS) is an interdisciplinary graduate program dedicated to advancing social, historical, and philosophical perspectives on science. Its areas of interest are broad, extending across the sciences and from the ancient world to the present day. Its faculty derive from many departments in the University, but particularly from History, Sociology, Anthropology, and Philosophy. We currently have major strengths in the study of evolutionary biology, psychology, and medicine, and in issues of the social activity of science, such as those relating to scientific authority, credibility, communication, and intellectual property. Students in the Ph.D. program have an opportunity to investigate such aspects of the scientific enterprise in depth, within its many rich historical, social, and philosophical contexts. They are also encouraged to grapple with the practices and approaches of science itself.

A brief description of the Committee's degree requirements is provided below, along with a representative list of courses that have been taught in recent years. For more complete information, you are encouraged to consult the website at http://chss.uchicago.edu/. This site contains an up to date description of faculty research interests, a complete statement of degree requirements, descriptions of individual courses being taught this year, a calendar of events (including meetings of the Committee's regular Workshop in the History, Philosophy, and Sociology of Science), a list of students who have received Ph.D.s from the Committee with the titles of their dissertations, and more.

Those with questions about the Committee should write to the Secretary, The Committee on Conceptual and Historical Studies of Science, The University of Chicago, 1126 East 59th Street, Chicago, IL 60637 (bbmackev@uchicago.edu).

## Application

New students are admitted to the Committee through the Division of the Social Sciences. Applicants will be expected to submit undergraduate transcripts, scores from the general Graduate Record Examination, three letters of recommendation, short descriptions of their interests and/or reasons for wanting to study in CHSS, and a writing sample.
The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: https://gradapplication.uchicago.edu/
Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of the applications should be mailed to:

The University of Chicago
Division of the Social Sciences
Admissions Office, Foster 105
1130 East 59th Street
Chicago, IL 60637

## Degree Requirements

Every new student in CHSS is assigned an advisor, with whom he or she designs an individual program of study. Because the interests of students within CHSS vary widely, so too do these programs. Yet all students are expected to fulfill certain common requirements. Full and up to date details are given on the website, but the main elements are described here.

Students choose one of the following options:

1. SCIENCE OPTION: The student may earn a master's degree in a science (here understood to include mathematics, statistics, and social science).
2. PHILOSOPHY OPTION: The student may earn a master's degree in philosophy.
3. HISTORY OPTION: The student may earn a master's degree in history.

All students must complete a total of at least eighteen courses at the University for a grade of $B$ or better, including at least seven CHSS courses. They must maintain at least a B+ average every quarter. Those selecting the philosophy or history options must take a coherent series of six courses in a scientific area at the University, approved by the committee and of an appropriately advanced nature. This will normally mean that students must take at least some portion of their science work at a graduate level. Note that if a student enters the program with a master's degree in an appropriate area, the committee determines what level of credit is given for it.

The expected timetable is that students entering with a master's degree will complete coursework by the end of the second year, and those entering without will complete it by the end of year three (see the website for this and other details of the expected timetable).

Among the coursework of the first two years, students should take three courses offered by the committee: Philosophy of Science, History of Science, and Introduction to Science Studies.

Students must them pass two oral examinations. Each student has the option of taking the exams in history of science, philosophy of science, sociology of science, or anthropology of science; but at least one of the exams must be in either history of science or philosophy of science. These exams are, in part, designed by the students themselves.

At this point the student writes a dissertation proposal, and defends it at a hearing before his or her dissertation committee. He or she is then considered to have advanced to Ph.D. candidacy, and proceeds to write the dissertation itself.

Representative courses offered in recent years.

## COURSES

The department website offers descriptions of graduate courses scheduled for the current academic year: http://chss.uchicago.edu/courses.html

## DEPARTMENT OF ECONOMICS

## Chair

- Harald Uhlig

Professors

- Fernando Alvarez
- Gary S. Becker
- Robert W. Fogel
- David W. Galenson
- Lars Peter Hansen
- James J. Heckman
- Ali Hortaçsu
- Samuel S. Kortum
- Steven Levitt
- John List
- Robert E. Lucas, Jr.
- Casey Mulligan
- Kevin M. Murphy
- Roger B. Myerson
- Derek A. Neal
- Philip J. Reny
- Robert Shimer
- Hugo F. Sonnenschein
- Nancy L. Stokey
- Harald Uhlig

Associate Professors

- Azeem Shaikh

Assistant Professors

- Thomas Chaney
- Brent Hickman
- Rafael Lopes de Melo
- Richard Van Weelden
- E. Glen Weyl

Research Associates

- Alicia Menendez
- Robert Townsend


## Visiting Professors

- Aloisio Pessoa De Arauio
- Steven Durlauf
- Kenneth Judd
- César Marinelli
- Thomas Sargent
- Balázs Szentes

Visiting Associate Professors

- Michael Price

Senior Lecturers

- Victor O. Lima
- Allen R. Sanderson
- Grace Tsiang

Lecturers

- Peter Bondarenko
- Sebastien Gay


## Emeritus Faculty

- Arnold C. Harberger
- Larry A. Sjaastad
- Lester G. Telser
- George S. Tolley

OTHER ACADEMIC PERSONNEL
Lecturers and Instructors

- John Felkner
- Kathryn Ierulli
- Scott Duke Kominers
- Sabina Shaikh Post-Doctoral Fellows and Scholars
- Nicolaus Mader
- Remi Piatek

Visiting Scholars

- Zhang Helin Business School of Zhengzhou University
- Elie Tamer Northwestern University

Chicago is a particularly innovative department of economics. The proportion of new ideas in economics that have emanated from or become associated with Chicago over the last forty years is astonishing. Any definition of the Chicago School
would have to find room for the following ideas (in chronological order from the 1940s to the present): the economic theory of socialism, general equilibrium theory, general equilibrium models of foreign trade, simultaneous equation methods in econometrics, consumption as a function of permanent income, the economics of the household, the rationality of peasants in poor countries, the economics of education and other acquired skills (human capital), applied welfare economics, monetarism, sociological economics (entrepreneurship, racial discrimination, crime), the economics of invention and innovation, quantitative economic history, the economics of information, political economy (externalities, property rights, liability, contracts), the monetary approach to international finance, rational expectations in macroeconomics, and mechanism design. The unifying thread in all this is not political or ideological but methodological, the methodological conviction that economics is an incomparably powerful tool for understanding society.

The Department of Economics offers a program of study leading to the Ph.D. degree. A general description of the program is given below. For a more detailed explanation of the program requirements, as well as complete course descriptions and faculty bios, see the information for current students on our website at: http:// economics.uchicago.edu/graduate/.

The Department of Economics has no master's-level courses and does not admit students who intend to do only a master's degree. Ph.D. students may apply for and receive a master's degree after completion of a set of courses and examinations that they have taken as part of the doctoral program.

## ADmissions and Financial Aid

## Prerequisites and Preparation for Graduate Study

Each autumn, the Department of Economics enrolls an entering class of approximately twenty-five to thirty-five graduate students who come from many countries around the world, and have been selected from a large and diverse group of applicants. Admission to graduate study requires a bachelor's degree (or equivalent). This degree need not be in economics, although some background in economics is certainly desirable. There are no formal course requirements for admission, but a strong background in mathematics is important. At the Ph.D. level, the study of economics requires an absolute minimum of one year of college calculus and a quarter (or semester) each of both matrix algebra and mathematical statistics (that is, statistics using calculus, as distinct from introductory statistics for social science). Prospective students who lack this preparation and have remaining free time in their undergraduate schedules are urged to take these courses before beginning graduate study.

Beyond these basic prerequisites, many of our applicants have taken other advanced mathematics courses, such as real analysis, have completed some graduate-level classes in economics or related fields, or have had some other significant exposure to research in economics. Many strong applicants have ranked at or near the top of their graduating class.

## ADMISSIONS PROCESS

Given the year long sequence of courses, all new students must begin their study in the Autumn Quarter. The application process for admission and financial aid for Economics and all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines, and department specific information is available online at: https://grad-application.uchicago.edu/
Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of applications should be mailed to:

The University of Chicago
Division of Social Sciences Admissions Office,
Foster 1051130 East 59th Street
Chicago, IL 60637
All applicants are required to submit scores from the Graduate Record Examination (GRE) General Test. Foreign applicants whose native language is not English must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). The current University minimum score requirements are provided with the application.

## CRITERIA FOR ADMISSIONS

The Committee on Admissions takes account of a wide range of factors to evaluate each applicant: the previous educational record, letters of recommendation, writing sample, previous research experience, the applicant's scores on the GRE (General Test) and the TOEFL or IELTS, the compatibility of the applicant's research interests with the program strengths in the department, and any special factors that the applicant may bring to the committee's attention. The committee evaluates each applicant on the basis of all material available; no arbitrary cut-offs in terms of a student's grade point average or test scores are used. Applications must be complete for the January review, including scores from the GRE and TOEFL or IELTS if appropriate. These exams should be taken no later than November 1. In deciding when to register for the exams, applicants should particularly note our yearly cycle in order to assure that their applications receive full consideration.

## Program of Study

The program of study for the Ph.D. degree in Economics includes courses and comprehensive examinations in the three "Core" subjects of Price Theory; the Theory of Income, Employment, and the Price Level; and Quantitative Methods. In addition to the Core, Ph.D. requirements include demonstration of competence in two Specialized Fields of concentration, courses in three elective Fields for the General Distribution requirement, a Research Paper, the approval of a Thesis Proposal, and the completion of the Doctoral Thesis.

The usual load is three courses per quarter for two years; this permits completion of nine courses during the regular academic year of three quarters. The comprehensive examination for the Core subjects is given in the Summer Quarter. An examination in each Specialized Field of concentration is given once a year.

Ph.D. students may request permission to choose electives outside the Department of Economics for Field or General Distribution requirements. Satisfactory grades on course work done at the graduate level at another institution may also be used to satisfy part of the course requirements for General Distribution by petition to the Director of Graduate Studies.

With good preparation, students normally take five years to complete the Ph.D. Students who begin with the intention of obtaining the Ph.D. but who change their plans or fail to satisfy the Ph.D. requirements will in most cases be eligible for a M.A. degree.

The program of a typical Ph.D. student consists of the following sequence: in the first year, courses in price theory, the theory of income, and quantitative methods prepare the student for the Core examinations which are taken in the following summer; in the second year, courses and participation in workshops prepare the student for certification in two Specialized Fields (one by exam and one by GPA or exam) and help the student identify a Research Paper topic; in the third and fourth years, the student completes his/her Research Paper and General Distribution requirements, participates in workshops, formulates a thesis topic, and presents a Thesis Proposal Seminar at which the faculty formally approves the topic and admits the student to candidacy; in the fifth year, the student completes his/her Doctoral Thesis and gives a Public Lecture.

## COURSES

The department website offers descriptions of graduate courses scheduled for the current academic year: http://economics.uchicago.edu/graduate/

## Joint Ph.D. Program In Financial ECONOMICS

The joint Ph.D. program in Financial Economics was established in the 2006-07 academic year and is run jointly by the Department of Economics in the Division of the Social Sciences and by the University of Chicago Booth School of Business (formerly the GSB). The aim of this program is to exploit the strengths of both sponsors in training Ph.D. students interested in financial economics. Core economics training is valuable for students seeking to do research in financial economics, and advances in financial economics have important spillovers to other areas of economics. It has long been a tradition in the Department of Economics to feature core economics training for their Ph.D. students, and the Booth School has a well recognized excellence in finance. Students in the joint program benefit from broad sets of instructors and classmates in both the Economics Department and the Booth School. They also hold an official status and are able to utilize resources in both Economics and the Booth School.

Upon completion of this program, students will be awarded a Doctor of Philosophy degree in Economics and Finance jointly from the Division of the Social Sciences and the Booth School.

## Program Elements

Students must satisfy the requirements for the Ph.D. degree in both programs. This is viable because of the considerable overlap in what the two programs expect of their students.

## ADMISSIONS

Admission to the joint program requires admission to both the doctoral program in the Department of Economics and to the doctoral program in the Booth School, but interested parties need only apply to one or the other program. Students may enter the joint program at the beginning of their doctoral studies. Those seeking admission to the joint program should apply online to either the Ph.D. program in the Department of Economics or the Booth School.

Students enrolled in doctoral studies in either the Economics Department or the Booth School may apply to the joint program at any time within their first two years in residence. Such students will still have to meet all of the requirements of both programs.

Enrollment and financial aid throughout a student's matriculation in the joint program will be administered by either the Division of the Social Sciences or the Booth School, as arranged by the two units. This designation will be for administrative purposes only and will not have programmatic implications. If a student's interests change, the Director of the Ph.D. program in the Booth School and the Dean of Students for the Social Sciences will facilitate transfers out of the joint program and into the doctoral program in Economics or Business.

## Department of History

## Chair

- Bruce Cumings

Professors

- Leora Auslander
- John W. Boyer
- Mark P. Bradley
- Dipesh Chakrabarty
- Bruce Cumings
- Constantin Fasolt
- Sheila Fitzpatrick
- Cornell Fleischer, Near Eastern Languages and Civilizations
- Michael E. Geyer
- Jan Ellen Goldstein
- Ramón Gutiérrez
- Jonathan Hall
- James Hevia, College
- Thomas Holt
- Adrian D.S. Johns
- Walter E. Kaegi
- James Ketelaar
- Emilio H. Kourí
- David Nirenberg, Committee on Social Thought
- Moishe Postone, College
- Robert J. Richards
- Christine Stansell
- Mauricio Tenorio
- Bernard Wasserstein
- John E. Woods

Associate Professors

- Guy S. Alitto
- Dain Borges
- Susan Burns
- Edward M. Cook
- Jane Dailey
- Rachel Fulton Brown
- Adam Green
- Julie Saville
- James Sparrow
- Amy Dru Stanley
- Alison Winter
- Tara Zahra

Assistant Professors

- Fredrik Albritton Jonsson
- Matthew Briones
- Paul Cheney
- Cameron Hawkins
- Faith Hillis
- Rachel Jean-Baptiste
- Amy Lippert
- Jonathan Lyon
- Emily Osborn

Visiting Professor

- James Grossman, Newberry Library

Associate Faculty

- Muzaffar Alam, South Asian Languages and Civilizations
- Michael Allen, Classics
- Clifford Ando, Classics
- Catherine Brekus, Divinity School
- Alain Bresson, Classics
- Jean Comaroff, Department of Anthropology
- John Craig, Social Sciences Division
- Fred Donner, Near Eastern Languages and Civilizations
- Robert W. Fogel, Graduate School of Business
- R.H. Helmholz, Law School
- Dennis Hutchinson, Master New Collegiate Division
- Rochona Majumdar, South Asian Languages and Civilizations
- Paul Mendes Flohr, Divinity School
- John F. Padgett, Political Science
- Lucy Pick, Divinity School
- A. Holly Shissler, Near East Languages
- Corey Tazzara, College

Emeritus Faculty

- Ralph A. Austen
- Kathleen Neils Conzen
- Prasenjit Duara
- T. Bentley Duncan
- Hanna H. Gray
- Harry Harootunian
- Neil Harris
- Ping Ti Ho
- Halil Inalcik
- Ronald B. Inden
- Julius Kirshner
- William H. McNeill
- Tetsuo Najita
- William Sewell
- Ronald Suny
- Noel Swedlow

From its 1892 establishment as one of the founding departments of the University of Chicago, the History Department has fostered programs leading to the Ph.D. degree in a broad range of fields. Theoretically sophisticated comparative and interdisciplinary approaches are a hallmark of our program. Along with graduate fields organized by traditional regional, national, and chronological boundaries (African, Ancient Greek and Roman, British, Byzantine, Caribbean Atlantic, Chinese, Early Modern and Modern European, French, Iranian and Central Asian, Islamic and Ottoman, Japanese, Latin American, Medieval, Modern Middle Eastern, Modern Jewish, Russian/Soviet, South Asian, United States), the Department offers a comprehensive range of interdisciplinary, theoretical, and comparative fields of study. Included are such fields as cultural studies in history, intellectual history, legal history, race and ethnicity, gender and sexuality, modern international history, social practices, and the history of science and medicine.
The History Department expects to welcome about thirty to thirty five new graduate students each year. They are broadly distributed by field and back grounds; perhaps a fifth arrive from outside the United States. Faculty members work in close concert with students in the small graduate seminars, colloquia, and tutorials that form the core of advanced training at Chicago. It is here, in intense interaction with faculty and fellow students, that individual interests and the professional skills of the historian are honed. As in any history program, a student is expected to learn to read critically, to search out and analyze primary materials with skill, and to write with rigor. At Chicago, we also expect that students will
demonstrate through their own creativity a significant advancement in the field itself.

Students are strongly encouraged to take courses outside of History and to compose one of their three oral fields in a comparative or theoretical discipline. There are extensive opportunities to develop ancillary fields with faculty in other social science and humanities programs, and in the University's professional schools of Business, Divinity, Law, Medicine, Public Policy, and Social Service Administration. Through consortia arrangements, students can also supplement their Chicago studies with work at Stanford, Berkeley, or any of the Ivy League or Big Ten Midwestern universities, where they can earn credit for courses while registered at the University of Chicago.

Central to our program are interdisciplinary workshops and special conferences that bring together students and faculty from throughout the University for intellectual exchange. Some recent workshops involving Department members include African Studies, American Cultures, Early Modern, East Asia Gender and Sexuality Studies, History of the Human Sciences, Human Rights, Interdisciplinary Approaches to Modern France, Late Antiquity and Byzantium, Latin American History, Medieval Studies, Middle East History and Theory, Modern European History, Paris Center, Race and Religion, Reproduction of Race and Racial Ideologies, Russian Studies, and Social History. Workshops insure dissertation writing students a supportive intellectual community within which both students and faculty are able to present and comment upon research in progress.

For more detailed information on History Department faculty and the graduate program, please visit the Department's website at http://history.uchicago.edu/.

## ADMISSION

Requirements for admission are:

1. The degree of Bachelor of Arts or its equivalent
2. A distinguished undergraduate record
3. High competence in the foreign language

Four parts of the application are critically important: the student's academic record, letters of recommendation submitted by persons able to describe the student's achievements and promise, a significant example of the student's work, (bachelor's essay, master's thesis, research or course paper) and, finally, the student's statement of purpose which describes the intellectual issues and historical subjects to be explored at the University of Chicago. Although many graduate students change their focus in the course of their studies, it is helpful to have the clearest possible idea of applicants' interests and any research experience to date.

In addition, applicants are required to submit Graduate Record Examination aptitude scores that are not more than five years old (the History subject test is not required). It is advisable, especially for aid applicants, to take the GRE no later than October so that scores will arrive on time. Applicants whose first language is not

English must submit scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

## Information on How to Apply

The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: https://gradapplication.uchicago.edu/

Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of applications should be mailed to:
The University of Chicago
Division of the Social Sciences
Admissions Office, Foster 105
1130 East 59th Street
Chicago, IL 60637

## Program for the First Year

Normal registration the first year is eight graded courses. Among the eight courses taken, the curriculum for the first year prescribes:

1. a two quarter seminar
2. six other courses, including two in an area outside their major field

These courses are taken for letter grades and must be completed by the end of the spring quarter. Students receive the master's degree upon completing the first year curriculum.
Students are also required to take a foreign language reading examination during their first term. A few general comments on these hurdles may be in order. Students are required to secure a high pass on one University of Chicago Office of Test Administration foreign language reading examination in their first year. Each field will specify the language(s) to be used and the degree of proficiency required if beyond the minimum results mentioned above. The fields will also determine whether students have met the requisite standards.
Near the end of the spring quarter a faculty committee will decide whether a student is qualified to proceed toward the Ph.D. degree. Evidence for the judgment will be:

1. Evaluation of the seminar paper
2. Autumn and winter quarter course grades
3. A high pass in a foreign language reading examination

## After the First Year

Students who are recommended for the Ph.D. continue their formal study and will be expected to complete another year of graded course work including another graded seminar, unless they petition for credit for previous graduate work. The Ph.D. field examination is taken no later than the autumn quarter of the third year. Students are examined in three Ph.D. fields in a two hour oral examination. Within two quarters of passing the field examination, the student presents the dissertation proposal at a formal public hearing such as a workshop, and it must be approved by the dissertation committee. The student is then admitted to candidacy for the doctoral degree after the hearing.

## Pre-Dissertation Fellowships

The Freehling, Kunstadter, and Sinkler families and friends have made funds available for summer research fellowships, averaging about $\$ 2,000$, to support travel to archival collections. Two Eric Cochrane Traveling Fellowships of \$3,000 each are awarded annually to assist graduate students in western European history in making a summer research trip to Europe. The Arthur Mann Fellowship was created to award an Americanist in summer research. Other fellowships may be available each year. Awards of up to $\$ 300$ for travel to present papers at scholarly conferences are available.

## Work On The Dissertation

Following approval of the dissertation proposal and subsequent admission to candidacy for the Ph.D. degree, students are expected to devote their time to dissertation research. Each year the Division of Social Sciences and the department awards a number of dissertation write up fellowships. Formal defense of the completed dissertation, written with the guidance of a three or four member dissertation committee, concludes the degree requirements. All requirements for the Ph.D. degree including the final defense must be completed within ten calendar years from the date of matriculation, although most students graduate in six to eight years.

## TEACHING OppORTUNITIES

Students serve as assistants and lecturers in introductory History courses, Social Sciences and Humanities core sequences, the College writing program, and various civilizations sequences. The History Department's von Holst Prize Lectureships permit four students to design undergraduate courses centered on their dissertation research. The five students who receive the Bessie L. Pierce Prize Preceptorship Award guide third and fourth year History undergraduates in A.B. essay seminars. Students acquire initial teaching experience through an internship program in which they assist faculty with the design, teaching, and grading of courses.

Numerous students also gain valuable college teaching experience in other Chicago area institutions.

## COURSES

The department website offers descriptions of graduate courses scheduled for the current academic year: http://history.uchicago.edu/graduate/courses.shtml.

## Committee on INTERNATIONAL RELATIONS

Chair

- Mark Phillip Bradley


## Professors

- Ralph A. Austen, History (Emeritus)
- John W. Boyer, History
- Dipesh Chakrabarty, South Asian Languages and Civilization
- Terry Clark, Sociology
- Bruce Cumings, History
- Jean Bethke Elshtain, Divinity
- Michael E. Geyer, History
- Andreas Glaeser, Sociology
- Susan Gzesh, Law
- Gary B. Herrigel, Political Science
- James Hevia, History
- Charles Lipson, Political Science
- Joseph P. Masco, Anthropology
- John J. Mearsheimer, Political Science
- Robert Pape, Political Science
- Eric Posner, Law
- Alberto Simpser, Political Science
- Dan Slater, Political Science
- Nathan Tarcov, Social Thought
- Bernard Wasserstein, History
- Lisa Wedeen, Political Science
- Dali Yang, Political Science
- Dingxin Zhao, Sociology
- Marvin Zonis, Business


## Instructors

- Anne Holthoefer, International Relations
- Michael Reese, International Relations


## GENERAL INFORMATION

The Committee on International Relations (CIR) offers a one year program of graduate studies leading to the A.M. (Master of Arts) degree; admitted students may apply for a one-year extension during their first year of study to allow for further specialization. CIR makes the resources of a great university available to students seeking a firm grounding in the theory and practice of international relations. An A.M. from CIR will prepare students for a wide range of careers for which the masters is increasingly the entry level degree, as well as for further academic or professional training in political science, law, and business administration. Students interested in combining a CIR A.M. with an M.B.A. can apply to a joint degree program with the University of Chicago Booth School of Business. A dual A.M/M.A. degree with the Harris School of Public Policy or an A.M. /J.D. with the University of Chicago Law School is also available.

CIR provides students with a vibrant intellectual community and core course training in international relations theory. CIR's interdisciplinary faculty and curriculum encourage students to explore a wide range of topics spanning the economic, political, security and social factors shaping international life. Students will learn to craft critical and creative responses to the challenges of the present, including globalization, terrorism, and human rights. Throughout the academic year, each student works closely with an assigned preceptor on all aspects of the program, from selecting courses to designing and writing the master's paper.

CIR offers dedicated counseling and application support to students pursuing further academic study in doctoral or professional school programs. CIR graduates have received and presently pursue doctorates in Political Science as well as degrees in the various professional schools, including law and business administration, at both the University of Chicago and other major research institutions in the U.S. and abroad. An international network of CIR alumni, in concert with the University's office of Career Counseling and Placement Services, assists current students in identifying career possibilities and applying for positions.

## PRECEPTORS

Students work closely with one of the preceptors in the CIR. Preceptors guide students in defining their areas of academic specialization as well as in choosing courses. Preceptors also assist students in selecting faculty sponsors for their A.M. papers and take an active role in guiding and evaluating the research and writing of these papers.

## Programs and Requirements

Students pursuing the Committee on International Relations' Master of Arts degree are expected to complete nine graduate level courses with a minimum GPA of 3.0 and a thirty-five to fifty page master's thesis that must be approved by both a faculty sponsor and a CIR preceptor. In addition, students must successfully
complete the introductory seminar Perspectives in International Relations (offered in the Autumn Quarter) and participate in the master's thesis workshop throughout the academic year. Master's workshops are led by CIR preceptors and give students the opportunity to present and discuss their research projects as they develop from proposal to final draft.

Students may apply for a second year of study A.M. with specialization. This second year requires an additional three quarters of residence during which the student takes an additional nine courses. Students apply for the second year with specialization during their first year in residence.

The joint degree program with the Chicago Booth School of Business is administered through the Division of the Social Sciences. Students pursuing a joint degree must fulfill all the requirements of the CIR degree in addition to the requirements of the respective professional degree, though there are some exceptions. Students enrolled in the dual J.D. /A.M. program with the Law School take nine courses in their fourth year of study, three of which are typically lawschool courses and the remaining six from the CIR list of approved courses. Students enrolled in the joint M.B.A/A.M. take a reduced course load of 14 courses in the Booth School of Business and the full nine courses in CIR. Students interested in the dual A.M./M.A. degree program should contact the Harris School of Public Policy for more information.

## ADMISSION

Applicants to the Committee on International Relations are expected to meet the graduate admissions requirements of the division. Submission of Graduate Record Examination (GRE) scores is required, except for the joint CIR and Booth School of Business degree program, where the Graduate Management Admission Test (GMAT) is accepted. Applicants from non-English speaking countries must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

CIR is designed to be completed in one academic year (three or four quarters on a full time basis). All financial aid is merit based, and the CIR program offers partial tuition scholarships on a highly competitive basis.

## HOW TO APply

The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: https://gradapplication.uchicago.edu/
Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of applications should be mailed to:

The University of Chicago<br>Division of the Social Sciences<br>Admissions Office, Foster 105<br>1130 East 59th Street<br>Chicago, IL 60637

Applicants interested in the dual J.D./A.M. program must apply separately to both the Law School (1111 East 60th Street, Chicago, IL 60637) and the Committee on International Relations. Applicants interested in the joint M.B.A./A.M. program must submit their application to the Graduate School of Business, which then refers the application to CIR. Please contact the Harris School of Public Policy regarding the application procedure for the dual A.M./M.A. degree.

## FURTHER INFORMATION

Additional program information may be found at the Committee's website, http:// cir.uchicago.edu/. You can contact the CIR preceptors at (773) 702-8073, and E.G. Enbar, Student Affairs Administrator, at (773) 702-8312 or egenbar@uchicago.edu.

## DEPARTMENT OF Political Science

## Chair

- Bernard Harcourt


## Professors

- John J. Brehm
- Cathy Cohen
- Michael Dawson
- Robert Gooding-Williams
- J. Mark Hansen
- Bernard Harcourt, Law
- Gary Herrigel
- William Howell
- Charles Lipson
- John McCormick
- John J. Mearsheimer
- J. Eric Oliver
- John F. Padgett
- Robert Pape
- Bernard S. Silberman
- Nathan Tarcov, Social Thought
- Lisa Wedeen
- Dali Yang
- Linda Zerilli

Associate Professors

- Patchen Markell
- Sankar Muthu
- Jennifer Pitts
- Gerald N. Rosenberg
- Dan Slater

Assistant Professors

- Julie Cooper
- Iza Hussin
- Stanislav Markus
- Jong Hee Park
- Alberto Simpser
- Betsy Sinclair
- Paul Staniland

Emeritus Faculty

- Leonard Binder
- Joseph Cropsey
- David Easton
- Morton A. Kaplan
- Norman H. Nie
- Lloyd Rudolph
- Susanne Rudolph
- Duncan Snidal
- Ronald Suny

Associate Members

- Elisabeth Clemens
- Jean Bethke Elshtain
- Thomas Ginsburg
- Roger Myerson
- Martha Nussbaum
- Moishe Postone

The Department of Political Science offers a course of study leading to the Ph.D. degree. A departmental faculty committee makes admission decisions based on an assessment of all the material required in the University application: biographical data, statement of interests and goals in graduate school, transcripts of grades, letters of recommendation, Graduate Record Examination aptitude scores, and a brief writing sample. Committee members want to know what applicants find intellectually exciting and why applicants want to study at the University of Chicago.

The department is committed to training doctoral students in political science broadly conceived. We believe that the best work in political science often crosses subfields and disciplines. Our aim is to help students develop and pursue their intellectual interests while grounding them in the various approaches and methodologies that characterize the discipline. The program requirements mix research papers, coursework, and exams so that students can achieve these goals as they proceed expeditiously towards the Ph.D. degree.

## The Graduate Program

For purposes of course distribution and comprehensive exams, the department offers courses and exams in five fields. At present, they are theory, American politics, comparative politics, international relations, and methodology. To meet the course distribution requirement, students must complete three courses in each of three fields. Overall, twelve courses taken for quality grades are required by the end of the sixth quarter.

In the first year students are required to take PLSC 30500 Introduction to Data Analysis and write a research paper as part of the normal writing requirement of a class. The most important project in the first two years is the master's paper, a piece of original research that is modeled on a journal article and addresses an important research question or debate.

Students are required to pass comprehensive exams in two fields. The exams are offered twice a year (with the exception of the comparative politics exam, which is scheduled on an individual basis) and they may be taken at any point but the final deadline by which the exams must be taken is the beginning of the seventh quarter (normally autumn quarter of the third year).

Practical pedagogical experience is a program requirement. To satisfy the requirement, students can serve as teaching assistants in undergraduate lecture courses and in the department's methodology sequence. A few advanced graduate students, selected as Grodzins Prize Lecturers, offer their own undergraduate courses. There are also opportunities to serve as teaching interns and instructors in the College's undergraduate core curriculum and as preceptors who assist the undergraduate majors with the writing of B.A. papers.

After completing courses and exams, students turn to the Ph.D. dissertation. The first step is a dissertation proposal that briefly outlines the research question, significance, argument, and method of the dissertation. PLSC 50000 The Dissertation Proposal Seminar, required in the autumn quarter of the third year, is a weekly seminar devoted solely to the presentation and collective discussion of several drafts of each student's dissertation proposal. The proposal must be approved by a committee of three faculty who agree to supervise the dissertation research and present the proposal for departmental approval.

Although advanced graduate research and writing is often a solitary enterprise, students in the department also typically continue to participate in one or more workshops, which are mainly devoted to students' presentation of research in progress for discussion and constructive criticism. Political science students participate in workshops devoted to American Politics, Comparative Politics, East Asia, Political Economy, Political Psychology, Political Theory, International Relations, and International Security Policy to name just a few. There are many other interdisciplinary workshops throughout the University ranging from Law and Economics, to Gender and Sexuality, to Russian Studies, all of which are open to political science students.

Upon receiving final approval of the dissertation by the members of the dissertation committee, the candidate gives a formal presentation based on the
dissertation. Following the presentation, which is open to the public, the candidate is questioned by an examining committee of three faculty members.

For more information about current faculty, students, requirements, and courses, consult the department webpage at http://political-science.uchicago.edu/.

## Information on How To Apply

The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines, and department specific information is available online at: https://gradapplication.uchicago.edu/
Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of the applications should be mailed to:
The University of Chicago
Division of the Social Sciences
Admissions Office, Foster 105
1130 East 59th Street
Chicago, IL 60637

## COURSES

For teaching purposes the subject matter of political science has been divided into the following fields of advanced study: political theory, American politics, comparative politics, international relations, and methodology. These fields are thought of not as separate compartments but as broad and flexible areas of specialization. Ph.D. candidates with interest in the governments of particular geographical areas may specialize in those areas by combining work in political science with relevant courses from other departments.

## Field I. POlitical Theory

The field of political theory deals with the basic problems of politics with respect to both substance and method. It is therefore regarded as the foundation for work in all other areas of political science. It is concerned with three orders of problems: with alternative theories relating to the way people act in political affairs; with alternative standards in terms of which policy may be judged; and with alternative kinds of models and methods for pursuing political research.

## Field II. AMERICAN POLITICS

The field of American politics deals with the organization, distribution, and orientation of political power in American society. The major items of emphasis are the development of American political thought, the political behavior of individuals, groups, and governmental institutions, elections, and the formation and execution
of public policy. Attention is paid both to the present state of the American political system and to its historical roots.

## Field III. Comparative Politics

The field of comparative politics examines phenomena such as state formation, democracy, nationalism, economic organization, revolution, and social movements across time and space. One approach to these phenomena is to develop expertise in a particular era or area, and then to interpret the distinctive political processes and outcomes coming from that context. Another approach is to examine a set of cases in the search for valid generalizations about political phenomena that span across regions or historical eras. A third approach is to rely on formal theory to specify universal mechanisms or processes, and then to use data from a variety of sources to give credence to the models. All approaches share an assumption that the systematic study of political experience beyond that of the United States is a key ingredient for a discipline that seeks high levels of generality and abstraction.

## Field IV. International Relations

The field of international relations is concerned with theoretical and empirical examination of international politics, especially international security and international political economy. Methodological approaches represented by the faculty include historical, case study, quantitative, and mathematical analysis. Workshops provide a common forum within the department for interchange between different questions about and approaches to international politics. In addition, there are important connections to other areas of political science including comparative and American politics, methodology, and political theory. International relations further engages other social science disciplines including international economics, political geography, public policy, and diplomatic history. Students are encouraged to take courses in these and other disciplines, although the department assumes responsibility only for those approaches to the study of international relations which develop the assumptions and utilize the methods employed in the fields of political science. For this field of political science, students are expected to acquire fundamental knowledge of international politics, with special emphasis on international relations theory and research approaches.

## Field V. Methodology

The field of methodology is concerned with the quantitative and model building skills required for the study of political phenomena. It consists of introductory sequences of courses in both statistical and mathematical analysis, in addition to a variety of more advanced offerings focusing on specific topics. Applications of these methods in particular research areas will be encountered in a number of courses listed under the appropriate substantive fields. The department offers a comprehensive exam in Methodology by petition only; however, students can meet the requirements for course distribution automatically.

The department website offers descriptions of graduate courses scheduled for the current academic year: http://political-science.uchicago.edu/courses.shtml.

## DEPARTMENT OF PSYCHOLOGY

## Chair

- Susan Cohen Levine


## Professors

- John T. Cacioppo
- Bertram J. Cohler, Human Development
- Jean Decety
- Susan Goldin Meadow
- Boaz Keysar
- Susan Cohen Levine
- John A. Lucy, Human Development
- Daniel Margoliash, Organismal Biology and Anatomy
- Martha K. McClintock
- Howard C. Nusbaum
- Steven K. Shevell
- Richard Shweder, Human Development
- Michael Silverstein, Anthropology
- Steven K. Small, Neurology
- Nancy Lou Stein

Associate Professors

- Sian Beilock
- William Goldstein
- Leslie M. Kay
- Brian Prendergast
- Penelope S. Visser

Assistant Professors

- Jasmin Cloutier
- Josh Correll
- David Gallo
- Katherine Kinzler
- Sarah London
- Kimberly Rios

Emeritus Faculty

- R. Darrell Bock
- Abraham Bookstein, Humanities Division
- Norman M. Bradburn
- Robert A. Butler, Surgery
- Mihaly Csikszentmihalyi
- Eugene T. Gendlin
- Sebastian P. Grossman
- Eric P. Hamp, Linguistics
- Janellen Huttenlocher
- Philip W. Jackson, Education
- Jerre Levy
- Frederick F. Lighthall, Education
- David McNeill
- Joel M. Pokorny, Ophthalmology and Visual Science
- Allan Rechtschaffen, Psychiatry
- Milton J. Rosenberg
- Vivianne Smith, Ophthalmology and
- Visual Science
- Benjamin D. Wright
- Victor H. Yngve, Linguistics

The primary focus of the study of psychology is on the individual. Thus, its scope includes the biological processes of brain growth, development and functioning; the perceptual and cognitive processes by which information is acquired, stored, used and communicated; the comprehension, production, and use of language from a psychological viewpoint; the social, cultural, and emotional processes by which experience is interpreted and organized; and the developmental processes that underlie change from infancy through adulthood. Training emphasizes the conceptual theories that describe and explain these processes, and the variety of methods that are used to study them.
Originally founded as the Laboratory of Psychology in 1893, the Department of Psychology has been for a century a leading center of scholarship, research and teaching in psychology and related fields. Among its distinguished faculty and students have been James Rowland Angell, John Dewey, George Herbert Mead, John B. Watson, the founder of behaviorism, L. L. Thurstone, a pioneer in psychological measurement, Karl Lashley, Klüver and Bucy, Kleitman, discoverer of REM sleep, Frank Beach, founder of behavioral endocrinology, W. C. Allee who viewed biology as a social phenomenon, and Roger Sperry, Nobel Prize winner for his work in cerebral lateralization. The present Department of Psychology is conscious of its distinguished intellectual forebears and continues to reflect its heritage in its commitment to research, the scope of its inquiry, and the diversity of its programs of graduate study.
Moreover, consistent with the interdisciplinary traditions of the University of Chicago, the Department of Psychology maintains close connections with other
departments in the University. The department's faculty and students actively participate in courses, colloquia, workshops and joint research ventures with scholars in related departments, including, but not confined to, anthropology, biology, computer science, computational neuroscience, linguistics, neurobiology, and philosophy, and in the University's professional schools of business, public policy, law, medicine, and social service administration.

The Department of Psychology is organized into specialized training and research programs that reflect the contemporary state of the discipline as well as wide ranging interests of its own faculty. They are currently the Cognition Program, the Developmental Psychology Program, the Integrative Neuroscience Program, the Perception Program, and the Social Psychology Program. The interdisciplinary character of the University and the Department of Psychology is reflected in the fact that many faculty members serve on more than one of the department's programs.

## DEGREES

The course of study offered by the Department of Psychology is designed primarily to prepare students for careers in research and teaching and for whatever professional work is necessary as an adjunct to these career objectives. Programs of graduate study offered by the department lead to the Ph.D. degree in the Division of the Social Sciences. In order to qualify for the Ph.D. degree, students must satisfy:

1. The University's residency requirements
2. The requirements of the Division of the Social Sciences
3. The requirements of the particular program of the Department of Psychology

The Department of Psychology does not offer courses of study leading to the degree of Master of Arts. However, students admitted to doctoral study may take the Master of Arts degree as an optional step in the doctoral program. Similarly, a student admitted who must leave the program, for whatever reason, may apply for a terminal Masters of Arts degree, providing the student has met the University's residency requirements, the requirements of the Division of the Social Sciences, and the program requirements of the particular program of the Department of Psychology.

## PsyChology Linguistics Joint Ph.D. Program

A joint Ph.D. degree program in psychology and linguistics exists for those students who are interested in completing degree requirements in both fields. Psychology students in the Language area of the Cognition Program may apply to the joint degree program in the second year and beyond, but are not required to do so.

## PSYCHOLOGY-BUSINESS JOINT PHD PROGRAM

A joint PhD degree program in psychology and business exists for those students who are interested in completing degree requirements in both fields. This program
is overseen jointly by the Department of Psychology and by the Managerial and Organizational Behavior Area in the Booth School of Business. Admission to this program requires admission to both the PhD program in psychology and at Booth School of business. Faculty in both programs will determine, based in a student's primary research interests and/or explicit preferences for a primary research advisor, which program will be the student's primary affiliation.

## ADMISSION

Students are admitted by application to the Department of Psychology to pursue courses of study in doctoral programs that are formulated by the individual programs. Applicants must specify the program to which they are applying. Applicants will be considered for admission only if they have earned a bachelor's degree or its equivalent. Admission depends upon the strength of the general undergraduate record, scores on the Graduate Record Examination, letters of recommendation, personal statement and interests, and relevant laboratory or field research experience. Please refer to the Office of International Affairs web site: https://internationalaffairs.uchicago.edu/students/prospective/toefl.shtml. Foreign language students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Testing System (IELTS). Candidates for admission are expected to have some background in psychology as well as mathematics and statistics. Candidates with backgrounds in anthropology, history or sociology are encouraged to apply to Psychology, (the Social Psychology Program); those with strong biological training and interests are encouraged to apply to Psychology, (the Integrative Neuroscience Program or the Social Program).

Students are admitted through the Division of the Social Sciences. Students already enrolled in the Department of Linguistics of the Division of the Humanities who wish to work toward the joint Ph.D. In Psychology, (the Language area of the Cognition Program) and in Linguistics must be admitted as well to the Department of Psychology through the Division of the Social Sciences.

## How TO Apply

The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: https://gradapplication.uchicago.edu/

Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of applications should be mailed to:
The University of Chicago
Division of the Social Sciences
Admissions Office, Foster 105

## 1130 East 59th Street

Chicago, IL 60637
For additional information about the Psychology program, please see: http:// psychology.uchicago.edu/ or call 773-702-8861.

## General Requirements for Doctoral Students

All doctoral students in the Department of Psychology must complete the common graduate curriculum. In addition, each student must complete the course requirements specified by one of the department's specialized training and research programs. In exceptional cases, a student may design an individual sequence of courses. This sequence must be approved by the curriculum and student affairs committee before the student undertakes it. Completion of these course requirements is a prerequisite for Ph.D. candidacy.

## Common Graduate Curriculum

The common curriculum consists of a maximum of 11 courses. Other requirements for graduate students will be set by the areas of specialization.

Proseminar: One-quarter course in which faculty members whose primary affiliation is the Department of Psychology give a summary of their ongoing research. This introduces new students to the range of research areas in the department.
Statistics requirement, passed with a grade of B or better:
STAT $22000 \quad$ Statistical Methods and Applications (or a more advanced 100
PSYC 37300 Experimental Design-1 100

PSYC 37900 Experimental Design-2 100
TRIAL RESEARCH SEMINAR
All graduate students are required to take the trial research seminar in the spring of the first year. The purpose of this seminar is to help students formulate and complete their trial research projects.

## Core courses

Five core courses will be offered each year. Students will be required to take three of these five courses. These courses must be passed with a grade of B or better.
Choose three of the following: ${ }^{300}$

| PSYC 30300 | Course PSYC 30300 Not Found ${ }^{100}$ | true |
| :--- | :--- | :--- |
| PSYC 30400 | Course PSYC 30400 Not Found ${ }^{100}$ | true |
| PSYC 30500 | Course PSYC 30500 Not Found | true |
| PSYC 30600 | Social Psychology | true |


| PSYC 30700 Sensation and Perception true |
| :--- |
| Total Units |
| MINOR AREA |
| Students must take three graduate courses that provide coherent coverage of |
| a discipline outside of psychology that complements a student's course of study |
| within psychology (e.g., computer science, neurobiology, linguistics, philosophy, |
| anthropology, mathematics, statistics beyond the courses required, etc.). These |
| courses should be chosen in consultation with the student's advisor, and they may |
| be taken pass/fail. |

## COGNITION PROGRAM

Research on cognition lies at the core of the study of many basic psychological mechanisms (e.g., recognition, attention, categorization, memory, inference) and in recent years, neuroimaging methods have been used to make enormous strides grounding these mechanisms in the brain. Work on cognitive mechanisms has been important in a number of other areas of psychology (e.g., Social Psychology and Developmental Psychology) and provides an important theoretical foundation for understanding higher order cognition including language use, reasoning, and problem solving.

## Curriculum

There are three elements in the graduate curriculum of the Cognition Program.

1. Departmental curriculum. Students must complete the departmental core graduate curriculum. Within this curriculum, there are two requirements specific to cognition students.
A. They must take Cognitive Psychology as one of their three core psychology classes.
B. They must fulfill the departmental minor area requirement by taking three courses that provide a coherent grounding in some aspect of cognition or cognitive neuroscience. These courses are to be decided on in consultation with the student's advisor, prior to actually taking the courses. It is recommended that students fulfill this requirement through cognitively-oriented courses in anthropology, computer science, human development, linguistics, or neurobiology. Other courses are also acceptable as long as they are relevant to the study of cognition.
2. Basic courses. Three basic courses. The following list includes possible courses, including those that are not offered every year. Pre-approved courses are:

- PSYC 31200: Systems Neuroscience
- PSYC 31500: Neuroethology
- Psyc 32000: Color Vision
- Psyc 32600: Speech Perception
- Psyc 33100: Developmental Neuropsychology
- Psyc 34214: Cognitive Neuroscience
- Psyc 34400: Computational Models of Language
- Psyc 34700: Social Cognition
- Psyc 36100: Developmental Cognitive Neuroscience
- Psyc 37500: Introduction to the Psychology of Language
- Psyc 38300: Attention
- Psyc 38500: Cognitive Neuropsychology
- Psyc 39000: Vision
- Psyc 36100: Developmental Cognitive Neuroscience
- Psyc 37400: Human Memory (Autumn, 2011)
- Psyc 42550: Cognitive Development
- Psyc 43200: Seminar: Language Development

Students may also propose other courses, based on course offerings in a given year. Such student-proposed courses should be approved by the cognition area chair prior to taking them.
3. Advanced courses and seminars. Students are strongly encouraged to participate in advanced courses and seminars, particularly in their area of interest.

## The Developmental Psychology Program

There is a strong history of work in developmental psychology at the University of Chicago. The goal of this program is to foster the continuing development of this area by providing a program of study for graduate students and a community of researchers who share an interest in how development occurs. The Developmental Psychology program offers graduate study which investigates child psychology from a variety of perspectives. Four major research areas make up the program: cognitive development, social and emotional development, language and communicative development, and biological development. Specific topics of research specialization include: vocabulary acquisition, the development of gesture and other forms of nonverbal communication, the development of discourse abilities, mathematical and number knowledge in infants and children, the effects of early brain damage on development, social cognitive development in infancy and early childhood, early emotional understanding, the development of autobiographical memory, parent child interaction, language socialization, cultural influences on development, and environmental effects on language development and school achievement. The emphasis is on the use of experimental and observational methods for the study of development.

## Curriculum

1. General course: Psyc 40500: Advanced Seminar in Developmental Psychology is required of all students in the program. A prerequisite for this course is that the student has already taken a survey course in developmental psychology. This course will also fulfill a core course requirement for the common graduate curriculum.
2. An advanced course in each of four areas of Developmental Psychology. Certain seminars may also fulfill these requirements. Below are a few examples of courses that will fulfill these requirements. This is not a comprehensive list as course offerings change from year to year. Students may petition the developmental area chair to count courses not included on this list. Topics in Developmental Psychology along with an additional paper may, under special circumstances, be used towards one course satisfying this requirement, with permission of the developmental area chair.
A. Cognitive/Intellectual Development:

Psyc 42550: Topics in Cognitive Development (Woodward); Psyc
33300: Cognition, Development and Learning (N. Stein), Psyc 33600:
Development in Infancy (Woodward), Psyc 42040 Sem. Mathematical Development (Levine).
B. Biological Development:

Psyc 31700: Developmental Biopsychology (M. McClintock); Psyc 34900: Biopsychology of Attachment (Maestripieri); Psyc 36100: Developmental Cognitive Neuroscience (Staff).
C. Language/Communicative Development:

Psyc 43200: Seminar on Language Acquisition (S. Goldin-Meadow); Psyc 35500: Language Socialization (J. Lucy).
D. Social/Emotional Development: Psyc 34701: The Development of Emotional and Social Understanding (N. Stein); Psyc 33650. The Development of Social Cognition (K. Kinzler), Psyc 34500. Developmental and Neuroscience Perspectives on Social Cognition (K. Kinzler, J. Decety).
3. It is suggested that the three minor area courses required by the common graduate curriculum be chosen from one of the following areas: linguistics, computer science, computational neuroscience, neurobiology, statistics, sociology, anthropology, public policy, human development. The minor area courses must form a cohesive unit that relates to the student's program of study.
4. Students are expected to take advanced courses and seminars, particularly in their area of interest, and to attend the weekly meeting of Topics in Developmental Psychology

## Integrative Neuroscience

The notion that 100 billion neurons give rise to human behavior proved daunting up through the 20th Century because neuroscientists were limited by existing technologies to studying the properties of single neurons or small groups of neurons. Characterizing simple neural circuits has led to an understanding of a variety of sensory processes, such as the initial steps in vision, and motor processes, such as the generation of locomotion patterns. However, unraveling the neural substrates of more complex behaviors, such as the ability to pay attention to relevant events in its surroundings or the ability to understand the likely events going through the mind of another, remains one of the major challenges for the neurosciences in the twenty-first century. In contrast to simple behaviors, these complex behaviors depend on interactions within a network of different brain structures. Studying the neural bases of complex behaviors, thus, requires an integrative neuroscience approach.

The Integrative Neuroscience graduate program at the University of Chicago is designed to provide the training and research opportunities for the next generation of behavioral, cognitive, and social neuroscientists. Behavioral, cognitive, and social neuroscience represent three complementary and partially overlapping aspects of this integrative neuroscience of mind and behavior. Behavioral neuroscience places an emphasis on the biological mechanisms underlying basic behavioral processes; cognitive neuroscience places an emphasis on the biological mechanisms underlying cognition, with a specific focus on the neural substrates of mental processes and their behavioral manifestations; and social neuroscience places an emphasis on the biological mechanisms underlying social processes and behavior, including the ability to perceive and communicate mental states including the beliefs and desires of others and to form and maintain interpersonal and group relationships. The University of Chicago is optimally positioned to meet this challenge because its unique academic structure facilitates interactions across disciplinary perspectives.

## Curriculum

1. Proseminar: One quarter course in which faculty members whose primary affiliation is the Department of Psychology give talks summarizing their on ongoing research
2. Statistics (3 courses)
A. Statistics 22000 (Statistical Methods \& Applications), or a more advanced statistics course for which Statistics 22000 is a prerequisite.
B. Psychology 37300 (Experimental Design 1)
C. Psychology 37900 (Experimental Design 2)
3. Trial Research Seminar (1 course)

This seminar helps students formulate and complete the Trial Research Project
4. Psychology Department Core Courses ( $3^{*}$ courses)

Select 3* courses from Biological Psychology, Cognitive Psychology,
Developmental Psychology, Sensation \& Perception, and Social Psychology
5. Minor Area (3 courses)

These courses must be the Neuroscience Cluster courses:
A. Cellular Neurobiology (Normally taken Autumn of first year)
B. Survey of Systems Neuroscience (Normally taken Autumn of first year)
C. Behavioral Neuroscience

The IN program offers the following advanced courses. All of these courses will not be offered every year.

- Biological Rhythms and Behavior (Psyc 33960)
- Attention (Psyc 38300)
- Advanced Cognitive Neuroscience (Psyc 38760)
- Neural Oscillations (Psyc 37150)
- Developmental Cognitive Neuroscience (Psyc 36100)
- Neuropsychopharmacology (Psyc 36901)
- Color Vision (Psyc 32000)
- Human Memory (Psyc 37400) or LM\&C
- Perception and Action (Psyc 33700)
- Skill Learning \& Performance (Psyc NEW)
- Spoken Language Processing (Psyc 35750)
- Social Neuroscience of Empathy (Psyc 33300)
- Attitudes \& Persuasion (Psyc 46100)
- Stereotyping and Prejudice (Psych 35950)
- Social Cognition (Psyc 34700)
- Physiology of Vision (Psyc 35000)
- Vision (Psyc 39000)


## Trial Research Project

Each student completes a Trial Research Project under the guidance of a faculty advisor. This is a significant piece of research carried out over a 12 -month period. Both written and oral presentations of the research are required. The written report is due during Spring Quarter of the second year. The oral presentation is required before the end of Spring Quarter of the second year.

## Qualifying Exam

A PhD Qualifying Examination is given at the beginning of the third year.

## Doctoral Dissertation

The Doctoral Dissertation is an independent research project carried out under the guidance of a faculty Dissertation Committee with at least four members. At least two members of the committee, including the chair, must be in the Integrative Neuroscience program; a third member must be in the Department of Psychology. The chair of the committee typically is the primary research advisor.

A written dissertation proposal is presented to the committee in advance of an oral Proposal Hearing. The hearing is open to all students and faculty in the Integrative Neuroscience program.

A student is admitted to PhD Candidacy after successfully completing (i) all course requirements, (ii) written and oral presentations of the Trial Research Project, (iii) the Qualifying Exam and (iv) an approved dissertation proposal (including oral defense).

The doctoral dissertation is submitted to the dissertation committee prior to a final oral defense (the "final oral examination"). The dissertation committee plus an outside reader, who may be a faculty member at the University of Chicago or a scientist at another institution, administer the final oral exam. The committee members and reader evaluate the dissertation in private after the oral exam. At most one abstention or vote to disapprove is allowed among the committee members and reader; all others must approve the dissertation to satisfy the requirements for the PhD degree.

## The Social Psychology Program

The general philosophy of the curriculum is to provide students with the requisite knowledge and skills to excel in mainstream, academic social psychology. In addition to Departmental requirements, graduate students in the University of Chicago Social Psychology Program must fulfill the following course requirements:

1. General Courses:
A. PSYC 40600: Advanced Seminar in Social Psychology: Introductory course in experimental social psychology. This course will also fulfill part of the core course requirements of the common graduate curriculum.
B. Proseminar in Social Psychology: One quarter course in which faculty members in the Chicago Program (but not in the Department of Psychology) give summarizes of ongoing research.
2. Topics in Experimental Social Psychology: An ongoing seminar taught collectively by the Core Faculty each quarter.
3. An advanced course or seminar in at least four of the following Areas of Emphasis:

- Self
- Social Cognition
- Social and Cognitive Neuroscience
- Decision Making
- Attitudes and Affect
- Stereotyping and Prejudice
- Communication and Language Processes
- Interpersonal Relations and Group Processes
- Political Psychology
- Cultural Psychology

4. The Advanced Methods in Experimental Social Psychology course plus two additional courses in advanced methods and statistics.
5. Finally, students are expected to take advanced courses and seminars in their area of interest.

## RESEARCH REQUIREMENTS

## Trial Research Project

Each student in the Department of Psychology will complete a trial research project under the guidance of a faculty advisor or advisors by the end of the seventh week of the spring quarter of the second year. Each student's trial research committee consists of the advisor and two other faculty members.

## Dissertation

Each student in the Department of Psychology will complete a dissertation under the guidance of a faculty advisor or advisors. The committee consists of the advisor, two other members of the faculty, and an outside reader.

## Evaluations

All students in the Department of Psychology are evaluated at the end of the spring quarter each year. The evaluation at the end of the second year is particularly important, as it determines whether a student will be admitted to candidacy and permitted to conduct dissertation research.

## The John U. Nef Committee on Social Thought

## Chair

- Robert Pippin


## Professors

- Lorraine Daston
- Vincent Descombes
- Wendy Doniger
- Hans Joas
- Irad Kimhi
- Gabriel Lear
- Jonathan Lear
- Jean Luc Marion
- Heinrich Meier
- Glenn W. Most
- David Nirenberg
- Thomas Pavel
- Mark Payne
- Robert B. Pippin
- James M. Redfield
- Haun Saussy
- Laura Slatkin
- Nathan Tarcov
- David Wellbery
- Adam Zagajewski


## Emeriti

- Paul Friedrich
- Leon Kass
- Joel Kraemer
- Ralph Lerner
- Charles W. Rosen
- David Tracy
- Anthony C. Yu

The John U. Nef Committee on Social Thought was established as a degree granting body in 1941 by the historian John U. Nef (1899-1988), with the assistance
of the economist Frank Knight, the anthropologist Robert Redfield, and Robert M. Hutchins, then President of the University. The Committee is a group of diverse scholars sharing a common concern for the unity of the human sciences. Their premises were that the serious study of any academic topic, or of any philosophical or literary work, is best prepared for by a wide and deep acquaintance with the fundamental issues presupposed in all such studies, that students should learn about these issues by acquainting themselves with a select number of classic ancient and modern texts in an inter-disciplinary atmosphere, and should only then concentrate on a specific dissertation topic. It accepts qualified graduate students seeking to pursue their particular studies within this broader context, and aims both to teach precision of scholarship and to foster awareness of the permanent questions at the origin of all learned inquiry.

The primary themes of the Committee's intellectual life have continued to be literature, religion, philosophy, politics, history, art and society. The Committee differs from the normal department in that it has no specific subject matter and is organized neither in terms of a single intellectual discipline nor around any specific interdisciplinary focus. It exists to bring together scholars in a variety of fields sharing a concern with basic and trans-disciplinary issues, and to enable them to work in close intellectual association with other like-minded graduate students seeking to pursue their particular studies in this broader context. Inevitably, the faculty of the Committee does not encompass within itself the full range of intellectual disciplines necessary for these studies, and the fields represented by the faculty have changed substantially during the Committee's history. Students apply to work with the faculty who are here at any particular time and, where appropriate, with other faculty at the University of Chicago. Although it offers a variety of courses, seminars, and tutorials, it does not require specific courses. Rather, students, with the advice of Committee faculty, discover the points at which study in established disciplines can shape and strengthen their research, and they often work closely with members of other departments. Through its several lecture and seminar series, the Committee also seeks to draw on the intellectual world beyond the University.

Students admitted to the Committee work toward the Ph.D. There are three principal requirements for this degree: the fundamentals examination, the foreign language examination and the dissertation. Study for the fundamental exam centers on twelve to fifteen books, selected by the student in consultation with the faculty. Each student is free to draw from the widest range of works of imaginative literature, religious thought, philosophy, history, political thought, and social theory and ranging in date from classical times to the twentieth century. Non-Western books may also be included. Study of these fundamental works is intended to help students relate their specialized concerns to the broad themes of the Committee's intellectual life. Some of the student's books will be studied first in formal courses offered by faculty, though books may also be prepared through reading courses, tutorials, or independent study.

Preparation for the fundamentals examination generally occupies the first two or three years of a student's program, together with appropriate philological, statistical, and other disciplinary training.

After successful completion of the fundamentals examination, the student writes a dissertation under faculty supervision on an important topic using appropriately specialized skills. A Committee on Social Thought dissertation is expected to combine exact scholarship with broad cultural understanding and literary merit. In lieu of an oral defense, a public lecture on an aspect of their research of general interest to the scholarly community is to be given.

As a partial guide, and to suggest the variety of possible programs, there follows a list of titles of some of the dissertations accepted by the Committee since 1994:

- Heidegger's Polemos: From Being to Politics
- Nature's Artistry: Goethe's Science and Die Wahlverwandtschaften
- Nietzsche's Schopenhauer: The Peak of Modernity and the Problem of Affirmation
- Feminism and Liberalism: The Problem of Equality
- A Hesitant Dionysos: Nietzsche and the Revelry of Intuition
- Conrad's Case Against Thinking
- Reading the Republic as Plato's Own Apology
- Cartesian Theodicy: Descartes Quest for Certitude
- Plato's Gorgias and the Power of Speech and Reason in Politics
- World Government and the Tension between Reason and Faith in
- Dante Alighieri's Monarchia
- A House Divided: The Tragedy of Agamemnon
- Eros and Ambition in Greek Political Thought
- Natural Ends and the Savage Pattern: The Unity of Rousseau's Thought
- Revisited
- A Sense of Place. Reading Rousseau: The Idea of Natural Freedom
- Churchill's Military Histories: A Rhetorical Study
- A Nation of Agents: The Making of the American Social Character
- The Problem of Religion in Spinoza's Tractatus Theologico Politicus
- A Great Arrangement of Mankind: Edmund Burke's Principles and Practice of Statesmanship
- The Dance of the Muses
- Tocqueville Unveiled: A Historian and his Sources in L Ancien Régime et la Révolution
- The Search for Biological Causes of Mental Illness
- War, Politics, and Writing in Machiavelli's Art of War
- Plato's Laws on the Roots and Foundation of the Family
- The Philosophy of Friendship: Aristotle and the Classical Tradition on Friendship and Self Love
- Regions of Sorrow: Spaces of Anxiety and Messianic Tome in Hannah Arendt and W.H. Auden
- Converting the Saints: An Investigation of Religious Conflict using a Study of Protestant Missionary Methods in an Early 20th Century Engagement with Mormonism
- The Significance of Art in Kant's Critique of Judgment
- Historicism and the Theory of the Avant Garde
- Human Freedom in the Philosophy of Pierre Gassendi
- Taking Her Seriously: Penelope and the Plot of Homer's Odyssey
- Karna in the Mahabharata
- Hegel on Mind, Action, and Social Life: The Theory of Geist as a Theory of Explanation. Liberalism in the Shadow of Totalitarianism: The Problem of Authority and Values Since World War Two
- Nietzsche's Problem of Socrates and Plato's Political Psychology
- Tocqueville's New Political Science: A Critical Assessment of Montesquieu's Vision of a Liberal Modernity
- Magnanimity and Modernity: Self Love in the Scottish Enlightenment
- Hegel's Conscience: Radical Subjectivity and Rational Institutions
- Religious Zeal, Political Faction and the Corruption of Morals: Adam Smith and the Limits of Enlightenment
- This Distracted Globe: Hamlet and the Misgivings of Early Modern Memory
- Teaching the Contemplative Life: The Psychagogical Role of the Language of Theoria in Plato and Aristotle
- The Allegory of the Island: Solitude, Isolation, and Individualism in the Writings of Jean Jacques Rousseau
- The Convergence of Homer's Odyssey and Joyce's Ulysses
- The Curiosity of the Idle Reader: Self Consciousness in Renaissance Epic
- Bacon on Virtue: The Moral Philosophy of Nature's Conqueror
- Picturing the Path: The Visual Rhetoric of Barabudur
- Collecting Objects/Excluding People: Chinese Subjects and the American Art Discourse 1870-1900
- From Religionskrieg to Religionsgesprach: The Theological Path of Boden's Colloquium Heptaplomeres
- The Problem of Autonomy in the Thought of Montaigne
- The Virtue of the Soul and the Limits of Human Wisdom: The Search for SÔPHROSUNE in Plato's Charmides
- Nietzsche's "Fantastic Commentary": On the Problem of Self-Knowledge
- Erotic Uncertainty: Towards a Poetic Psychology of Literary Creativity
- Cruelty: On the Limits of Humanity
- Hamletian Romanticism: Social Critique and Literary Performance from Wordsworth to Trollope
- Hamlet's Arab Journey: Adventures in Political Culture and Drama 1952-2002
- Acquiring "Feelings that do not Err": Moral Deliberation and the Sympathetic Point of View in the Ethics of Dai Zhen
- The Contest of Regimes and the Problem of Justice: Political Lessons from Aristotle's Politics
- Socrates and the Second Person: The Craft of Platonic Dialogue
- In the Grip of the Future: The Tragic Experience of Time
- Thucydides on the Political Soul: Pericles, Love of Glory, and Freedom
- Connecting Agency and Morality in Kant's Moral Theory
- Tocqueville and the Question of the Nation
- Pierre Bayle's "Machiavellianism"
- The Burial of Hektor: The Emergence of the Spiritual World of the Polis in the Iliad
- Hegel's Defense of Moral Responsibility
- Dostoevsky, Madness, and Religious Fervor: Reason and its Adversaries
- The Uses of Boredom
- Two Loves, Two Cities: Intellectus and Voluntas in Augustine's Political Thought
- Power and Goodness: Leibniz, Locke and Modern Philosophy
- Soren Kierkegaard and the Very Idea of Advance Beyond Socrates
- Between City and Empire: Political Ambition and Political Form in Plutarch's Parallel Lives
- Gluttony and Philosophical Moderation in Plato's Republic
- Plato's Immoralists and their Attachment to Justice: A Look at Thrasymachus and Callicles
- The Great Law of Change: Edmund Burke, Thomas Paine, and the Meaning of the Past in a Democratic Age
- Devil's Advocate: Politcs and Morality in the Work of Carl Schmitt
- Relation without Relation: Emily Dickinson - Maurice Blanchot
- Perfecting Adam: The Perils of Innocence in the Modern Novel
- Stubborn Against the Fact: Literary Ideals, Philosophy and Criticism
- One Man Show: Poiesis and Genesis in the Iliad and Odyssey
- Political Theology in Eric Voegelin's Philosphy of History
- The Ancient Quarrel Unsettled: Plato and the Erotics of Tragic Poetry
- Heroic Action and Erotic Desire in Sidney, Spenser, and Shakespeare


## AREAS OF STUDY

Work with the Committee is not limited as to subject matter. Any serious program of study, based on the Fundamentals Examination, culminating in a scholarly doctoral dissertation, and requiring a framework wider than that of a specialized department, may be appropriate. In practice, however, the Committee is unwilling to accept a student for whom it is unable to provide competent guidance in some special field of interest, either from its own ranks or with the help of other members of the University.

## ADMISSION

Students in the Committee have unusual scope for independent study, which means that successful work in Social Thought requires mature judgment and considerable individual initiative. Naturally, the Committee wishes to be reasonably confident of an entering student's ability to make the most of the opportunities the Committee offers and to complete the program of study. Hence, we request that the personal statement required by the University application should take the form of a letter to the Committee which addresses the following questions: What intellectual interests, concerns, and aspirations lead you to undertake further study and why do you want to pursue them with the Committee? What kind of work do you propose to do here? (If you can, include your intentions for the Fundamentals requirement, further language study, and dissertation research.) How has your education to date prepared you? In addition, you should include a sample of your best written work, preferably relevant to the kind of work you propose to do at the Committee, though you may also include a short sample of fiction or poetry in addition. We will return your papers if they are accompanied by a stamped, self addressed envelope. Should we consider the evidence submitted to be insufficient, we may ask you to add to it. Applicants are also required to take the Graduate Record Examination.

## How To Apply

The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: https://gradapplication.uchicago.edu/.
Questions pertaining to admissions and aid should be directed to ssdadmissions@uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of applications should be mailed to:
The University of Chicago
Division of the Social Sciences
Admissions Office, Foster 105
1130 East 59th Street
Chicago, IL 60637

Foreign students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

For additional information about the Social Thought program, please call 773-702-8410.

## COURSES

The department website offers descriptions of graduate courses scheduled for the current academic year: http://socialthought.uchicago.edu/page/social-thought-courses-descriptions. Or you may email the Committee directly com-soctht@uchicago.edu and request a copy of the current course schedule.

## Department of SOCIOlogy

## Chair

- Mario Luis Small


## Professors

- Andrew Abbott
- Gary S. Becker, Economics
- Terry N. Clark
- Elisabeth S. Clemens
- John L. Comaroff, Anthropology
- Karin Knorr Cetina, Anthropology
- Edward O. Laumann
- John Levi Martin
- Stephen W. Raudenbush
- Mario Luis Small
- Ross M. Stolzenberg
- Richard P. Taub, Comparative Human Development
- Linda Waite
- Kazuo Yamaguchi
- Dingxin Zhao


## Associate Professors

- Kathleen A. Cagney, Health Studies
- Andreas Glaeser
- Omar M. McRoberts

Assistant Professors

- Michael Engelman
- James A. Evans
- Ryon Lancaster
- Cheol-Sung Lee
- Kristen Schilt

Visiting Professor

- Hans Joas, Social Thought

Emeritus Faculty

- Charles E. Bidwell
- Donald J. Bogue
- Donald N. Levine
- William L. Parish
- Martin Riesbrodt
- Gerald D. Suttles

Associated Faculty

- Ronald S. Burt, Business
- James A. Davis
- Bernard E. Harcourt, Law School
- Susan E. Mayer, Public Policy

Research Associate

- Elizabeth McGhee Hassrick (Assistant Professor)

The Department of Sociology, established in 1893 by Albion Small and Charles A. Henderson, has been centrally involved in the history and development of the discipline in the United States. The traditions of the Chicago School were built by pioneers such as W. I. Thomas, Robert E. Park, Ernest W. Burgess, and William F.Ogburn. It is a tradition based on the interaction of sociological theory with systematic observation and the analysis of empirical data; it is interdisciplinary, drawing on theory and research from other fields in the social sciences and the humanities; it is a tradition which seeks to fuse together concern with the persistent issues of social theory and attention to the pressing social and policy problems of modern society.

Continuous developments in social research have marked the department's work in recent years. The department has pursued a balance in effort between individual scholarship and the development of group research approaches. Faculty members have been engaged in the development of systematic techniques of data collection and in the statistical and mathematical analysis of social data. Field studies and participant observation have been refined and extended. There has been an increased attention to macrosociology, to historical sociology, and to comparative studies. The staff is engaged in individual and large scale group projects which permit graduate students to engage in research almost from the beginning of their graduate careers. The student develops an apprenticeship relation with faculty members in which the student assumes increasing amounts of independence as he or she matures.

## RESEARCH

The study of sociology at the University of Chicago is greatly enhanced by the presence of numerous research enterprises engaged in specialized research. Students often work in these centers pursuing collection and study of data with faculty and other center researchers. Students have the opportunity for experience in the following research enterprises: the William F. Ogburn/Samuel A. Stouffer Center for the Study of Population and Social Organizations; the Population Research Center; the Committee on Demographic Training; NORC Research Centers; the Center for the Study of Politics, History, and Culture; the Center for

Health Administration Studies; the Rational Choice Program; and the Center on Demography and Economics of Aging. These provide an opportunity either for field work by which the student brings new primary data into existence or for the treatment of existing statistical and other data. The city of Chicago provides opportunities for a variety of field investigations, and the department also encourages cross national and foreign studies.
The faculty have research interests in Europe, Asia, and Africa. Faculty and students may take advantage of an extensive computer system dedicated to research and teaching activities. The department participates fully in the Social Sciences Research Computing Center, which is a fully articulated network of personal computers, minicomputers and small mainframes. Access to the system is available through many work stations on campus. A large library of social science programs and data sets has been collected, with applied demographic routines being an area of particular strength.

## ADMISSION

The Department of Sociology offers a program of studies leading to the Ph.D. degree. It does not have a master's degree program. Students may ordinarily earn a master's degree as part of the Ph.D. program. The department welcomes students who have done their undergraduate work in other social sciences and in fields such as mathematics, biological sciences, and the humanities. The department also encourages students who have had work experience, governmental or military service, or community and business experience to apply.

All applicants for admission are required to submit Graduate Record Examination (GRE) General Test scores. Foreign students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). A writing sample is required for all applications.

The application process for admission and financial aid for all Social Sciences graduate programs is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines, and department specific information is available online at https://gradapplication.uchicago.edu/
Questions pertaining to admissions and aid should be directed to admissions@ssd.uchicago.edu or (773) 702-8415. All correspondence and materials sent in support of applications should be mailed to:
The University of Chicago
Division of the Social Sciences
Admission Office, Foster 105
1130 East 59th Street
Chicago IL 60637
For additional information about the Sociology program, please see http:// sociology.uchicago.edu/ or call (773) 702-8677.

## The Degree of Doctor of Philosophy

The doctoral program is designed to be completed in five to seven years of study by a student entering with a bachelor's degree. Satisfactory completion of the first phase of the Ph.D. program also fulfills the program requirements for the M.A. degree.

## COMMON CORE COURSE REQUIREMENTS

To complete the requirements for the M.A. And Ph.D. degrees, students are required to complete for credit a two quarter sequence, Sociological Inquiry $1 \& 2$, as well as History of Social Theory, during the first two years of residence.

## METHODOLOGY AND STATISTICS REQUIREMENT

For the Ph.D. degree, also during the first year, students are required to complete for credit Statistical Methods of Research I and II. For students entering with a strong quantitative background, the department may approve alternative sequences.

## PRELIMINARY EXAMINATION

This is an M.A. final/Ph.D. qualifying written examination designed to demonstrate competence in several major subdisciplines of sociology. The examination is based on the first-year common core courses, Sociological Inquiry 1 and History of Social Theory, and a special supplementary bibliography. The preliminary examination is normally taken at the beginning of the second year of residence. On the basis of the student's performance on this examination and in course work during the first year, the department determines whether the student is allowed to continue for the Ph.D.

## THE QUALIFYING PAPER

This paper should represent an original piece of scholarship or theoretical analysis and must be written in a format appropriate for submission to a professional publication. Note that the requirement is "publishable," not "published." The paper is to be prepared under the direct supervision and approval of a faculty member and may be written or revised in connection with one or more regular courses. Students entering with M.A. papers may submit an appropriate revision to meet the qualifying paper requirement. Students should formulate a proposal for the paper by the time of the progress review in spring of their second year. The qualifying paper should be completed before the end of the third year of study.

## SpeCIAL FIELD EXAMINATIONS

Ph.D. students are required to demonstrate competence in two special fields. The Special Field Requirement is generally met during the third and fourth years of graduate study. Students must pass the Preliminary Examination at the Ph.D. level before meeting the Special Field Requirement. An examination or review essay is prepared on an individual basis in a field of sociology in which the student wishes to develop research competence. One special field is ordinarily closely
related to the subject matter of the subsequent dissertation. The examination will cover both theoretical and substantive materials and the methods required for effective research in those fields. Preparation takes the form of specialized courses and seminars, supplemented by independent study and reading. The fields most commonly taken are community structure; demography; economics and work institutions; culture; educational institutions; family and socialization; formal organizations; mathematical sociology; methodology; modernization; political organization; race and ethnic relations; social change and social movements; social stratification; and urban sociology. One of the two Special Field requirements may be met with an approved sequence of methodology courses.

## DISSERTATION

The student prepares a research plan under the guidance of a specially appointed committee. The plan is subject to review by a faculty committee appointed for each student to determine whether the project is feasible and to assist in the development of research. Upon approval of the dissertation proposal and completion of the other requirements listed above, the department recommends that the Division of the Social Sciences formally admit the student to candidacy for the Ph.D. degree. When the dissertation is completed, an oral examination is held on the dissertation and the field to which it is related. The Ph.D. dissertation is judged by its contribution to sociological knowledge and the evidence it shows of ability to carry out independent research.

## TEACHING OppORTUNITIES

The Department of Sociology provides teaching opportunities which give graduate students increasing responsibility for classroom instruction. After completing the second year of study, students apply to become course assistants with the opportunity to discuss course design, teach under supervision of a faculty member, and review student work. After completion of the M.A. portion of the program students who have served as course assistants may apply to become teaching interns with increased responsibility for course design and student evaluation in addition to leading class sessions. Students who have completed an internship are eligible for consideration as independent instructors of College level courses.

## Graduate Workshops

Students in sociology are invited to participate in the program of Graduate Workshops in the Humanities and Social Sciences, a series of interdepartmental discussion groups that bring faculty and advanced graduate students together to discuss their current work. At the workshops, Chicago faculty and students or invited guests present portions of books or other projects in which they are currently engaged. Workshops in which students and faculty in the department participate include those addressed to the following topics: Demography; East Asia: Politics, Economy, and Society; Education, Gender and Sexuality Studies; Money, Markets,
and Consumption; Political Economy; Politics, Communication, and Society; Reproduction of Race and Racial Ideologies; Science, Technology, Society, and the State; Semiotics: Culture in Context; and Social Theory and Evidence.

## COURSES

The department website offers descriptions of graduate courses scheduled for the current academic year: http://sociology.uchicago.edu/graduate/course-catalog.shtml.

# Committee on Geographical Studies 

## Professors

- Michael P. Conzen
- Neil Harris, History
- Marvin W. Mikesell

Associate Faculty

- Virginia Parks, Social Service Administration
- Todd Schuble, Manager of GIS Research/Lecturer

Emeritus Faculty

- Gerald Suttles, Sociology

The Committee on Geographical Studies offers course work and research opportunities for graduate students in the University. Students from many degree programs in different divisions work through the committee for specialized training. The committee does not admit students for degree work.
Unique resources for geographical research exist both at the University and in the Chicago area. On campus, the Joseph Regenstein Library contains a geography monograph collection considered one of the four best in the world; a main map collection of over a quarter of a million maps covering all regions of the globe; and over 1,000 geography serial titles from all over the world. Among the holdings in the distinguished John Crerar Science Library are significant materials on the environment in general, agriculture, land use, housing, social welfare, and urban growth in Europe and the United States. Area research centers at the University devoted to the Middle East, East Asia, South Asia, Slavic regions, and Latin America provide further specialist interdisciplinary research opportunities, some including additional library collections.
Among the major libraries and museums in the Chicago area, the Newberry Library has special strength in American local materials and is home to the Hermon Dunlap Smith Center for the History of Cartography with its world class collection of antique and historical maps. Research and policy organizations, such as the Northeastern Illinois Planning Commission and Chicago Area Transportation Study, maintain specialized libraries and data repositories, and from time to time offer internship opportunities.
Students who wish to inquire further about the Committee on Geographical Studies should write or call: Chair, Committee on Geographical Studies, The University of Chicago, 5828 South University Avenue, Chicago, IL 60637, telephone: (773) 702-8301.

## Fields of STUDY

The principal objectives of the committee are the investigation of the organization of area, exploration of the earth environment and of its interactions with human life, and inquiry into the geographical dimensions of cultures and societies. The research interests of the committee's faculty include:

## URBAN ORGANIZATION AND CHANGE

Urban origins; the evolution of urban networks and systems of cities, ancient and modern, western and non western; the changing spatial structure, social organization, and morphology of urban areas; problems of urban allocation and planning; regionalism in American urban life; emergence of new metropolitan and non metropolitan settlement patterns in advanced societies.

## REGIONAL STUDIES

Historical and thematic approaches to regional structure, particularly of North America and the Middle East; theory of the region; the origin and development of regional character; locality and place making; nature and culture in regional settings; comparative study of regions.

## CULTURAL FOUNDATIONS OF NATION BUILDING

The ethno religious bases of the nation state; evolving regionalism and culture; the geographical significance of territoriality; national and regional boundary conflicts; minorities and cultural autonomy; linguistic policies of the state; multicultural development strategies; international and transnational management of ethnic conflict; cultural roots of self determination.

## LANDSCAPE STUDIES

Landscape as an embodiment and shaper of social values and attitudes towards environment; theories of landscape structure and change; the historical development and regional construction of landscapes; thematic landscapes; the role of institutions in environmental design and management; aesthetic landscape values; landscape and the sense of place; comparative landscape analysis.

## COURSES

The following list is representative of courses which have been offered by committee faculty members in recent years. Individualized reading and research courses on topics of faculty expertise may be arranged as well. The committee also maintains information on related courses in other disciplines.

## Geographical Studies Courses

GEOG 30100. Cultural Geography. 100 Units. Edit Course Data - default
This course examines the two main concerns of this field of geography: (1) the logic and pathology revealed in the record of the human use and misuse of the Earth, and (2) the discordant relationship of the world political map with more complicated patterns of linguistic and religious distribution.
Instructor(s): M. Mikesell Terms Offered: Winter
Equivalent Course(s): GEOG 20100,ENST 25900
GEOG 31900. Historical Geography of the United States. 100 Units. Edit Course Data - default
This course examines the spatial dynamics of empire, the frontier, regional development, the social character of settlement patterns, and the evolution of the cultural landscapes of America from pre-European times to 1900. All-day northern Illinois field trip required.
Instructor(s): M. Conzen Terms Offered: Autumn
Note(s): This course offered in even years.
Equivalent Course(s): GEOG 21900,HIST 28800,HIST 38800
GEOG 32100. Changing America in the Twentieth Century. 100 Units. Edit Course Data - default
This course explores the regional organization of U.S. society and its economy during the pivotal twentieth century, emphasizing the shifting dynamics that explain the spatial distribution of people, resources, economic activity, human settlement patterns, and mobility. We put special focus on the regional restructuring of industry and services, transportation, city growth, and cultural consumption. Two-day weekend field trip to the Mississippi River required.
Instructor(s): M. Conzen Terms Offered: Winter
Note(s): This course offered odd years.
Equivalent Course(s): GEOG 22100,HIST 27506,HIST 37506
GEOG 32700. Urban Structure and Process. 100 Units. Edit Course Data - default This course reviews competing theories of urban development, especially their ability to explain the changing nature of cities under the impact of advanced industrialism. Analysis includes a consideration of emerging metropolitan regions, the microstructure of local neighborhoods, and the limitations of the past U.S. experience as a way of developing worldwide urban policy.
Instructor(s): O. McRoberts Terms Offered: Spring
Equivalent Course(s): SOCI 20104,CRES 20104,GEOG 22700,SOCI 30104,SOSC 25100

GEOG 33003. Urban Europe 1600-present. 100 Units. Edit Course Data - default This course examines the growth, structure, and impact of urban Europe from an era of guilds, merchant capitalism, and state-building to the present. Attention goes both to the changing forms and functions of urban systems and to the defining features of different categories of town and city - to the occupational structure, the built environment, the provisioning, the physical and other disamenities, the policing, and so on. Emphasis is on the spatial, the economic, the social, and the political, but consideration is also given to shifting images of urban life, pro and con, and to current thinking about the prospect of urban Europe.
Instructor(s): J. Craig Terms Offered: Winter
Equivalent Course(s): HIST 23003,GEOG 23003,HIST 33003
GEOG 35300. Urban Geography. 100 Units. Edit Course Data - default
This course examines the spatial organization and current restructuring of modern cities in light of the economic, social, cultural, and political forces that shape them. It explores the systematic interactions between social process and physical system. We cover basic concepts of urbanism and urbanization, systems of cities urban growth, migration, centralization and decentralization, land-use dynamics, physical geography, urban morphology, and planning. Field trip in Chicago region required.
Instructor(s): M. Conzen Terms Offered: Winter
Note(s): This course offered in even years.
Equivalent Course(s): GEOG 23500
GEOG 35500. Biogeography. 100 Units. Edit Course Data - default
This course examines factors governing the distribution and abundance of animals and plants. Topics include patterns and processes in historical biogeography, island biogeography, geographical ecology, areography, and conservation biology (e.g., design and effectiveness of nature reserves).
Instructor(s): B. Patterson (odd years, lab). L., Heaney (even years, discussion) Terms Offered: Winter
Prerequisite(s): Completion of the general education requirement in the biological sciences and a course in either ecology, evolution, or earth history; or consent of instructor
Equivalent Course(s): BIOS 23406,ENST 25500,EVOL 45500,GEOG 25500
GEOG 36100. Roots of the Modern American City. 100 Units. Edit Course Data default
This course traces the economic, social, and physical development of the city in North America from pre-European times to the mid-twentieth century. We emphasize evolving regional urban systems, the changing spatial organization of people and land use in urban areas, and the developing distinctiveness of American urban landscapes. All-day Illinois field trip required.
Instructor(s): M. Conzen Terms Offered: Autumn
Note(s): This course offered in odd years.
Equivalent Course(s): GEOG 26100,ENST 26100,HIST 28900,HIST 38900

GEOG 36600. Economics of Urban Policies. 100 Units. Edit Course Data - default This course covers tools needed to analyze urban economics and address urban policy problems. Topics include a basic model of residential location and rents; income, amenities, and neighborhoods; homelessness and urban poverty; decisions on housing purchase versus rental (e.g., housing taxation, housing finance, landlord monitoring); models of commuting mode choice and congestion and transportation pricing and policy; urban growth; and Third World cities.
Instructor(s): G. Tolley, J. Felkner Terms Offered: Spring
Prerequisite(s): ECON 20100
Equivalent Course(s): ECON 26600,GEOG 26600,LLSO 26202,PBPL 24500
GEOG 38200. Introduction to GIS. 100 Units. Edit Course Data - default This course introduces students to the concepts and applications of geographic information systems (GIS). The course provides a basic foundation of spatial analysis and GIS with laboratory applications in particular techniques and methodology utilizing ESRI's ArcGIS 10. Students will learn to perform spatial analyses and communicate their results through cartography, along with introduction to concepts such as spatial data collection, remote sensing, and database design.
Instructor(s): T. Schuble Terms Offered: Autumn
Equivalent Course(s): GEOG 28200
GEOG 38400. Intermediate GIS. 100 Units. Edit Course Data - default
This course covers the development of cartographic and computer-based geographic information system techniques applicable to student research topics.
Instructor(s): R. Greene Terms Offered: Winter
Prerequisite(s): GEOG 28200, GEOG 38200
Equivalent Course(s): GEOG 28400
GEOG 38800. History of Cartography. 100 Units. Edit Course Data - default This course offers a grand overview of the key developments in mapmaking throughout history worldwide, from pre-literate cartography to the modern interactive digital environment. It looks at the producers, their audience, the technologies and artistic systems used, and the human and global contexts in which they developed. The course also draws on the extensive map collections of Regenstein Library.
Instructor(s): G. Danzer Terms Offered: Spring
Equivalent Course(s): GEOG 28800

GEOG 42400. Urban Landscapes as Social Text. 100 Units. Edit Course Data default
This seminar explores the meanings found in varieties of urban landscapes, both in the context of individual elements and composite structures. These meanings are examined in relation to three fundamental approaches that can be identified in the analytical literature on landscapes: normative, historical, and communicative modes of conceptualization. Emphasis is placed on analyzing the explicitly visual features of the urban landscape. Students pursue research topics of their own choosing within the general framework.
Instructor(s): M. Conzen Terms Offered: Autumn
Prerequisite(s): Advanced standing and consent of instructor.
Equivalent Course(s): SOCI 30303

## The Division of the Biological SCiences and the Pritzker SCHOOL OF MEDICINE

Kenneth S. Polonsky, M.D.

- Dean of the Division of the Biological Sciences and the Pritzker School of Medicine
- Chief Executive Officer of the University of Chicago Medical Center

Victoria E. Prince, Ph.D.

- Professor of Biochemistry and Molecular Biology
- Professor of Pediatrics
- Dean for Graduate and Post Doctoral Affairs

Holly J. Humphrey, M.D.

- Professor of Medicine
- Dean for Medical Education

The Division of the Biological Sciences is unique in that it encompasses both a medical school and graduate programs in biological sciences. Faculty in the division teach biology in the undergraduate College, but the organization and administration of baccalaureate programs in the biological sciences is the responsibility of the College, through the office of the Master of the Collegiate Division of the Biological Sciences. The departments and faculty within the division are not identified as those providing instruction to medical, graduate or College students, but rather all serve the entire curricular needs of the students in the University. This organizational structure makes possible a wide range of contacts and interactions among students and faculty in the basic and clinical science areas and affords many unique study and research opportunities for students regardless of their program of study.

## Degrees and Requirements

The Division of the Biological Sciences offers the degrees of Master of Science, Doctor of Philosophy, Doctor of Medicine, or Doctor of Medicine with Honors. Combined degrees (A.B./S.M. or M.D./Ph.D.) are available within certain special programs.

Recommendation for any of these degrees is conditional on the satisfactory completion of the academic requirements for the degree and the maintenance of proper conduct by the student while in the University.

## MASTER OF SCIENCE

At this time, only the Department of Health Studies offers a program leading specifically to the Master of Science degree. Otherwise, this degree is generally awarded in only two circumstances.

- Those individuals not continuing in their Ph.D. program of study may be awarded a terminal masters degree.
- Some students who are continuing their Ph.D. programs specify a desire to receive a transitional Master of Science degree.


## DOCTOR OF PHILOSOPHY

A general statement of the conditions under which this degree is awarded is presented here. The more specific departmental requirements are described in the sections outlining the offerings of each department.

- Bachelors degree from an accredited undergraduate institution.
- A minimum of three years of graduate work beyond the level of the bachelors degree. Credit for graduate work done in other institutions may be given if recommended by the department concerned and approved by the Dean for Graduate Affairs.
- Completion of nine, letter graded courses at the University of Chicago, with a B average in course grades. This is a minimum; individual units may have more stringent requirements.
- Preliminary examinations testing the candidates qualifications for candidacy.
- Fulfillment of the divisional teaching requirement. Before the Ph.D. can be awarded, students are required to teach twice (two quarters) for credit in preapproved teaching assistant positions in the biological sciences.
- Fulfillment of the divisional ethics requirement. All students are required to successfully complete a course in scientific integrity and the ethical conduct of research, usually in the first year of study.
- Formal admission to candidacy for the degree, recommended by a department or committee, and approved by the Dean for Graduate Affairs at least eight months before the degree is granted. Students are not admitted to candidacy until they have passed their departmental preliminary examination.
- A program of work for the degree, definitively formulated, approved by the department or committee concerned, and filed in the Office of Graduate Affairs along with the candidacy application at least eight months before the degree is granted. It must include the equivalent of at least three full quarters (9 course credits) devoted to research. (It may not include more than 9 course credits which are also submitted by the student toward the degree of Doctor of Medicine.)
- Acceptance of a dissertation submitted by the student to the department or committee having jurisdiction over the student's program.
- A successful final examination given by the department or committee concerned.


## COMBINED BACHELOR'S/MASTER'S

Students who have completed at least three years of undergraduate study in the College of the University of Chicago but have not completed their bachelor's degree may sometimes qualify for admission to a special A.B./S.M. program leading directly to the master's degree. Acceptance into such a program depends on a student's qualifications and on departmental policy. Only a few departments currently offer such a combined program. Inquiries should be made to the appropriate departments or the College office.

## Doctor of Medicine

This degree is normally awarded after fourteen quarters of satisfactory full time work at the University of Chicago Pritzker School of Medicine. To qualify for the M.D. degree, students must have completed at least the last eight academic quarters of medical studies in the School. Please see the Pritzker School of Medicine section for additional information on this degree.

## Doctor of Medicine with Honors

Each year during the spring, the committee on honors and awards entertains nominations from individual departments of senior medical students to be awarded graduation with honors. It is the purpose of this committee to select those students who have demonstrated leadership qualities, outstanding scholastic performance, and significant research abilities and accomplishments. Membership in Alpha Omega Alpha is taken into consideration, but is not a prerequisite for the award. The names of students so honored appear in the convocation program followed by the notation with Honors. This notation also appears both on the official academic records and on the diplomas of such students.

## M.D./Ph.D. DEGREES

In addition to the regular degree programs in medicine (M.D.) and the basic sciences (Ph.D.), the Division of the Biological Sciences administers a few special joint degree programs, such as the Medical Scientist Training Program, Growth and Development M.D./Ph.D. Program and the MD-PhD program in Medicine, the Social Sciences and Humanities.

## Programs of Graduate Study in the basic Biological Sciences

The Division of the Biological Sciences offers a variety of graduate programs leading to the Ph.D. degree. Joint programs also may be devised with departments, such as chemistry and psychology, in other divisions of the University. Graduate programs are offered under the aegis of divisional departments as well as interdepartmental committees composed of faculty members with a common interest in a broad but definable area of advanced study. Recent years have seen a trend in graduate study in the biological sciences away from strict separations of disciplines and toward interdisciplinary approaches to research. Toward a similar goal in the Division of the Biological Sciences, several degree granting units have joined together in clusters, with a common admissions process and a core basic curriculum. The cluster arrangement offers students greater flexibility in their choice of department or committee, while enhancing interdisciplinary research opportunities. The fundamentals of graduate education in the division are not altered by these provisions. Students still complete their degrees in individual departments and committees.

The goal of all the programs, whether offered by clusters or individual departments or committees, is the creation and dissemination of fundamental knowledge of life processes and the education and training of outstanding young scholars in these disciplines. To this end, the Division of the Biological Sciences has assembled a dedicated and talented faculty, strong in research and teaching, and has developed laboratory and other facilities of the first rank that allow the faculty and graduate students to pursue their goals at the highest level of excellence.
The clusters in the division that offer programs of study leading to the Ph.D. degree are:

Biomedical Sciences: Cancer, Immunology, Microbiology, Molecular Metabolism and Nutrition, and Pathology

- The Committee on Cancer Biology
- The Committee on Immunology
- The Committee on Molecular Metabolism and Nutrition
- The Committee on Microbiology
- The Department of Pathology
- (Graduate Program in Molecular Pathogenesis and Molecular Medicine)

Darwinian Sciences: Ecological, Integrative, and Evolutionary Biology

- The Department of Ecology and Evolution
- The Committee on Evolutionary Biology
- The Department of Organismal Biology and Anatomy

Molecular Biosciences: Biochemistry, Genetics, and Cell and Developmental Biology

- The Department of Biochemistry and Molecular Biology
- The Committee on Developmental Biology
- The Department of Human Genetics
- The Committee on Genetics
- (Graduate Program in Genetics, Genomics, and Systems Biology)
- The Department of Molecular Genetics and Cell Biology
- (Graduate Program in Cell and Molecular Biology)

Neurosciences: Computational Neuroscience, Neurobiology and Integrative Neuroscience

- The Committee on Computational Neuroscience
- Program in Integrative Neuroscience (Psychology)
- The Committee on Neurobiology

These degree granting units have not entered into a cluster arrangement and provide separate admission. They are:

- The Committee on Cell and Molecular Physiology
- The Department of Health Studies (Master's and Ph.D.)
- Interdisciplinary Scientist Training Program
- The Committee on Medical Physics
- The Committee on Biophysical Sciences (Joint with the Division of Physical Sciences)


## ADmission Procedures

The following requirements and procedures apply to those students wishing to follow a course of study leading to the Doctor of Philosophy degree in the division. Students may apply to a cluster or individual units within a cluster, indicating their choices in order of preference. Students may not apply to more than two clusters or units on one application. According to their own schedules, the units applied to will communicate directly with the student as needed. Final decision letters are issued by the BSD Office of Graduate Affairs. If admitted to more than one program, applicants will have the option of accepting the program of their choice.

## APPLICATION MATERIALS

Information about graduate programs and application materials is available on the World Wide Web at http://gradprograms.bsd.uchicago.edu/. We recommend that you apply online.

## DEADLINES

Applications are due December 1st in the Office of Graduate Affairs of the Division of the Biological Sciences (address above). Late applications will be reviewed only at the discretion of the Dean for Graduate and Post Doctoral Affairs. Incomplete applications will be evaluated on the basis of materials received at the time of the regular review process. Interviews are often required and students will be notified to setup visits, generally during February. On or about March 1 the process of notification of acceptance or rejection of applicants begins. Responses by students to offers of admission are due in the Office of Graduate and Post Doctoral Affairs by April 15.

## CREDENTIALS

An applicant who holds an undergraduate degree from an accredited institution is considered for admission on the basis of:

1. An excellent undergraduate record
2. The Graduate Record Examination
3. A demonstrated interest in a research career
4. Recommendations from three college faculty members acquainted with the scientific abilities and potential for graduate studies of the applicant
5. Proof of English proficiency for foreign students whose native language is not English; either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Certain departments and committees of the division require additional credentials. Details concerning these additional credentials or requirements may be ascertained by contacting the individual department or committee.

## FUNDING

Most graduate students in the BSD working toward the Ph.D. degree are fully funded (regular tuition and fees and prevailing competitive stipend). Funds for this support are derived from numerous sources, including Federal or private training grants, institutional funds, endowed funds, research grants and individual awards to students. During a student's course of study, support mechanisms may vary. Funds for international students are limited to non federal sources.

## Department of Biochemistry and Molecular Biology

## Chair

- Tobin R. Sosnick

Professors

- Francisco Bezanilla
- Glyn Dawson, Pediatrics
- Geoffrey Greene, Ben May Department for Cancer Research
- Stephen B. H. Kent
- Shohei Koide
- Anthony A. Kossiakoff
- Marvin W. Makinen
- Steve Meredith, Pathology
- Keith Moffat
- Tao Pan
- Eduardo Perozo
- Joseph A. Piccirilli
- Phoebe A. Rice
- Benoit Roux
- Nancy B. Schwartz, Pediatrics
- James A. Shapiro
- Tobin R. Sosnick
- Ira G. Wool

Associate Professors

- Erin J. Adams
- Sean D. Crosson
- Robert J. Keenan
- David Kovar, Molecular Genetics and Cell Biology
- Ronald S. Rock

Assistant Professors

- D. Allan Drummond

Emeritus Faculty

- Wolfgang Epstein
- Herbert C. Friedmann
- Eugene Goldwasser
- Alvin Markovitz
- Theodore L. Steck
- Donald F. Steiner
- Edwin W. Taylor
- Robert B. Uretz
- John L. Westley

The Biochemistry and Molecular Biophysics graduate program is a highly interdisciplinary program that forges a scientific culture of collaboration across the physical and biological sciences disciplines and among diverse laboratories. In this environment, students will have the opportunity to engage in research that aims to understand biological processes at the molecular level. The program is designed to encourage students to pursue research interests at the biologicalphysical sciences interface using diverse approaches such as structural and chemical biology, molecular and single molecule biophysics, combinatorial mutagenesis, protein engineering and RNA and DNA protein recognition.

## ADMISSION

For information about applying to our graduate program, please visit our website at http://molbio.bsd.uchicago.edu/index.php.

## DEGREES

## DOCTOR OF PHILOSOPHY

A Ph.D. program requires generally 4 to 6 years of study. The first year is spent in course work and small research projects in several laboratories to become acquainted with the department. Also during the first year there are many opportunities to attend and participate in departmental invited seminars and the Graduate Student Seminar Series. After the qualifying exam at the end of the first year, students choose a research advisor, carry out their Ph.D. research, write and orally defend a thesis.
Each student is required to take a minimum of 9 graded courses. One research rotation (BCMB 39900) will count as one of the 9 courses. Of the nine courses only the following are required:

| BCMB 30400 | Protein Fundamentals | 100 |
| :--- | :--- | :--- |
| BCMB 32300 | Macromolecular Function | 100 |
| BCMB 31600 | Course BCMB 31600 Not Found |  |
| BCMB 31200 | Course BCMB 31200 Not Found |  |

Two additional courses (BCMB 31900 - Introduction to Faculty Research, affectionately called "Faculty All Stars" and BCMB 31800 - Current Seminar Topics in Biochemistry and Molecular Biology) are required. BCMB 31900 is not for credit;
however, BCMB 31800 is for $1 / 2$ a credit. Each student is required to be a Teaching Assistant for a total of two quarters in their second and third years of residence.

The Qualifying Examination consists of a written research proposal that is prepared and submitted during the summer quarter of the first year. Students will be permitted to take the Qualifying Examination only after all course and grade requirements have been met. Two outcomes are possible: Pass or Revisions Needed. If revisions are required, the student will have the opportunity to respond to the committee's concerns and either revise portions of the proposal or re-write the entire proposal as indicated by the committee. Inadequate performance on a second exam is grounds for dismissal from the program. For continuation in the program, students must successfully pass the qualifying exam by the end of the fifth quarter of full-time residence as a graduate student in Biochemistry and Molecular Biophysics.

During the second year, students select a thesis advisor and begin laboratory research. To complete the Ph.D. degree, they must prepare, under the general direction of an appointed doctoral committee, a dissertation based upon their original research. A public seminar describing the results of the dissertation research must be presented and the dissertation must be successfully defended before the doctoral committee.

## Biochemistry and Molecular Biology Courses

BCMB 30400. Protein Fundamentals. 100 Units. Edit Course Data - default
For course description contact Biological Sciences.
Equivalent Course(s): GENE 30400,HGEN 30400,MGCB 30400
BCMB 31000. Fundamentals of Molecular Biology. 100 Units. Edit Course Data default
Third- or fourth-year standing. This course covers the structure of genetic material, replication, and transcription and its regulation. Other topics include post-
transcriptional regulation, chromatin and DNA repair (both after transcription), and protein synthesis.
Instructor(s): U. Storb, J. Staley Terms Offered: Winter
Prerequisite(s): Basic knowledge of genetics and biochemistry
Equivalent Course(s): BIOS 21208,GENE 31000,MGCB 31000

BCMB 31358. Simulation, Modeling, and Computation in Biophysics. 100 Units.
Edit Course Data - default
This course develops skills for modeling biomolecular systems. Fundamental knowledge covers basic statistical mechanics, free energy, and kinetic concepts. Tools include molecular dynamics and Monte Carlo simulations, random walk and diffusion equations, and methods to generate random Gaussian and Poisson distributors. A term project involves writing a small program that simulates a process. Familiarity with a programming language or Mathlab would be valuable. Instructor(s): B. Roux Terms Offered: Spring
Prerequisite(s): BIOS 20200 and Bios 26210-26212, or consent from instructor Equivalent Course(s): BIOS 21358,CPNS 31358

BCMB 31800. Current Seminar Topics in Biochemistry \& Molecular Biology. 50
Units. Edit Course Data - default
For course description contact Biochemistry and Molecular Biology.
Equivalent Course(s): BPHS 31800
BCMB 32200. Biophysics of Biomolecules. 100 Units. Edit Course Data - default This course covers the properties of proteins, RNA, and DNA, as well as their interactions. We emphasize the interplay between structure, thermodynamics, folding, and function at the molecular level. Topics include cooperativity, linked equilibrium, hydrogen exchange, electrostatics, diffusion, and binding.
Instructor(s): T. Sosnick Terms Offered: Spring
Prerequisite(s): Consent of instructor
Equivalent Course(s): BIOS 21328,BPHS 31000
BCMB 32300. Macromolecular Function. 100 Units. Edit Course Data - default
For course decription contact Biological Sciences.
Equivalent Course(s): MGCB 32300
BCMB 32500. Bioorganic Chemistry 100 Units. Edit Course Data - default A goal of this course is to relate chemical phenomena with biological activities. We cover two main areas: (1) chemical modifications of biological macromolecules and their potential effects; and (2) the application of spectroscopic methods to elucidate the structure and dynamics of biologically relevant molecules.
Instructor(s): L. Yu
Equivalent Course(s): CHEM 32500
BCMB 39900. Intro To Research: BCMB. Var Units. Edit Course Data - default For course description contact Biological Sciences.

## Committee on Cancer Biology

Chair

- Geoffrey Greene, Ben May Department for Cancer Research

Professors

- Habibul Ahsan, Health Studies
- Eric Beyer, Pediatrics
- Douglas Bishop, Radiation and Cellular Oncology
- Marcus Clark, Medicine
- Susan Cohn, Pediatrics
- Nancy Cox, Medicine
- Glyn Dawson, Pediatrics
- M. Eileen Dolan, Medicine
- Richard Fehon, Molecular Genetics and Cell Biology
- Edwin Ferguson, Molecular Genetics and Cell Biology
- David Grdina, Radiation and Cellular Oncology
- Elizabeth Grove, Neurobiology, Pharmacology and Physiology
- Howard Halpern, Radiation and Cellular Oncology
- Gregory Karczmar, Radiation and Cellular Oncology
- Bruce Lahn, Human Genetics
- Stephen Kron, Molecular Genetics and Cell Biology
- Michelle Le Beau, Medicine
- Shutsung Liao, Ben May Department for Cancer Research
- Anning Lin, Ben May Department for Cancer Research
- Terence Martin, Molecular Genetics and Cell Biology
- Olufunmilayo Olopade, Medicine
- Marcus Peter, Ben May Department for Cancer Research
- Marsha Rosner, Ben May Department for Cancer Research
- Janet Rowley, Medicine
- Benoit Roux, Biochemistry and Molecular Biology
- Ravi Salgia, Medicine
- Hans Schreiber, Pathology
- Walter Stadler, Medicine
- Ursula Storb, Molecular Genetics and Cell Biology
- Mitchel Villereal, Neurobiology, Pharmacology and Physiology
- Ralph R. Weichselbaum, Radiation and Cellular Oncology


## Associate Professors

- Suzanne Conzen, Medicine
- Wei Du, Ben May Department for Cancer Research
- Nathan Ellis, Medicine
- Thomas Gajewski, Pathology \& Medicine
- Tong Chuan He, Surgery
- Akira Imamoto, Ben May Department for Cancer Research
- Barbara Kee, Pathology
- Rick Kittles, Medicine
- Ernst Lengyel, Obstetrics and Gynecology
- Maciej Lesniak, Surgery
- Mark Lingen, Pathology
- Kay Macleod, Ben May Department for Cancer Research
- Clifford Ragsdale, Neurobiology, Pharmacology and Physiology
- Ilaria Rebay, Ben May Department for Cancer Research
- Carrie Rinker-Schaeffer, Surgery
- Stephen Skapek, Pediatrics
- Wei-Jen Tang, Ben May Department for Cancer Research
- Michael Thirman, Medicine
- Amittha Wickrema, Medicine
- Yingming Zhao, Ben May Department for Cancer Research

Assistant Professors

- Kenneth Cohen, Medicine
- Nickolai Dulin, Medicine
- Karen Frank, Pathology
- Lucy Godley, Medicine
- Kathleen Goss, Surgery
- Yu-Ying He, Medicine
- Richard Jones, Ben May Department of Cancer Research
- Deborah Lang, Medicine
- Andy Minn, Radiation and Cellular Oncology
- Piers Nash, Ben May Department for Cancer Research
- Kenan Onel, Pediatrics
- Dorothy Sipkins, Medicine
- H. Rosie Xing, Pathology
- Mirjam Zegers, Surgery

Committee on Cancer Biology offers a graduate program of study leading to the Doctor of Philosophy degree in Cancer Biology, and is supported by a National Cancer Institute sponsored training grant for predoctoral and postdoctoral trainees in cancer biology. The program provides multidisciplinary training for students interested in pursuing a research career in any aspect of Cancer Biology, focusing on mammalian (particularly human) biology as well as the study of genes and processes in other eukaryotic organisms. The program provides doctoral students with the most up to date knowledge and research training in molecular and cellular aspects of Cancer Biology and prepares the students for leadership positions in the academic community. The broad range of interests and expertise of the 67 faculty members of the Committee on Cancer Biology enables students to concentrate in multiple areas of cancer biology, including angiogenesis, animal models of cancer, apoptosis and cell survival, cancer genetics, cell cycle regulation, carcinogenesis, chromosome damage and repair, drug discovery/development, hormone action, metastatic progression, radiation biology, signal transduction, and tumor biology and immunology.

The Committee on Cancer Biology is a member of the Biomedical Sciences Cluster, which also includes graduate programs from the Committee on Immunology, the Committee on Microbiology, the Committee on Molecular Metabolism and Nutrition, and the Department of Pathology Molecular Pathogenesis and Molecular Medicine Graduate Program. The five academic units share several common courses and additional common events for students and faculty within the cluster. The goal of the cluster system is to encourage interdisciplinary interactions among both trainees and faculty, and to allow students flexibility in designing their particular course of study.

In addition to formal course work, the program sponsors a student led journal club, a Student/Postdoctorate Research Presentation group, and an annual cluster retreat in which students and trainees present their research findings. In addition, the program co-sponsors the Ben May Symposium with the Ben May Department for Cancer Research. This symposium brings speakers of international renown to campus. Students and trainees also have the opportunity to attend national meetings and cancer biology workshops off campus. Through the auspices of the Ben May Department for Cancer Research, the Section of Hematology/Oncology, and the University of Chicago Cancer Research Center (an NCI designated Cancer Center), there are several additional seminar series and a Clinical Cancer Research/ Basic Science Research Translational conference. Thus, there is a thriving, interactive community of cancer researchers.

## ADMISSION

Students interested in obtaining the Ph.D. in Cancer Biology should apply directly to the Committee on Cancer Biology by December 1st of each year and indicate Cancer Biology as their field of specialization.

## The Degree of Doctor of Philosophy

Ph.D. requirements include:

- Completion of 9.5 course credits consisting basic science, cancer biology and elective courses
- A preliminary exam in the form of a mock NIH-style grant proposal
- A dissertation based on original research
- A final thesis examination


## CANCER Biology COURSES

## CABI 40300. Systems Analysis of Proteins and Post-Translational Modifications.

 100 Units. Edit Course Data - defaultProteins play a major role in all cellular processes and their modification represents a major vehicle for expanding the genetic code of the cellular proteome (the inventory of all protein species in a cell). Given the crucial roles in the major cellular pathways and diseases such as cancer, proteins and PTM studies are a critical aspect of most biological projects. This course will cover concepts (including biochemistry, proteomics/systems biology, molecular biology, and bioinformatics), and practical techniques for identifying and quantifying proteins and PTMs. Topics include, but are not limited to quantification of protein interactions, abundances, modifications including phosphorylation, ubiquitination, and lysine acetylation, and subsequent discussion of biochemical and functional roles of proteins and PTMs in regulating biological networks.
Instructor(s): R. Jones, Y. Zhao, P. Nash Terms Offered: Spring
Prerequisite(s): BIOS 20200
Equivalent Course(s): BIOS 21346,IMMU 40300,MOMN 40300
CABI 40700. From Structure Coordinates to Protein Function. 100 Units. Edit Course Data - default
The course uses the atomic coordinate of proteins to explore how molecular machinery work in the context of physiological functions (vision, fight or flight) and human diseases (cancer). We begin by exploring protein components that make up the signal transduction pathway and how these components are assembled for the various physiological functions of humans. We then proceed to consider the physical properties of proteins. We conclude by discussing the protein-targeted therapeutics of human diseases. Computer graphic exercises and in-class student presentations complement the lecture topics.
Instructor(s): W.-J. Tang Terms Offered: Winter. L.
Prerequisite(s): Completion of a Biological Sciences Fundamentals sequence.
Biochemistry strongly recommended. Recommended for AP5 students.
Equivalent Course(s): BIOS 21339,NURB 40700

CABI 47300. Genomics and Systems Biology. 100 Units. Edit Course Data - default This lecture course explores the technologies that enable high-throughput collection of genomic-scale data, including sequencing, genotyping, gene expression profiling, assays of copy number variation, protein expression and protein-protein interaction. We also cover study design and statistical analysis of large data sets, as well as how data from different sources can be used to understand regulatory networks (i.e., systems). Statistical tools introduced include linear models, likelihood-based inference, supervised and unsupervised learning techniques, methods for assessing quality of data, hidden Markov models, and controlling for false discovery rates in large data sets. Readings are drawn from the primary literature.
Instructor(s): Y. Gilad, D. Nicolae Terms Offered: Spring
Prerequisite(s): STAT 23400 or Statistics in the Biomath Sequence
Equivalent Course(s): BIOS 28407,BPHS 47300,HGEN 47300,IMMU 47300

## Committee on Cellular and Molecular Physiology

## Chair

- Eric Beyer


## Professors

- Eric Beyer, Pediatrics
- Francisco Bezanilla, Pediatrics
- Eugene Chang, Medicine
- Aaron Fox, Neurobiology, Pharmacology and Physiology
- Benjamin Glick, Molecular Genetics and Cell Biology
- Steve Goldstein, Pediatrics
- Christopher Gomez, Neurology
- William Green, Neurobiology
- Dorothy A. Hanck, Medicine
- Ratnesh Lal, Medicine
- Alan Leff, Medicine
- Karl Matlin, Surgery
- Jeffrey Matthews, Surgery
- Elizabeth McNally, Medicine
- Deborah J. Nelson, Neurobiology, Pharmacology and Physiology
- H. Clive Palfrey, Neurobiology, Pharmacology and Physiology
- Eduardo Perozo, Pediatrics
- Louis H. Philipson, Medicine
- Nanduri Prabhakar, Medicine
- Marsha Rosner, Ben May Dept of Cancer Research
- Eric A. Schwartz, Neurobiology, Pharmacology and Physiology
- Julian Solway, Medicine
- Wei Jen Tang, Ben May Dept of Cancer Research
- F. Gary Toback, Medicine
- Jerrold Turner, Pathology
- Mitchel Villereal, Neurobiology, Pharmacology and Physiology

Associate Professors

- James Brorson, Neurology
- Mahesh Gupta, Surgery
- Akira Imamoto, Ben May Dept of Cancer Research
- Stephen Kron, Molecular Genetics and Cell Biology
- Philip E. Lloyd, Neurobiology, Pharmacology and Physiology
- Jeremy Marks, Pediatrics
- James Mastrianni, Neurology
- Daniel McGehee, Anesthesia and Critical Care
- Gopal Thinakaran, Neurobiology
- Aaron Turkewitz, Molecular Genetics and Cell Biology

Assistant Professors

- Konstantin G. Birukov, Medicine
- Matthew Brady, Medicine
- Nikolai Dulin, Medicine
- Kathleen Goss, Surgery
- James Holaska, Medicine
- Richard Baker Jones, Ben May Dept for Cancer Research
- Piers Nash, Ben May Dept of Cancer Research
- Jalees Rehman, Medicine
- Martin ter Beest, Surgery
- Mirjam Zegers, Surgery

Emeritus Faculty

- Harry A. Fozzard, Neurobiology, Pharmacology and Physiology

Today's cell physiologist is motivated by the need to understand how cells work in the context of organs and organisms. The intricate interactions within and between cells provide a fascinating framework and countless unanswered questions. Thanks to recent advances in technology and experimental approaches, we are identifying fundamental cellular processes that were only theorized just a few years ago. In today's research environment, quality training in cell physiology requires interdisciplinary approaches using state of the art techniques. The graduate training program in Cellular and Molecular Physiology at the University of Chicago provides a supportive research community that fosters cooperation while encouraging individual excellence and creativity. In short, this program is an ideal training environment for individuals interested in joining this exciting field. The program provides training and instruction for students over a wide range of topics, leading to the Ph.D. degree, which is granted through the Department of Neurobiology, Pharmacology and Physiology. Major research areas in which training can be received include electrophysiology of ionic channels in excitable and nonexcitable cells; membrane transport systems; signal transduction and second messenger systems; regulation of cell growth in normal and transformed cells; biophysics and biochemistry of muscle contraction; molecular biology of muscle proteins and ionic channels; and mechanisms of endocytosis and secretion.

A common focus of this committee is the interest in the integration of the specific phenomena in the behavior of the whole cell.

The program in Cellular and Molecular Physiology includes faculty with diverse research interests who are dedicated to graduate education. All students receive concentrated attention from faculty mentors, advisory committee members and course instructors. The research interests of the program faculty range from cell development and structure to signal transduction across the plasma membrane.

Cell physiology students are required to take 9 courses, selecting at least one course from each of the following categories: biochemistry, cell biology, molecular biology and physiology. In addition, students take two courses in genetics. Elective courses are offered in neurophysiology, membrane transport, ionic channels, control of cell growth, neuropharmacology, and psychopharmacology. In addition to this didactic course work, all first year students are required to attend a course in scientific ethics and integrity in research, usually offered in Spring Quarter. Before completion of the degree program, students in the Biological Sciences are required to be a teaching assistant in two courses without remuneration in order to gain experience in organizing and leading a class.

## LabORATORY ROTATIONS

Students are required to complete two lab rotations, which together will receive a total of one course credit. Additional rotations may be taken, but will not receive credit.

## PRELIMINARY EXAMS

Students will submit a written thesis proposal before the start of the third year. Successful students will be admitted to candidacy for the Ph.D.

## THESIS PROPOSAL

Submitted before the start of the third year.

## Frequency of Thesis Committee Meetings

Bi annual thesis committee meetings.
The Committee welcomes medical students interested in a Ph.D. There are two M.D./Ph.D. programs available to Pritzker School of Medicine students. Interested students are encouraged to apply for the Medical Scientist Training Program at the same time they file their application with the Pritzker School of Medicine. Interested MSTP students, would follow the medical school curriculum for two years and then enter the Cellular and Molecular Physiology research program for their dissertation research. After the completion of the Ph.D., the students return to medical school to complete the work required for the M.D. Another combined degree program is available after matriculation to medical school. Medical students are allowed elective research courses during the third quarter of the first year during which time many discover an interest in scientific research. Application to the Cellular and Molecular Physiology Program may be made during the second year of medical school. Once accepted to the program and after securing funding from the several
fellowship sources available to medical students within the University, the student takes a leave of absence for the length of time required to complete the Ph.D.
More information on the combined M.D./Ph.D. degree programs is available from the Dean of Students Office of the Biological Sciences Division.

## ADMISSION INFORMATION

Students initially are admitted to the Biological Sciences Division and must meet divisional requirements. The application consists of a statement of interest, three letters of recommendation; transcripts from all post secondary institutions attended; official notification of GRE general examination scores; and official notification of TOEFL if the applicant's native language is not English.

## Financial Aid

Fellowship support is provided by means of University and endowed fellowships, federal training grants, and programmatic support awarded to the individual laboratory. In most cases, this support includes a full stipend, the required student supplemental health insurance and health center fee, and full tuition which varies according to the number of quarters a student has been in registration. Notification of fellowship support is sent with the admissions packet. Highly qualified applicants are also encouraged to apply for fellowships from outside agencies such as the Howard Hughes Medical Institute and the National Science Foundation.

Funding is guaranteed to each student for the first four years and traditionally has been continued through the completion of the Ph.D. as long as satisfactory progress is certified. The student is responsible for reporting and paying applicable state and federal income taxes.

## Biochemistry and MOlecular Biology Courses

## Committee on Computational Neuroscience

Chair

- Nicholas Hatsopoulos

Professors

- Yali Amit, Statistics
- Jack Cowan, Mathematics
- John Ebersol, Neurology
- Jay Goldberg, Neurobiology, Pharmacology and Physiology
- John Goldsmith, Linguistics
- Steve Goldstein, Pediatrics
- Dorothy Hanck, Medicine
- Daniel Margoliash, Organismal Biology and Anatomy
- Martha McClintock, Psychology
- Robert McCrea, Neurobiology
- Partha Niyogi, Computer Science
- Howard Nusbaum, Psychology
- Richard Penn, Surgery
- Eduardo Perozo, Pediatrics
- S. Murray Sherman, Neurobiology
- Steven Shevell, Psychology
- Steven L. Small, Neurology
- V. Leo Towle, Neurology

Associate Professors

- Melina Hale, Organismal Biology and Anatomy
- Nicholas Hatsopoulos, Organismal Biology and Anatomy
- Leslie Kay, Psychology
- Terry Regier, Psychology
- Paul Vezina, Psychiatry


## Assistant Professors

- Sliman Bensmaia, Organismal Biology and Anatomy
- David Biron, Physics
- David Freedman, Neurobiology
- Jason MacLean, Neurobiology
- Wim van Drongelen, Pediatrics

Emeritus

- Joel Pokorny, Ophthalmology and Visual Science
- Philip S. Ulinski, Organismal Biology and Anatomy

The University of Chicago has a long tradition of innovative research in the neurosciences. K. C. Cole developed the voltage clamp here, Stephen Polyak and C. J. Herrick did pioneering work on the anatomy of the retina and brain, and Jack Cowan and Hugh Wilson were among the first to develop mathematical analyses of the dynamics of cortical neurons using non linear dynamics. This tradition is continued in the Committee on Computational Neuroscience, which draws on faculty from many departments in all four graduate divisions in the University to create a multidisciplinary program in neuroscience. Computational neuroscience is a relatively new area of inquiry that is concerned with how components of animal and human nervous systems interact to produce behaviors. Using quantitative and modeling methods, the interdisciplinary approach of computational neuroscience seeks to understand the function of the nervous system, natural behaviors and cognitive processes and to design human made devices that duplicate behaviors. Course work in computational neuroscience prepares students for research in neurobiology, psychology, or in the mathematical or engineering sciences. Graduates from this program move to traditional academic careers, to careers in biomedical research or engineering, or to opportunities in the corporate world.

## Graduate Degrees

Students with undergraduate degrees in biology or psychology, any of the quantitative sciences or any of the engineering disciplines are welcome to apply for graduate study. Computational neuroscience is inherently interdisciplinary, and most students doing graduate work in this area will have strengths in one of the relevant areas and weaknesses in others. Program requirements in the committee are designed to correct background deficiencies, so students with uneven backgrounds should not hesitate to apply. A year of college level calculus is an absolute prerequisite. Ideally, applicants should have some collegiate level course work in biology (optimally including an introductory neurobiology course), an introductory psychology course, and some mathematics (such as linear algebra and elementary differential equations) beyond calculus. Students who have not had prior exposure to linear algebra and differential equations may be asked to take appropriate courses in these areas before taking the mathematics sequence within the computational neuroscience curriculum.

## MASTER OF SCIENCE

Most students in the program are pursuing the Ph.D. However, students interested in obtaining an M.S. are considered on an individual basis. Interested students should contact the graduate program administrator at (773) 702-6371.

## DOCTOR OF PHILOSOPHY

Students seeking the Ph.D. in Computational Neuroscience must take the nine formal courses in the Computational Neuroscience curriculum, and enroll for nine quarters of research. The formal courses are typically taken in the first year and arranged into three themes. The neuroscience theme presents the basic concepts and phenomena in neuroscience. The mathematics theme presents the quantitative techniques required for a modern analysis of the nervous system and behavior. The courses in this theme have prior exposure to linear algebra and differential equations as a prerequisite. The computational neuroscience theme illustrates how quantitative methodologies are used to understand neurons and behavior. The courses in this theme have completion of a year of calculus as a prerequisite. Students must complete two laboratory rotations which can be started in the first year Students can also take graduate courses offered by the Departments of Computer Science, Linguistics, Mathematics, Psychology and Statistics, or from any of the graduate programs in the Division of the Biological Sciences. Please consult the listings elsewhere in these Announcements or on the University of Chicago web page for current lists of such courses. Courses in engineering applications of computational neuroscience are also available through a limited reciprocal course arrangement with the Department of Biomedical Engineering at the Illinois Institute of Technology Students must pass a preliminary examination with both written and oral components at the end of their second year. In addition to satisfying course requirements, students must write and defend a dissertation based on original and publishable research. Students are expected to participate in the ongoing Computational Neuroscience seminar series, as well as occasional workshops, that are conducted during their stay in the program.

## M.D./PH.D. PROGRAM

Students interested in earning both an M.D. and a Ph.D. in Computational Neuroscience at the University of Chicago can follow one of two routes. The first is to apply to the Medical Science Training Program (MSTP) within the Pritzker School of Medicine. The MSTP training grant provides support for both the M.D. and Ph.D. components of the training. Second, a student in the Pritzker School of Medicine may take a leave of absence from the School of Medicine after the first two, preclinical years of medical training and apply to the Ph.D. program in the normal fashion. The student would then return to finish the two clinical years of medical studies after completing the Ph.D. Several of the preclinical medical school courses may be used as electives in the Computational Neuroscience Ph.D. program. Students with an undergraduate degree in one of the engineering disciplines can earn an M.D. through the Pritzker School of Medicine and a Ph.D. in Biomedical Engineering through the Department of Biomedical Engineering at the Illinois Institute of Technology (which is located approximately three miles north of the

University of Chicago Campus). They are able to emphasize neural engineering in the Biomedical Engineering Ph.D. program and take courses in the Committee on Computational Neuroscience.

## ADmission to Graduate Programs

Admission to the Committee on Computational Neuroscience is coordinated through the Neuroscience Cluster within the Division of the Biological Sciences. The most recent admissions policies, including an on line application, can be viewed at http://gradprograms.bsd.uchicago.edu/. Students preparing an application must submit transcripts of their undergraduate and prior graduate work, recent test scores from the general Graduate Record Exam, and three letters of recommendation under separate cover. Foreign applicants from non English speaking nations must also submit TOEFL scores with their application materials. Applications are due by December 28 for students beginning their studies in the following autumn quarter.

## Financial Aid

Students enrolled in the Ph.D. program receive financial support in the form of a stipend and tuition payments as long as they remain in good standing. Students are encouraged to apply for individual fellowships from the National Science Foundation or other sources.

## Research Opportunities

Unparalleled research opportunities and facilities are available through the facilities and faculty on the University of Chicago campus, at the Argonne National Laboratory, the Illinois Institute of Technology campus and corporate partners. Research interests of faculty in the Committee on Computational Neuroscience can be accessed through the committee web page at http://neuroscience.uchicago.edu/? $p=$ neuro/cns. Ongoing research topics range from work at the molecular level to studies in cognitive neuroscience. These projects involve modern methods of recording and imaging the activities of individual neurons, populations of neurons and human brain regions. Quantitative approaches currently utilized by faculty and students include those derived from non-linear dynamics, large scale simulations of neural activity, time series analysis, and pattern recognition. Research projects address basic problems in neuroscience using approaches that range from molecular neurobiology to cognitive neuroscience, biomedical applications such as the construction of neural prostheses and the control of epilepsy, and technological applications to computational vision and language.

## Committee on DEVELOPMENTAL BIOLOGY

Chair

- Edwin L. Ferguson, Molecular Genetics \& Cell Biology

Professors

- John Cunningham, Pediatrics
- Glyn Dawson, Pediatrics
- Wei Du, Ben May Institute for Cancer Research
- Richard Fehon, Molecular Genetics \& Cell Biology
- Edwin L. Ferguson, Molecular Genetics \& Cell Biology
- Michael Glotzer, Molecular Genetics and Cell Biology
- Elizabeth Grove, Neurobiology
- Robert Haselkorn, Molecular Genetics \& Cell Biology
- Robert K. Ho, Organismal Biology \& Anatomy
- Bruce Lahn, Human Genetics
- Elizabeth McNally, Medicine
- Victoria E. Prince, Organismal Biology \& Anatomy
- Ilaria Rebay, Ben May Institute for Cancer Research
- Marsha Rosner, Ben May Institute for Cancer Research
- Nancy B. Schwartz, Pediatrics
- Neil H. Shubin, Organismal Biology \& Anatomy
- Kevin White, Human Genetics

Associate Professors

- Yoav Gilad, Human Genetics
- William Green, Neurobiology
- Akira Imamoto, Ben May Institute for Cancer Research
- Barbara Kee, Pathology
- David Kovar, Molecular Genetics \& Cell Biology
- Kay MacLeod, Ben May Institute for Cancer Research
- Jocelyn Malamy, Molecular Genetics \& Cell Biology
- Clifton Ragsdale, Neurobiology
- Ilya Ruvinsky, Ecology \& Evolution
- Urs Schmidt Ott, Organismal Biology \& Anatomy
- Kamal Sharma, Neurobiology
- Eric C. Svensson, Medicine


## Assistant Professors

- Jill de Jong, Pediatrics
- James Holaska, Medicine
- Sally Horne-Badovinac, Molecular Genetics and Cell Biology
- Ivan Moskowitz, Pediatrics
- Ed Munro, Molecular Genetics \& Cell Biology
- Xiaoyang Wu, Ben May Institute for Cancer Research

Emeritus Faculty

- Martin Gross, Pathology
- Anthony Mahowald, Molecular Genetics \& Cell Biology
- Manfred D.E. Ruddat, Ecology \& Evolution


## Program of Study

## First Year

The first year of graduate study is spent in coursework, independent reading, and exploratory research. The number of courses constituting a full schedule for each quarter of the first year will vary, but typically includes three lecture courses or two lecture courses and a research rotation. Students are required to undertake laboratory rotations in at least two different laboratories before beginning their dissertation research. Three rotations are encouraged. These rotations can be performed during the first academic year or during the Summer Quarter.
Seminars given by invited speakers are regularly offered and students are strongly urged to attend. A separate series of meetings is presented in the fall and winter quarters by faculty to introduce students to their research. Before beginning their second year, students complete Part I of the candidacy examinations, which consists of an oral examination covering the core courses in developmental, cell, and molecular biology, and genetics.

## Second year

While coursework can continue during the second year, students spend much of their time developing a research project. Students have generally chosen research advisors at the beginning of the second year. By the end of the Winter Quarter of the second year, each student's doctoral committee is named. The student then prepares a written proposal for dissertation research and defends this proposal before the doctoral committee. This defense constitutes Part II of the candidacy examination. This examination must be completed by the end of the Spring Quarter of the second academic year.

## Advanced years

After the qualifying exam, the student works full time on thesis research, although the faculty urges students to continue to take advantage of the advanced courses
and seminars that are offered. Finally, each graduating student writes a dissertation describing his or her research, presents the work in a public seminar, and defends it before their doctoral committee.

## Evaluation

Throughout their term as graduate students, students are expected to have frequent informal conversations with professors in their courses, their research advisor, and members of their doctoral committees. In this way, students can obtain frequent appraisals of their progress and constructive advice.

Formal evaluation of each student's progress continues every academic year. In the first and second years, the evaluation is based on the student's performance in courses, laboratory rotations and the qualifying examination. In later years, the research advisor and doctoral committee oversee the student's dissertation research progress; a report is submitted after the yearly meeting that becomes part of the student's permanent file and is reviewed by the Curriculum Committee. If the committee is apprised of any deficiencies in performance, the student will receive a letter describing those deficiencies and making suggestions about how to remedy them.

## Admissions

For information about applying to our graduate program, please visit our website at http://molbio.bsd.uchicago.edu/index.php.

## Requirements for the Ph.D. Degree

A Ph.D. candidate must fulfill certain formal course work requirements, pass the qualifying examination, and present a satisfactory dissertation describing the results of original research.

The committee expects a knowledge of and proficiency in contemporary developmental biology as well as auxiliary fields of molecular biology, cell biology, and genetics. This requirement will normally be met by fulfilling the formal course work listed below. However, courses taken at other institutions, in other departments, or as part of the medical school curriculum may substitute for required committee courses with the approval of the curriculum committee.

## Formal Course Work

The Division of the Biological Sciences requirement of nine graded course units may be met by registering for a combination of formal courses and research credits. During the first year of graduate work students ordinarily complete one course in molecular biology, one in cell biology, one in genetics, and three courses in developmental biology.

## Developmental Biology Courses

DVBI 35400. Advanced Developmental Biology. 100 Units. Edit Course Data default
This course provides both an overview of developmental biology and an in-depth coverage of selected topics, emphasizing the origins of classical concepts in the field as well as modern molecular and genetic approaches to the study of developmental processes. Subjects include cell fate determination, growth control, stem cells, signal transduction, neurogenesis, and cell polarity in developing systems. Underlying mechanisms are illuminated through discussion of key experiments. Discussion sections cover selected papers from the developmental biology literature, with emphasis on critical evaluation of experimental evidence.
Instructor(s): "E. Ferguson, R. Fehon" Terms Offered: Winter
Prerequisite(s): "BIOS 20182, 20192, or 20235"
Equivalent Course(s): BIOS 21227,GENE 35400,MGCB 35400
DVBI 35600. Vertebrate Developmental Biology. 100 Units. Edit Course Data default
This advanced-level course combines lectures, student presentations, and discussion sessions. It covers major topics on the developmental biology of embryos (e.g. formation of the germ line, gastrulation, segmentation, nervous system development, limb pattering, organogenesis). We make extensive use of the primary literature and emphasize experimental approaches (e.g. classical embryology, genetics, molecular genetics).
Instructor(s): V. Prince, K. Sharma Terms Offered: Spring
Prerequisite(s): BIOS 20180s or 20190, or AP 5 sequence
Equivalent Course(s): BIOS 21356,MGCB 35600
DVBI 36100. Plant Development and Molecular Genetics. 100 Units. Edit Course Data - default
This course examines the growth, differentiation, and development of plants at the molecular, cellular, and whole plant levels. Emphasis is placed on the signal transduction mechanisms that regulate the developmental and adaptive processes in plants. Students are especially encouraged to develop critical thinking and collaborative skills.
Instructor(s): J. Greenberg Terms Offered: Spring
Prerequisite(s): Completion of the general education requirement in the biological sciences
Equivalent Course(s): BIOS 23299,ECEV 32900,MGCB 36100

DVBI 36400. Developmental Mechanisms. 100 Units. Edit Course Data - default This course provides both an overview of developmental biology and an in-depth coverage of selected topics, emphasizing the origins of classical concepts in the field as well as modern molecular and genetic approaches to the study of developmental processes. Subjects include cell fate determination, growth control, stem cells, signal transduction, neurogenesis, and cell polarity in developing systems. Underlying mechanisms are illuminated through discussion of key experiments. Discussion sections cover selected papers from the development biology literature, with emphasis on critical evaluation of experimental evidence.
Instructor(s): E. Ferguson, R. Fehon Terms Offered: Winter
Prerequisite(s): BIOS 20182, 20192, 20187, or 20235
Equivalent Course(s): BIOS 21237,MGCB 36400

## Department of Ecology AND EVOLUTION

## Chair

- Joy Bergelson


## Professors

- Joy Bergelson
- Jerry Coyne
- Richard R. Hudson
- Martin Kreitman
- Wen-Hsiung Li
- Manyuan Long
- Trevor D. Price
- Molly Przeworski
- John Reinitz
- Kevin White
- J. Timothy Wootton
- Chung-I Wu


## Associate Professors

- Justin Borevitz
- Gregory Dwyer
- Stephen Pruett-Jones
- Catherine Pfister

Assistant Professors

- Stefano Allesina
- Jack Gilbert
- Ilya Ruvinsky

> Emeritus Faculty

- Thomas Nagylaki
- Manfred D.E. Ruddat
- Janice B. Spofford


## Research Associate

- Michael Z. Ludwig

The Department of Ecology and Evolution provides training for research and teaching in the ecology, evolution and behavior of whole organisms, at the levels
of the organism, the population, and the ecosystem. The research interests of our faculty include molecular evolution, population genetics, quantitative genetics, animal behavior, plant and animal ecology, evolutionary theory, systematics, paleontology, and related subjects. Individual levels of study range from molecules to communities. A common theme is the conduct of studies in a rigorous ecological and conceptual context, and the faculty share an interest in the architecture of populations, species and communities.

The department stresses scientific breadth and the interrelations between various specialized fields. Students are encouraged to approach basic biological problems with the most appropriate techniques: biophysical, biochemical, mathematical, physiological, or organismal. Departmental laboratories are equipped for a wide variety of contemporary research methods. Courses in other departments may be taken for credit in ecology and evolution for example, in the Departments of Organismal Biology and Anatomy, Biochemistry and Molecular Biology, Molecular Genetics and Cell Biology, Statistics, Geophysical Sciences, Anthropology, and Chemistry. Many students in the Department of Ecology and Evolution participate in interdepartmental programs in genetics, cell biology, developmental biology, population biology, theoretical biology, and evolutionary biology, and in these programs dissertation research may be co-sponsored by faculty from different departments. Collaboration is also maintained with the Field Museum and the Shedd Aquarium for students interested in research in systematics, taxonomy, and evolutionary biology, and with the Brookfield Zoo for basic research in conservation and behavior involving zoo animals. Possibilities also exist for field studies in Central America, Africa, and other regions of the earth.

## Program of Study

Most students in the Department of Ecology and Evolution complete their Ph.D. program in about five years, though students entering with master's degrees may finish in slightly less time. A student advisory committee advises all incoming and second year students on academic and research concerns. The first and second years consist largely of course work and individual reading courses, aiming toward successful completion of an oral general knowledge examination by the spring quarter of the first year, supervised by the student advisory committee. The student and faculty advisor in consultation with the Department chair, then choose a five member faculty doctoral committee, scheduling a defense of the dissertation research proposal by the end of the second year of study. Work in subsequent years shifts to dissertation centered research and, finally, preparation and defense of the Ph.D. dissertation. All students are required to register to be a supervised teaching assistant in two approved courses during their tenure in the doctoral program. While there is no master's program in the department, students may elect to receive the S.M. degree upon successful completion of their dissertation proposal defense.

## Entrance Requirements

Entering students are expected to have received a broad undergraduate training in biology, and a good background in related quantitative subjects, such as chemistry, statistics and calculus. Students who are admitted without having fully satisfied these requirements will be required to remedy their deficiencies by taking appropriate courses during their first two years in the graduate program.

## General Knowledge Examination

Each first year student will be expected to pass an oral general knowledge examination during the first year of study, generally no later than the 10th week of the spring quarter. This examination session shall be attended by all three members of an examination committee appointed by the student advisory committee. The goal of the examination will be to assess each student's general knowledge of key concepts, processes and issues in ecology and evolutionary biology, as covered in the courses recommended to the student by the student advisory committee during the student's first year in the program.

## Dissertation Proposal Defense

This examination consists of the submission of a written Ph.D. research proposal and an oral presentation of the proposal in a public or closed/private seminar format, followed by a closed discussion and examination on the proposal presentation with the faculty committee chosen by the student and the chair of the department. Students are expected to schedule the dissertation proposal defense before the end of their second year.

## DOCTOR OF PHILOSOPHY

Upon successful completion of the dissertation proposal defense and admission into candidacy for the Ph.D., students work closely with the faculty advisor and dissertation committee on the dissertation project. During the period of two to three years in which students do primary original research, they also participate in seminars, discussion groups, and professional meetings and conferences, leading to the completion of the written Ph.D. dissertation. The Ph.D. in Ecology and Evolution is awarded based upon:

- Submission of a written dissertation based on original research, which must be approved by the faculty adviser and dissertation committee.
- Presentation of a public seminar based on the dissertation research.
- Following the public seminar, successful performance during an oral examination by the dissertation committee and other relevant faculty.
- Acceptance of the approved written dissertation by the University Office of Academic Publications in compliance with that office's regulations.


## Application

We strongly advise students considering application to the department to begin preparation of their application early in the autumn quarter, so that all materials will arrive by the December 1 deadline. The department requires GRE General Test scores from all applicants, and strongly recommends submission of GRE subject test scores in biology. Foreign applicants whose first language is not English also must submit TOEFL test scores with their application materials.

Further information also may be obtained from the department's home page at http://pondside.uchicago.edu/ecol-evol/

## ECOlOGY AND EvOlution Courses

ECEV 32900. Plant Development and Molecular Genetics. 100 Units. Edit Course
Data - default
This course examines the growth, differentiation, and development of plants at the molecular, cellular, and whole plant levels. Emphasis is placed on the signal transduction mechanisms that regulate the developmental and adaptive processes in plants. Students are especially encouraged to develop critical thinking and collaborative skills.
Instructor(s): J. Greenberg Terms Offered: Spring
Prerequisite(s): Completion of the general education requirement in the biological sciences
Equivalent Course(s): BIOS 23299,DVBI 36100,MGCB 36100
ECEV 35400. Gene Regulation. 100 Units. Edit Course Data - default
This course covers the fundamental theory of gene expression in prokaryotes and eukaryotes through lectures and readings in the primary literature. Natural and synthetic genetic systems arising in the context of E. coli physiology and Drosophila development will be used to illustrate fundamental biological problems together with the computational and theoretical tools required for their solution. These tools include large scale optimization, image processing, ordinary and partial differential equations, the chemical Langevin and Fokker-Planck equations, and the chemical master equation. A central theme of the class is the art of identifying biological problems which require theoretical analysis and choosing the correct mathematical framework with which to solve the problem.
Terms Offered: Winter
Prerequisite(s): Consent of instructor
Equivalent Course(s): STAT 35400,MGCB 35401
ECEV 35600. Principles of Population Genetics-1. 100 Units. Edit Course Data default
For course description contact Biological Sciences.
Equivalent Course(s): EVOL 35600,GENE 35600

ECEV 44001. Molecular Evolution I: Fundamentals and Principles. 100 Units. Edit Course Data - default
The comparative analysis of DNA sequence variation has become an important tool in molecular biology, genetics, and evolutionary biology. This course covers major theories that form the foundation for understanding evolutionary forces that govern molecular variation, divergence, and genome organization. Particular attention is given to selectively neutral models of variation and evolution, and to alternative models of natural selection. The course provides practical information on accessing genome databases, searching for homologous sequences, aligning DNA and protein sequences, calculating sequence divergence, producing sequence phylogenies, and estimating evolutionary parameters.
Instructor(s): M. Kreitman L. Terms Offered: Winter
Prerequisite(s): Two quarters of biology and calculus, or consent of instructor Equivalent Course(s): BIOS 23258,EVOL 44001

ECEV 44002. Molecular Evolution II: Genes and Genomes. 100 Units. Edit Course Data - default
This course covers the knowledge and well-established evolutionary analyses of genes and genomes, as well as related areas (e.g., origination and evolution of new genes, exon-intron structure, sex-related genes, sex-determination genetic systems, transposable elements, gene regulation systems, duplication of genes and genomes, evolution of genome sizes). These topics are discussed under the processes driven by various evolutionary forces and genetic mechanisms. The analysis of these problems is conducted with the genomic context. Lectures, discussions, and experiments are combined.
Instructor(s): M. Long Terms Offered: Spring. This course is offered in alternate (odd) years.
Prerequisite(s): BIOS 23258 or consent of instructor
Equivalent Course(s): BIOS 23259,EVOL 44002

## Committee on Evolutionary Biology

Chair

- Michael Coates

Faculty

- Kenneth Angielczyk, Field Museum
- John Bates, Field Museum
- Joy Bergelson, Ecology and Evolution
- Rüdiger Bieler, Field Museum
- C. Kevin Boyce, Geophysical Sciences
- Michael Coates, Organismal Biology and Anatomy
- Jerry Coyne, Ecology and Evolution
- Martin Feder, Organismal Biology and Anatomy
- Michael J. Foote, Geophysical Sciences
- Lance Grande, Field Museum
- Shannon Hackett, Field Museum
- Lawrence Heaney, Field Museum
- Patrick Herendeen, Chicago Botanic Garden
- Andrew Hipp, Morton Arboretum/Herbarium
- Robert Ho, Organismal Biology and Anatomy
- Richard R. Hudson, Ecology and Evolution
- David Jablonski, Geophysical Sciences
- Susan M. Kidwell, Geophysical Sciences
- Michael LaBarbera, Organismal Biology and Anatomy
- Robert Lacy, Brookfield Zoo
- Bruce Lahn, Human Genetics
- Wen Hsiung Li, Ecology and Evolution
- Scott Lidgard, Field Museum
- Manyuan Long, Ecology and Evolution
- Thorston Lumbsch, Field Museum
- Dario Maestripieri, Comparative Human Development
- Peter Makovicky, Field Museum
- Robert D. Martin, Field Museum
- Jill Mateo, Comparative Human Development
- Martha McClintock, Comparative Human Development
- R. Michael Miller, Argonne National Laboratory
- Corrie Noreau, Field Museum
- Gregory M. Mueller, Chicago Botanic Garden
- Salikoko Mufwene, Linguistics
- Bruce Patterson, Field Museum
- Catherine Pfister, Ecology and Evolution
- Trevor Price, Ecology and Evolution
- Victoria Prince, Organismal Biology and Anatomy
- Jonathan Pritchard, Human Genetics
- Stephen Pruett-Jones, Ecology and Evolution
- Richard Ree, Field Museum
- Olivier Rieppel, Field Museum
- Callum Ross, Organismal Biology and Anatomy
- Ilya Ruvinsky, Ecology and Evolution
- Urs Schmidt-Ott, Organismal Biology and Anatomy
- Paul Sereno, Organismal Biology and Anatomy
- Neil Shubin, Organismal Biology and Anatomy
- Petra Sierwald, Field Museum
- Wm. Leo Smith, Field Museum
- Douglas Stotz, Field Museum
- Russell Tuttle, Anthropology
- Janet Voight, Field Museum
- Jason Watters, Brookfield Zoo
- Mark Webster, Geophysical Sciences
- Mark Westneat, Field Museum
- John Timothy Wootton, Ecology and Evolution
- Chung I Wu, Ecology and Evolution

Emeritus Faculty

- Stuart Altmann, Ecology and Evolution
- John Bolt, Field Museum
- James Hopson, Organismal Biology and Anatomy
- R. Eric Lombard, Organismal Biology and Anatomy
- Thomas Nagylaki, Ecology and Evolution
- Janice B. Spofford, Ecology and Evolution
- William Turnbull, Field Museum
- Leigh Van Valen, Ecology and Evolution
- Harold Voris, Field Museum
- William Wimsatt, Philosophy

The Committee on Evolutionary Biology provides students with the opportunity for interdisciplinary study of all aspects of evolutionary biology. The committee consists of faculty members with primary appointments in departments in all four graduate divisions within the University and of associated faculty from institutions in the Chicago area, such as Argonne National Laboratory, the Brookfield Zoo, Lincoln Park Zoo, Chicago Botanic Garden, Morton Arboretum, and the Field Museum. The diversity of research interests represented by the collective expertise of the committee faculty contributes to its strong national and international reputation as a graduate training program.

Students in the committee have ready access to facilities at the associated institutions, including the more than 2,000 animals representing over 400 species at Brookfield Zoo, more than 17 million specimens in the Field Museum collections in botany, zoology, and paleontology, and libraries at the Field Museum and Brookfield Zoo. Various facilities for the study of molecular evolution and phylogenetic analysis are available to committee students, as are several student computer centers, an on campus greenhouse, and digital equipment for off site research.

In the Chicago area, committee students have access to the rich resources available at the Chicago Botanic Garden, the Shedd Aquarium, the Morton Arboretum, and the many parks and lands managed by the local county forest preserve and park districts.

The University of Chicago is a member of the Organization of Tropical Studies. Doctoral students in the committee have taken courses in tropical ecology and conducted research in Costa Rica through this affiliation. Recent evolutionary biology students have also conducted domestic research at a variety of field sites, including the Southwest Research Station of the American Museum of Natural History, Kellogg Biological Station, Friday Harbor Marine Laboratory, Rocky Mountain Biological Station, and the Indiana Dunes National Park. International research is conducted on every continent.

## Program of Study

Most students in the Committee on Evolutionary Biology complete their Ph.D. program in about five years, though students entering with masters degrees may finish in slightly less time.

The first and second years consist largely of course work and individual reading and research courses, aiming toward successful completion of the preliminary examination and defense of a dissertation research proposal by the end of the second year of study.

## FIRST YEAR

Entering students are expected to have received a broad undergraduate training in biology and a good background in related quantitative subjects, such as chemistry,
statistics and calculus. Students who are admitted with gaps in these areas may be required to remedy their deficiencies by taking appropriate courses during their first two years in the graduate program. The committee maintains a student advisory committee, which meets three times a year with each of the first and second year students to advise them on courses available, arbitrate on which courses meet the committee's course distribution requirements, and otherwise help students keep on track towards Ph.D. candidacy.

## SECOND YEAR

Second year students continue to meet with the student advisory committee until they pass their preliminary examination/dissertation proposal hearing. The first part of the second year may be taken up mostly with course work, supplemented more heavily by reading and research courses.

## READING AND RESEARCH REQUIREMENTS

Committee on Evolutionary Biology courses have been divided into six broad areas. Students must take a course in five of the six areas to be recommended for PhD Candidacy. The primary aim is that the student acquires considerable breadth in evolutionary biology; this breadth and the interdisciplinary research it permits should be the distinguishing feature of students working in the committee. In the first two year of study students generally enroll in three courses per quarter. This can be a combination of lecture, seminar, and reading formats.

## Division of The Biological Sciences teaching assistant REQUIREMENT PROGRAM

During their tenure in the doctoral program, students are required to register for two evaluated teaching assistants in two approved courses.

## PRELIMINARY EXAMINATION/DISSERTATION PROPOSAL HEARING

The student must make an oral defense of his or her dissertation proposal, followed by an oral examination by a faculty committee on general issues in evolutionary biology. Students are expected to pass the preliminary examination by the spring quarter of their second year in the committee.
Prior to the preliminary examination, all students admitted to the Committee on Evolutionary Biology shall select an advisor, who will normally become the chair of the student's preliminary examination committee. The committee for the preliminary examination will be formed by the student and her/his advisor, subject to approval by the CEB Chair, when the student notifies the CEB chair in writing of her/his plans to take the examination.

## PH.D. DISSERTATION

Upon successful completion of the preliminary examination and admission into candidacy for the Ph.D., students work on their dissertation projects in close consultation with the faculty advisor and dissertation committee. During a period of two to three years the student does primary original research, participates in
seminars, discussion groups, and professional meetings and conferences, and completes the written Ph.D. dissertation.
The Ph.D. in evolutionary biology is awarded based upon the candidate's having:

- Submitted a written dissertation reporting results of the student's original research in a form suitable for publication, which must be approved by the faculty advisor and dissertation committee.
- Successfully completed a final oral examination covering the student's field of specialization.
- Final approved of the dissertation by the CEB Chair.


## ADMISSION

The committee trains doctoral students for research and teaching, and other careers in evolutionary biology. The S.M. degree may be awarded in special cases, usually associated with graduate students in the Committee on the Conceptual and Historical Studies of Science. Although graduate studies in evolutionary biology can be carried out in several different departments at the University, students whose research and career interests are interdisciplinary generally apply to the Committee on Evolutionary Biology for admission.

We strongly advise students considering application to the committee to begin preparation of their application early in the autumn quarter, so that all materials will arrive by the December $1^{\text {st }}$ deadline. The committee requires GRE General Test scores from all applicants, and recommends submission of GRE subject test scores in biology. Foreign applicants whose first language is not English also must submit TOEFL test scores with their application materials.

Further information also may be obtained from the department's home at http:// evbio.uchicago.edu, or by sending an email to darwin@uchicago.edu.

## Evolutionary Biology Courses

EVOL 30250. Chordates: Evolution and Comparative Anatomy. 100 Units. Edit Course Data - default
Chordate biology emphasizes the diversity and evolution of modern vertebrate life, drawing on a range of sources (from comparative anatomy and embryology to paleontology, biomechanics, and developmental genetics). Much of the work is lab-based, with ample opportunity to gain firsthand experience of the repeated themes of vertebrate body plans, as well as some of the extraordinary specializations manifest in living forms. The instructors, who are both actively engaged in vertebrate-centered research, take this course beyond the boundaries of standard textbook content.
Instructor(s): M. Coates Terms Offered: Spring
Prerequisite(s): Biological Sciences Fundamentals sequence. Recommended for AP5 students.
Equivalent Course(s): BIOS 22250,ORGB 33750

EVOL 32300. Principles of Paleontology. 100 Units. Edit Course Data - default
The focus of this course is on the nature of the fossil record, the information it provides on patterns and processes of evolution through geologic time, and how it can be used to solve geological and biological problems. Lectures cover the principles of paleontology (e.g., fossilization, classification, morphologic analysis and interpretation, biostratigraphy, paleoecology, macroevolution); labs are systematic, introducing major groups of fossil invertebrates. (L) Instructor(s): M. Foote Terms Offered: Spring Prerequisite(s): GEOS 13100-13200, or completion of the general education requirement in the biological sciences, or consent of instructor.
Equivalent Course(s): GEOS 26400,BIOS 23255,GEOS 36400

## EVOL 32400. Invertebrate Paleobiology and Evolution. 100 Units. Edit Course

 Data - defaultThis course provides a detailed overview of the morphology, paleobiology, evolutionary history, and practical uses of the invertebrate and microfossil groups commonly found in the fossil record. Emphasis is placed on understanding key anatomical and ecological innovations within each group and interactions among groups responsible for producing the observed changes in diversity, dominance, and ecological community structure through evolutionary time. Labs supplement lecture material with specimen-based and practical application sections. An optional field trip offers experience in the collection of specimens and raw paleontological data. Several "Hot Topics" lectures introduce important, exciting, and often controversial aspects of current paleontological research linked to particular invertebrate groups. Instructor(s): M. Webster L. Terms Offered: Autumn
Prerequisite(s): GEOS 13100 and 13200, or equivalent. Students majoring in biological sciences only; Completion of the general education requirement in the biological sciences, or consent of instructor.
Equivalent Course(s): GEOS 26300,BIOS 23261,GEOS 36300
EVOL 33700. Evolutionary Developmental Biology. 100 Units. Edit Course Data default
The purpose of this course is to provide a developmental genetic perspective on evolutionary questions that have emerged in various disciplines (e.g., developmental biology, paleontology, phylogenetic systematics). Topics range from the evolution of gene regulation to the origin of novelties (e.g., eyes, wings). Although these subjects are introduced in lectures, the focus of this course is on reading, presenting, and discussing original research papers.
Instructor(s): U. Schmidt-Ott
Prerequisite(s): Biological Sciences Fundamentals sequence. Recommended for AP5 students.
Equivalent Course(s): BIOS 22256,ORGB 33750

EVOL 34100. Introduction to Invertebrate Biology. 100 Units. Edit Course Data default
This is a survey of the diversity, structure, and evolution of the invertebrate phyla, with emphasis on the major living and fossil invertebrate groups. Structure-function relationships and the influence of body plans on the evolutionary history of the invertebrate phyla are stressed.
Instructor(s): M. LaBarbera. L. Terms Offered: Autumn 2014
Prerequisite(s): Completion of the general education requirement in the biological sciences or consent of instructor
Equivalent Course(s): BIOS 22244
EVOL 34200. Biological Fluid Mechanics. 100 Units. Edit Course Data - default Prior physics course required; prior chemistry and calculus courses recommended. This course introduces fluid mechanics and the interactions between biology and the physics of fluid flow (both air and water). Topics range from the fluid mechanics of blood flow to the physics (and biology) of flight in birds and insects.
Instructor(s): M. LaBarbera. L. Terms Offered: Winter
Prerequisite(s): Completion of the general education requirement for the biological sciences
Equivalent Course(s): BIOS 22242,ORGB 34200
EVOL 34300. Biomechanics of Organisms. 100 Units. Edit Course Data - default Prior chemistry, physics, and calculus courses recommended. This course examines how organisms cope with their physical environment, covering the properties of biological materials, mechanical analysis of morphology, and principles of design optimization. We emphasize support systems of organisms but also examine aspects of cardiovascular design. Mechanical properties of biomaterials are analyzed in relation to their underlying biochemical organization and biophysical properties, with mathematical treatment at an introductory level. The lab research project is optional.
Instructor(s): M. LaBarbera. L. Terms Offered: Winter 2013
Prerequisite(s): Completion of the general education requirement in the biological sciences
Equivalent Course(s): BIOS 22243,ORGB 34300

EVOL 35401. Reconstructing the Tree of Life: An Introduction to Phylogenetics. 100 Units. Edit Course Data - default
This course is an introduction to the tree of life (phylogeny): its conceptual origins, methods for discovering its structure, and its importance in evolutionary biology and other areas of science. Topics include history and concepts, sources of data, methods of phylogenetic analysis, and the use of phylogenies to study the tempo and mode of lineage diversification, coevolution, biogeography, conservation, molecular biology, development, and epidemiology. One Saturday field trip and weekly computer labs required in addition to scheduled class time. This course is offered in alternate (odd) years.
Instructor(s): C. Moreau, R. Ree. L. Terms Offered: Autumn
Prerequisite(s): Completion of the general education requirement in the biological sciences or consent of instructor
Equivalent Course(s): BIOS 23404
EVOL 37600. Research Seminar in Animal Behavior I. 100 Units. Edit Course Data - default

Instructor(s): J. Mateo Terms Offered: Autumn
Note(s): Students register for this course in Autumn Quarter and receive credit in Spring Quarter after successful completion of the year's work.
Equivalent Course(s): CHDV 37500
EVOL 37700. Research Seminar in Animal Behavior II. 100 Units. Edit Course Data - default

Instructor(s): J. Mateo Terms Offered: Winter
Equivalent Course(s): CHDV 37502
EVOL 37800. Research Seminar in Animal Behavior III. 100 Units. Edit Course
Data - default
Instructor(s): J. Mateo Terms Offered: Spring
Equivalent Course(s): CHDV 37503
EVOL 38100. Evolution of the Hominoidea. 100 Units. Edit Course Data - default This course is a detailed consideration of the fossil record and the phylogeny of Hominidae and collateral taxa of the Hominidea that is based upon studies of casts and comparative primate osteology.
Instructor(s): R. Tuttle Terms Offered: Not offered 2012-13; will be offered 2013-14
Prerequisite(s): Third- or fourth-year standing and consent of instructor
Equivalent Course(s): ANTH 28100,ANTH 38100,HIPS 24000
EVOL 38200. Comparative Primate Morphology. 200 Units. Edit Course Data default
This course covers functional morphology of locomotor, alimentary, and reproductive systems in primates. Dissections are performed on monkeys and apes. Instructor(s): R. Tuttle Terms Offered: Spring
Equivalent Course(s): ANTH 28300,ANTH 38200,HIPS 23500

EVOL 38400. Classical Readings in Anthropology: History and Theory of Human
Evolution. 100 Units. Edit Course Data - default
This course is a seminar on racial, sexual, and class bias in the classic theoretic writings, autobiographies, and biographies of Darwin, Huxley, Haeckel, Keith, Osborn, Jones, Gregory, Morton, Broom, Black, Dart, Weidenreich, Robinson, Leakey, LeGros-Clark, Schultz, Straus, Hooton, Washburn, Coon, Dobzhansky, Simpson, and Gould.
Instructor(s): R. Tuttle Terms Offered: Winter
Equivalent Course(s): ANTH 21102,ANTH 38400,HIPS 23600
EVOL 44001. Molecular Evolution I: Fundamentals and Principles. 100 Units. Edit Course Data - default
The comparative analysis of DNA sequence variation has become an important tool in molecular biology, genetics, and evolutionary biology. This course covers major theories that form the foundation for understanding evolutionary forces that govern molecular variation, divergence, and genome organization. Particular attention is given to selectively neutral models of variation and evolution, and to alternative models of natural selection. The course provides practical information on accessing genome databases, searching for homologous sequences, aligning DNA and protein sequences, calculating sequence divergence, producing sequence phylogenies, and estimating evolutionary parameters.
Instructor(s): M. Kreitman L. Terms Offered: Winter
Prerequisite(s): Two quarters of biology and calculus, or consent of instructor Equivalent Course(s): BIOS 23258,ECEV 44001

EVOL 44002. Molecular Evolution II: Genes and Genomes. 100 Units. Edit Course
Data - default
This course covers the knowledge and well-established evolutionary analyses of genes and genomes, as well as related areas (e.g., origination and evolution of new genes, exon-intron structure, sex-related genes, sex-determination genetic systems, transposable elements, gene regulation systems, duplication of genes and genomes, evolution of genome sizes). These topics are discussed under the processes driven by various evolutionary forces and genetic mechanisms. The analysis of these problems is conducted with the genomic context. Lectures, discussions, and experiments are combined.
Instructor(s): M. Long Terms Offered: Spring. This course is offered in alternate (odd) years.
Prerequisite(s): BIOS 23258 or consent of instructor
Equivalent Course(s): BIOS 23259,ECEV 44002

EVOL 45500. Biogeography. 100 Units. Edit Course Data - default
This course examines factors governing the distribution and abundance of animals and plants. Topics include patterns and processes in historical biogeography, island biogeography, geographical ecology, areography, and conservation biology (e.g., design and effectiveness of nature reserves).
Instructor(s): B. Patterson (odd years, lab). L., Heaney (even years, discussion) Terms Offered: Winter
Prerequisite(s): Completion of the general education requirement in the biological sciences and a course in either ecology, evolution, or earth history; or consent of instructor
Equivalent Course(s): BIOS 23406,ENST 25500,GEOG 25500,GEOG 35500

# COmmittee on Genetics, Genomics \& Systems Biology 

Chair

- Richard R. Hudson, Ecology \& Evolution


## Professors

- Graeme Bell, Biochemistry \& Molecular Biology
- Joy Bergelson, Ecology \& Evolution
- Douglas K. Bishop, Radiation \& Cellular Oncology
- Nancy Jean Cox, Human Genetics
- Jerry Coyne, Ecology \& Evolution
- Anna DiRienzo, Human Genetics
- M. Eileen Dolan, Medicine
- Wei Du, Ben May Department for Cancer Research
- Martin Feder, Organismal Biology \& Anatomy
- Richard Fehon, Molecular Genetics \& Cell Biology
- Edwin L. Ferguson, Molecular Genetics \& Cell Biology
- T. Conrad Gilliam, Human Genetics
- Benjamin Glick, Molecular Genetics \& Cell Biology
- Michael Glotzer, Molecular Genetics \& Cell Biology
- Jean Greenberg, Molecular Genetics \& Cell Biology
- Robert Haselkorn, Molecular Genetics \& Cell Biology
- Robert Ho, Organismal Biology \& Anatomy
- Richard R. Hudson, Ecology \& Evolution
- Martin Kreitman, Ecology \& Evolution
- Stephen J. Kron, Molecular Genetics \& Cell Biology
- Bruce T. Lahn, Human Genetics
- Michelle M. LeBeau, Medicine
- Wen Hsiung Li, Ecology \& Evolution
- Manyuan Long, Ecology \& Evolution
- Rima McLeod, Ophthalmology \& Visual Science
- Elizabeth M. McNally, Medicine
- Mary Sara McPeek, Statistics
- Carole Ober, Human Genetics
- Olufunmilayo Olopade, Medicine
- Brian J. Popko, Neurology
- Trevor Price, Ecology \& Evolution
- Victoria Prince, Organismal Biology \& Anatomy
- Jonathan Pritchard, Human Genetics
- Molly Przeworski, Human Genetics
- Ilaria Rebay, Ben May Department for Cancer Research
- Carrie Rinker-Schaeffer, Surgery
- Bernard Roizman, Molecular Genetics \& Cell Biology
- Marsha Rosner, Ben May Department for Cancer Research
- Lucia Rothman-Denes, Molecular Genetics \& Cell Biology
- Janet D. Rowley, Medicine
- Andrey Rzhetsky, Medicine
- Angelo Scanu, Medicine
- James A. Shapiro, Biochemistry \& Molecular Biology
- Ursula B. Storb, Molecular Genetics \& Cell Biology
- Kevin White, Human Genetics
- Chung-I Wu, Ecology \& Evolution

Associate Professors

- Yoav Gilad, Human Genetics
- Tong-Chuan He, Surgery
- Akira Imamoto, Ben May Department for Cancer Research
- Gayle K. Lamppa, Molecular Genetics \& Cell Biology
- Jocelyn Malamy, Molecular Genetics \& Cell Biology
- Laurens J. Mets, Molecular Genetics \& Cell Biology
- Kenan Onel, Pediatrics
- Urs Schmidt-Ott, Organismal Biology \& Anatomy
- Jonathan P. Staley, Molecular Genetics \& Cell Biology
- Aaron Turkewitz, Molecular Genetics \& Cell Biology

Assistant Professors

- David Biron, Department of Physics
- Yoav Gilad, Human Genetics
- Mohan Gupta, Molecular Genetics \& Cell Biology
- James Holaska, Medicine
- Sally Horne-Badovinac, Molecular Genetics \& Cell Biology
- Richard Jones, Ben May Department for Cancer Research
- David Kovar, Molecular Genetics \& Cell Biology
- Ivan Moskowitz, Department of Pediatrics
- Edwin Munro, Molecular Genetics \& Cell Biology
- Piers Nash, Ben May Department for Cancer Research
- Timothy Niewold, Medicine
- Marcelo Nobrega, Human Genetics
- Abraham Palmer, Human Genetics
- Ilya Ruvinsky, Ecology \& Evolution

Emeritus Faculty

- Rochelle Easton Esposito, Molecular Genetics \& Cell Biology
- Wolfgang Epstein, Molecular Genetics \& Cell Biology
- Anthony Mahowald, Molecular Genetics \& Cell Biology
- Mary Mahowald, Obstetrics \& Gynecology
- Alvin Markovitz, Biochemistry \& Molecular Biology
- Samuel Refetoff, Medicine
- Janice B. Spofford, Ecology \& Evolution
- Bernard Strauss, Molecular Genetics \& Cell Biology

The Committee on Genetics, Genomics \& Systems Biology (GGSB) is an interdisciplinary degree-granting program that brings together biologists from over a dozen academic departments. The program is aimed at training Ph.D. scholars for careers as independent scientists in basic and applied biomedical research and education. The Graduate Program in Genetics, Genomics, \& Systems Biology offers a program of basic study leading to Doctor of Philosophy in Genetics. The Ph.D. training program combines a foundation in modern genetic analysis with training in current methods for formulating and addressing biological questions in the context of complex systems. Such systems are studied in physiological, developmental and evolutionary contexts. The presence of both basic and clinical sciences in the Division of Biological Sciences enhances the Committee's broad based interdisciplinary approach to teaching and research. The Committee provides an exciting environment in which to pursue rigorous, high quality training with flexibility in designing programs to meet individual needs. The focus of GGSB is to train students to utilize sophisticated genetic analysis, genomics, modeling and systems level analysis of regulations networks in their own research program. Opportunities are available to study diverse areas of biology and genetics, including bioinformatics, developmental processes, gene structure and regulation, genetic recombination and mutation, chromosome mechanics, evolution, human disease, immunology, and other areas of modern genetics. Students receive broad training in these sub-disciplines, while specializing in one of them for their research career. The Committee's goal is to provide an intellectually stimulating, collegial and supportive environment for students to progress smoothly from research training to research independence.

Each student is expected to take five core courses in major areas of genetics, including Genetic Analysis of Model Organisms, Genetics Mechanisms, Genomics \& Systems Biology, and Molecular Biology I OR Fundamentals of Molecular Biology. In addition, a fifth requirement is chosen from the following courses: Fundamentals of Molecular Evolution, Principles of Population Genetics, Human Variation and Disease or Evolutionary Genomics. The remaining four courses are chosen as elective courses from a host of courses offered in the Biological Sciences Division, The Department of Statistics and The Department of Computer Science. All elective courses are to be approved by an academic advisor. The curriculum and research training are designed to take full advantage of the strength of genetics, genomics \& systems biology research at the University. The program sponsors a regular colloquium, an annual symposium on a chosen topic, a biweekly journal club, and a biweekly genetics of model organisms club. During the spring and summer of the first year laboratory rotations occur. At the beginning of the second year, students take an oral preliminary examination based on three written questions which are provided to the students two weeks prior to the exam. At the end of the second year, a written research proposal is submitted and defended at the qualifying examination. This is the final requirement for formal admission to candidacy for the Ph.D. degree.

## Application

For information about applying to our graduate program, please visit our website at http://molbio.bsd.uchicago.edu/index.php.

## Genetics Courses

GENE 31000. Fundamentals of Molecular Biology. 100 Units. Edit Course Data default
Third- or fourth-year standing. This course covers the structure of genetic material, replication, and transcription and its regulation. Other topics include post-
transcriptional regulation, chromatin and DNA repair (both after transcription), and protein synthesis.
Instructor(s): U. Storb, J. Staley Terms Offered: Winter
Prerequisite(s): Basic knowledge of genetics and biochemistry
Equivalent Course(s): BIOS 21208,BCMB 31000,MGCB 31000
GENE 34600. Introduction to Virology. 100 Units. Edit Course Data - default This class on animal viruses considers the major families of the viral kingdom with an emphasis on the molecular aspects of genome expression and virushost interactions. Our goal is to provide students with solid appreciation of basic knowledge, as well as instruction on the frontiers of virus research.
Instructor(s): T. Golovkina, B. Roizman Terms Offered: Spring
Prerequisite(s): Completion of the general education requirement in the biological sciences and third- or fourth-year standing
Equivalent Course(s): BIOS 25287,MICR 34600

GENE 35400. Advanced Developmental Biology. 100 Units. Edit Course Data default
This course provides both an overview of developmental biology and an in-depth coverage of selected topics, emphasizing the origins of classical concepts in the field as well as modern molecular and genetic approaches to the study of developmental processes. Subjects include cell fate determination, growth control, stem cells, signal transduction, neurogenesis, and cell polarity in developing systems. Underlying mechanisms are illuminated through discussion of key experiments. Discussion sections cover selected papers from the developmental biology literature, with emphasis on critical evaluation of experimental evidence.
Instructor(s): "E. Ferguson, R. Fehon" Terms Offered: Winter Prerequisite(s): "BIOS 20182, 20192, or 20235"
Equivalent Course(s): BIOS 21227,DVBI 35400,MGCB 35400

## Department of Health Studies

Chair

- Ronald A. Thisted


## Professors

- Habib Ahsan
- Robert D. Gibbons
- Benjamin B. Lahey
- Diane S. Lauderdale
- Willard G. Manning, Jr.
- Ronald A. Thisted


## Associate Professors

- Kathleen A. Cagney
- Brian Chiu
- James J. Dignam
- R. Tamara Konetzka


## Assistant Professors

- Hongyuan Cao
- Lin Chen
- Michael David
- Dezheng Huo
- Lianne Kurina
- Brandon Pierce
- John Schneider
- Fabrice Smieliauskas

Emeritus Faculty

- John Christian Bailar

The Department of Health Studies was approved by the University in 1993 and began operations in November of 1995. The mission of the department is to increase and communicate knowledge to enhance health, reduce illness, and improve outcomes of health care. Department members conduct research in biostatistics, epidemiology, and health services. These projects include interdisciplinary investigations such as medical outcomes studies, development and implementation of guidelines, analysis of clinical decision making, investigation of patient provider relationships, and development of health system models that effectively and efficiently address the health needs of a population.

## Program of Study

Currently, the Department of Health Studies offers a graduate program, the Master of Science in Health Studies for Clinical Professionals, and a Ph.D. program. Current information on graduate programs is available from the department's website at http://health.bsd.uchicago.edu/.

## The Degree of Doctor of Philosophy

The Department of Health Studies at the University of Chicago offers a program of study leading to the Ph.D. with emphasis in biostatistics, epidemiology or health services research. This program will prepare individuals for research careers in population-based research in human health and biomedical science. The program is organized around a common quantitative core curriculum designed to prepare students methodologically for more in-depth study in their chosen field and for dissertation research. Beyond the core curriculum, each student will choose a major disciplinary area of concentration, take a sequence of advanced courses in that area, and prepare a dissertation of independent, original, and rigorous research. Opportunities for such concentrated study will be available in the three broad areas of biostatistics, epidemiology and health services research, areas of expertise represented by Department faculty.
In addition to the concentration, each student will choose a minor program of study in another area either represented by Department faculty or offered elsewhere in the Biological Sciences Division or on campus. Tailored to each individual student, the minor will vary in its degree of specificity from student to student. It may be in one of the board areas represented by the Department, or in a more specialized area. Examples of specialized minors include psychiatric or cancer epidemiology, health economics, economics of aging, clinical trials design, cancer biology, genetic or molecular epidemiology, bioinformatics, or medical decision theory.

## PROGRAM REQUIREMENTS

Students should expect to complete the program in 5 years by fulfilling the following requirements:

1. Complete 18 graduate level courses, including:

- A core curriculum of up to seven courses needed to prepare for the qualifying examination.
- A major concentration program approved by the faculty consisting of at least 7 additional courses in a disciplinary domain (such as biostatistics).
- A minor program approved by the faculty consisting of at least 3 additional courses in a second disciplinary area.

2. Successfully complete a course in scientific integrity and the ethical conduct of research, usually in the first year of study (divisional ethics requirement).
3. Pass a multi-part qualifying examination demonstrating matery of the core curriculum and of foundational knowledge in the chosen area of concentration.
4. Teach two quarters for credit in pre-approved teaching assistant positions in the biological sciences (divisional teaching requirement).
5. Establish a doctoral dissertation committee, present proposed dissertation research to memebers of that committee and other interested faculty, and obtain written approval from the committee on the proposed dissertation research.
6. Prepare and defend a doctoral dissertation of independent, original, and rigorous research in the chosen area of concentration.
7. Participate in teh departmental seminar, in weekly faculty/student workshops, and in research workshops that overlap with the chosen area of concentration.

## REQUIRED COURSES

| HSTD 32400 | Applied Regression Analysis | 100 |
| :--- | :--- | :--- |
| HSTD 32700 | Biostatistical Methods | 100 |
| HSTD 30900 | Principles of Epidemiology | 100 |
| HSTD 31001 | Epidemiologic Methods | 100 |
| HSTD 35100 | Intro: Health Services Rsch | 100 |
| HSTD 38000 | Health Status Assessment: Measurement and Inference | 100 |

APPLICATION FOR ADMISSION
Applications should be received by December 1st for entrance into the program in the fall quarter and should consist of a BSD application (including three letters of recommendation), sealed official transcript(s), GRE scores, TOEFL scores (if applicable), CV/detailed relevant work history, and a research statement indicating area of major concentration.

Interested students should visit the department website at http://
health.bsd.uchicago.edu.

## Master of Science in Health Studies for Clinical PROFESSIONALS

The Master of Science Program for Clinical Professionals is a course of study in the theory, methods, and concepts of biostatistics, epidemiology, and health services research needed to design and carry out clinical and epidemiologic research programs. It is designed for the professional enhancement of physicians and other clinical professionals. The program can be completed in one year of full time study, or it can be undertaken in conjunction with a clinical fellowship or training program, in which case the course work may be distributed over two or three years. Students in the program acquire skills with basic statistical methods, followed by additional training in the fundamental theory and methods of epidemiology, biostatistics, and health services research. Through choice from a broad range of elective courses, students can specialize in one of the three disciplinary areas.

## ENTRANCE REQUIREMENTS

Applicants should either have a doctoral level clinical degree (such as M.D., D.O., or nursing Ph.D.) from an accredited institution, or must have completed pre clinical training at an accredited medical school. In the latter case, the candidate must provide a plan for completion of both the M.D. and S.M. degrees, and a letter of support from the candidate's medical school.

## PROGRAM REQUIREMENTS

A candidate in this program for the degree of Master of Science in Health Studies must satisfy the divisional requirements for the degree, complete the required courses and elective courses (nine courses in total), and complete a master's paper.

## REQUIRED COURSES

| HSTD 32100 | Intro To Biostatistics |  |
| :--- | :--- | ---: |
| HSTD 32400 | Applied Regression Analysis | 100 |
| HSTD 30700 | Clinical Epidemiology | 100 |
| or HSTD 30900 | Principles of Epidemiology |  |
| HSTD 31001 | Epidemiologic Methods | 100 |
| HSTD 35100 | Intro: Health Services Rsch | 100 |
| At least one of the following: | true |  |
| HSTD 32600 | Analysis of Categorical Data | true |
| HSTD 32700 | Biostatistical Methods | true |
| HSTD 33300 | Applied Longitudinal Data Analysis | true |
| HSTD 33100 | Applied Survival Analysis |  |

* STAT 22000 or equivalent can be substituted for this course.


## APPLICATION FOR ADMISSION

Applications for admission should be completed by December 1st for entry into the program in summer quarter the same year.

If the degree program will be pursued while the candidate will be participating in a clinical training program, a letter of support from the training program director is required. Candidates must also submit a statement describing how the proposed course of study will enhance their professional objectives. In addition, candidates must provide sealed official transcripts from all post secondary institutions, MCAT or GRE scores, and a completed Biological Sciences Division application.
Interested students should visit the department website at http:// health.bsd.uchicago.edu.

## Master of Science in Health Studies for Clinical Professionals

The Master of Science Program for Clinical Professionals is a course of study in the theory, methods, and concepts of biostatistics, epidemiology, and health services research needed to design and carry out clinical and epidemiologic research programs. It is designed for the professional enhancement of physicians and other clinical professionals. The program can be completed in one year of full time study, or it can be undertaken in conjunction with a clinical fellowship or training program, in which case the course work may be distributed over two or three years. Students in the program acquire skills with basic statistical methods, followed by additional training in the fundamental theory and methods of epidemiology, biostatistics, and health services research. Through choice from a broad range of elective courses, students can specialize in one of the three disciplinary areas.

## ENTRANCE REQUIREMENTS

Applicants should either have a doctoral level clinical degree (such as M.D., D.O., or nursing Ph.D.) from an accredited institution, or must have completed pre clinical training at an accredited medical school. In the latter case, the candidate must provide a plan for completion of both the M.D. and S.M. degrees, and a letter of support from the candidate's medical school.

## PROGRAM REQUIREMENTS

A candidate in this program for the degree of Master of Science in Health Studies must satisfy the divisional requirements for the degree, complete the required courses and elective courses (nine courses in total), and complete a master's paper.

## REQUIRED COURSES

| HSTD 32100 | Intro To Biostatistics (STAT 22000 or equivalent can be <br> substituted for this course.) | 100 |
| :--- | :--- | :---: |
| or STAT 22000 | Statistical Methods and Applications |  |
| HSTD 32400 | Applied Regression Analysis | 100 |
| HSTD 30700 | Clinical Epidemiology |  |
| or HSTD 30900 | Principles of Epidemiology | 100 |
| HSTD 31001 | Epidemiologic Methods |  |
| HSTD 35100 | Intro: Health Services Rsch | 100 |
| At least one of the following: | 100 |  |
| HSTD 32600 | Analysis of Categorical Data | true |
| HSTD 32700 | Biostatistical Methods | true |
| HSTD 33000 | Course HSTD 33000 Not Found | true |

$\left.\begin{array}{lll}\begin{array}{ll}\text { HSTD 33300 } \\ \text { or HSTD 33300 }\end{array} & \text { Applied Longitudinal Data Analysis } & \text { Applied Longitudinal Data Analysis }\end{array}\right]$ true

Applications for admission should be completed by December 1st for entry into the program in summer quarter the same year.
If the degree program will be pursued while the candidate will be participating in a clinical training program, a letter of support from the training program director is required. Candidates must also submit a statement describing how the proposed course of study will enhance their professional objectives. In addition, candidates must provide sealed official transcripts from all post secondary institutions, MCAT or GRE scores, and a completed Biological Sciences Division application.
Interested students should visit the department website at http:// health.bsd.uchicago.edu.

## Department of Human Genetics

Chair

- Conrad Gilliam

Professors

- Habibul Ahsan, Health Studies
- Graeme Bell, Biochemistry and Molecular Biology
- Nancy Jean Cox, Medicine
- William B. Dobyns
- T. Conrad Gilliam
- Richard Hudson, Ecology and Evolution
- Bruce T. Lahn
- Michelle M. Le Beau, Medicine
- Mary Sara McPeek, Statistics
- Carole Ober
- Jonathan Pritchard
- Janet D. Rowley, Medicine
- Andrey Rzhetsky, Medicine
- Matthew Stephens
- Olufunmilayo Olopade, Medicine
- Kevin White

Associate Professors

- Mark Abney
- Soma Das
- Anna Di Rienzo
- Rick Kittles, Medicine
- Elizabeth M. McNally, Medicine
- Dan Nicolae
- Marion Verp, Obstetrics and Gynecology

Assistant Professors

- Yoav Gilad
- Kathleen J. Millen
- Marcelo A. Nobrega
- Molly Przeworski
- Abraham Palmer
- Darrel J. Waggoner

The Department of Human Genetics offers training in a number of fields of human genetics such as human disease, classical genetics, complex trait genetics population/evolutionary genetics, cytogenetics, chromosomal biology, neurogenetics, pharmacogenetics and developmental human genetics. This coursework is intended for graduate students who plan to pursue research careers and teaching in the emerging areas of modern biology, and is intended for medical students, advanced undergraduate and graduate students in other departments. The Ph.D. program places great emphasis on sound preparation in human genetics, cell biology, and molecular biology.

## The Degree of Doctor of Philosophy

A Ph.D. candidate must fulfill certain formal coursework requirements, pass one preliminary and one qualifying examination, and present a satisfactory dissertation describing the results of original research.

The department expects a knowledge of and proficiency in human genetics. This requirement will normally be met by fulfilling the formal coursework described here, but degree programs are flexible. Courses taken at other institutions, in other departments, or as part of the Medical School curriculum may substitute for HG courses with approval of the Curriculum Committee. To fulfill the requirements for a Ph.D. nine graded courses are required. In the Department of Human Genetics, a student must take the following three required courses:

| MGCB 31400 | Genetic Analysis of Model Organisms | 100 |
| :--- | :--- | :---: |
| HGEN 47000 | Human Genetics-1 | 100 |
| HGEN 46900 | Human Variation and Disease | 100 |
| One of the following: |  |  |
| HGEN 47100 | Intro Statistical Genetics | true |
| MGCB 31500 | Genetic Mechanisms | true |
| DVBI 35600 | Vertebrate Developmental Biology | true |
| MGCB 31300 | Molecular Biology-2 | true |
| ECEV 35600 | Principles of Population Genetics-1 | true |

The remaining 4 courses are electives chosen from a host of courses in the Biological Sciences Division and Statistics Department. All courses are to be approved by an assigned academic advisor. These courses and many more are designed to develop greater proficiency in your particular sub discipline.

A student is also required to do two laboratory rotations before selecting an advisor and laboratory in which to pursue a Ph.D. dissertation. These rotations will be graded and together will be equivalent to one elective. All students are required to serve as teaching assistants for two quarters.

During the second year, students select a thesis advisor and begin laboratory research. To complete the Ph.D. degree, they must prepare, under the general direction of an appointed doctoral committee, a dissertation based upon their original research. A public seminar describing the results of the dissertation research
must be presented and the dissertation must be successfully defended before the doctoral committee.

## APPLICATION

For information about applying to our graduate program, please visit our website at http://molbio.bsd.uchicago.edu/index.php.

## COMmittee on Immunology

Interim Chair

- Alexander Chervonsky, Pathology

Professors

- Albert Bendelac, Pathology
- Anita Chong, Surgery
- Marcus Clark, Medicine
- Yang Xin Fu, Pathology
- Vinay Kumar, Pathology
- James Madara, Pathology
- Rima McLeod, Surgery
- Marcus Peter, Ben May Department for Cancer Research
- Anthony Reder, Neurology
- Raymond Roos, Neurology
- Hans Schreiber, Pathology
- Ursula B. Storb, Molecular Genetics and Cell Biology
- Koen van Besien, Medicine
- Martin Weigert, Pathology


## Associate Professors

- Maria Luisa Alegre, Medicine
- Aaron Dinner, Chemistry
- Thomas Gajewski, Pathology \& Medicine
- Tatyana Golovkina, Microbiology
- Bana Jabri, Pathology
- Barbara Kee, Medicine
- Kay Macleod, Ben May Department for Cancer Research
- Avertano Noronha, Neurology
- Anne I. Sperling, Medicine

Assistant Professors

- Erin Adams, Biochemistry and Molecular Biology
- David Boone, Medicine
- Fotini Gounari, Medicine
- Jose Guevara, Surgery
- Haochu Huang, Medicine
- Glenn Randall, Microbiology
- Rebecca Shilling, Medicine
- Dorothy Sipkins
- Patrick Wilson, Medicine
- Jian Zhang, Medicine

The Committee on Immunology offers a graduate program of study leading to the Doctor of Philosophy degree in Immunology. The committee is dedicated to the open exchange of ideas among scholars of all fields, a commitment enhanced by an organizational structure that completely integrates the basic biological sciences with the clinical sciences. This multidisciplinary and integrated approach corresponds well with the reality of the new biology, where molecular and structural techniques are applied widely and with great success to clinical problems.

The Committee on Immunology is a member of the Biomedical Sciences Cluster, which also includes graduate programs from the Committee on Cancer Biology, Committee on Microbiology, the Committee on Molecular Metabolism and Nutrition, and the Department of Pathology's Molecular Pathogenesis and Molecular Medicine Graduate Program. The five academic units share several common courses, a seminar series and additional common events for students and faculty within the cluster. The goal of the cluster system is to encourage interdisciplinary interactions among both trainees and faculty, and to allow students flexibility in designing their particular course of study.

In addition to formal course work, the Committee on Immunology sponsors a weekly seminar series, an annual retreat where students and faculty present their research, and several focused group meetings.

## ADMISSION

Students interested in obtaining the Ph.D. in Immunology should apply directly to the Committee on Immunology by December 1st of each year and indicate Immunology as their field of specialization.

## The Degree of Doctor of Philosophy

Ph.D. requirements include:

- Completion of 9 course credits consisting of basic science, immunology and elective courses.
- A preliminary exam in the form of an oral defense.
- A dissertation based on original research.
- A final thesis examination.


## Immunology Courses

IMMU 30010. Immunopathology. 100 Units. Edit Course Data - default Five examples of diseases are selected each year among the following categories: autoimmune diseases, inflammatory bowel diseases, infection immunity, immunodeficiencies and gene therapy, and transplantation and tumor immunology. Each disease is studied in depth with general lectures that include, where applicable, histological analysis of diseased tissue samples and discussions of primary research papers on experimental disease models. Special emphasis is placed on understanding immunopathology within the framework of general immunological concepts and on experimental approaches to the study of immunopathological models.
Instructor(s): B. Jabri Terms Offered: Winter
Prerequisite(s): Consent of instructor
Equivalent Course(s): BIOS 25258,PATH 30010
IMMU 30266. Molecular Immunology. 100 Units. Edit Course Data - default This discussion-oriented course examines the molecular principles of immune recognition. We explore the roles of protein modification, protein-protein and protein-DNA interactions in the discrimination between self and non-self, and study the molecular fundamentals of cell stimulation and signaling. Primary literature focused on molecular research of the immune system is integrated with lectures on commonly used biochemical, structural and immunological techniques used in the research papers examined.
Instructor(s): E. Adams Terms Offered: Spring
Prerequisite(s): BIOS 20200 or 25256, or consent of instructor
Equivalent Course(s): BIOS 25266
IMMU 40300. Systems Analysis of Proteins and Post-Translational Modifications. 100 Units. Edit Course Data - default
Proteins play a major role in all cellular processes and their modification represents a major vehicle for expanding the genetic code of the cellular proteome (the inventory of all protein species in a cell). Given the crucial roles in the major cellular pathways and diseases such as cancer, proteins and PTM studies are a critical aspect of most biological projects. This course will cover concepts (including biochemistry, proteomics/systems biology, molecular biology, and bioinformatics), and practical techniques for identifying and quantifying proteins and PTMs. Topics include, but are not limited to quantification of protein interactions, abundances, modifications including phosphorylation, ubiquitination, and lysine acetylation, and subsequent discussion of biochemical and functional roles of proteins and PTMs in regulating biological networks.
Instructor(s): R. Jones, Y. Zhao, P. Nash Terms Offered: Spring
Prerequisite(s): BIOS 20200
Equivalent Course(s): BIOS 21346,CABI 40300,MOMN 40300

IMMU 47300. Genomics and Systems Biology. 100 Units. Edit Course Data default
This lecture course explores the technologies that enable high-throughput collection of genomic-scale data, including sequencing, genotyping, gene expression profiling, assays of copy number variation, protein expression and protein-protein interaction. We also cover study design and statistical analysis of large data sets, as well as how data from different sources can be used to understand regulatory networks (i.e., systems). Statistical tools introduced include linear models, likelihood-based inference, supervised and unsupervised learning techniques, methods for assessing quality of data, hidden Markov models, and controlling for false discovery rates in large data sets. Readings are drawn from the primary literature.
Instructor(s): Y. Gilad, D. Nicolae Terms Offered: Spring Prerequisite(s): STAT 23400 or Statistics in the Biomath Sequence Equivalent Course(s): BIOS 28407,BPHS 47300,CABI 47300,HGEN 47300

# THE INTERDISCIPLINARY Scientist Training Program 

The Interdisciplinary Scientist Training Program (ISTP) is a doctoral-degree granting program within the Division of Biological Sciences at the University of Chicago. It awards a Ph.D. degree in Biology. The core mission of the Program is to train graduate students in interdisciplinary approaches and foster novel, multifaceted analyses of biological systems and processes.

Central to the Program is the recruitment of unusual students with an aptitude and demonstrable interest in interdisciplinary biological science. Coursework is flexible and individually tailored depending on the student's background and interests. Students are strongly encouraged to pursue research projects that involve interdisciplinary collaborations between two or more members of the training faculty. A subset of ISTP students are part of a strategic training partnership between Chicago and the Howard Hughes Medical Institute's (HHMI) Janelia Farm Research Campus.
In addition to the BSD application requirements, students must submit a brief description of a proposed Ph.D. research project, designed to span the research interests of two or more participating faculty trainers. We expect that students who are selected for interviews for the ISTP program will be, highly committed, well-prepared and ready to pursue challenging research projects. During the interview process, candidates will be provided with extensive opportunities to discuss their proposed research with their potential advisors and will present their proposals orally to a committee. Selection into the program will be based on academic credentials, letters of recommendation, preparation and motivation for interdisciplinary training and quality of research ideas.
Incoming students are advised by the Program Director in consultation with a relevant member of the Steering Committee or Program faculty to select courses and formulate individual programs of study. This Steering Committee or Program faculty member provides oversight and guidance for the trainee in their first year. New trainees are introduced to the ISTP in an annual orientation session. Members of the Steering Committee and current ISTP trainees also participate in the orientation session.

All students are strongly encouraged to pursue research projects that involve interdisciplinary collaborations between two or more members of the training faculty. Students choose two faculty mentors as advisors from among the Program training facility. Once the advisors are chosen, a thesis committee is constituted which is typically comprised of four members of the faculty. The chairperson of this committee is a faculty member other than the thesis mentors. The thesis committee is responsible for evaluating the thesis research proposal and its defense as well as monitoring the student's progress on a yearly basis. ISTP trainees participate in an annual symposium - the venue for the symposium involves both the UC and JFRC campuses. Both participating students and faculty present research talks.

Further information about the program is available from:
Diane J. Hall Administrative Director of the Interdisciplinary Scientist Training Program, d-hall@uchicago.edu

Daniel Margoliash, Ph.D., Director of the Interdisciplinary Scientist Training Program, dan@bigbird.uchicago.edu

## Committee on Medical Physics

## Chair

- Maryellen L. Giger

Associate Chair

- Charles A. Pelizzari

Professors

- Jia-Hong Gao, Radiology
- Maryellen L. Giger, Radiology
- David J. Grdina, Radiation and Cellular Oncology
- Howard J. Halpern, Radiation and Cellular Oncology
- Gregory S. Karczmar, Radiology
- Charles E. Metz, Radiology
- Xiaochuan Pan, Radiology

Associate Professors

- Samuel G. Armato, Radiology
- Bulent Aydogan, Radiation and Cellular Oncology
- Chin-Tu Chen, Radiology
- Yulei Jiang, Radiology
- Chien-Min Kao, Radiology
- Patrick LaRiviere. Radiology
- Zheng Feng Lu, Radiology
- Robert M. Nishikawa, Radiology
- Bill O' Brien-Penney, Radiology
- Charles A. Pelizzari, Radiation and Cellular Oncology
- Chester S. Reft, Radiation and Cellular Oncology
- Kamil M. Yenice, Radiation and Cellular Oncology

Assistant Professors

- Hania A. Al-Hallaq, Radiation and Cellular Oncology
- Naim Ozturk, Radiation and Cellular Oncology
- Brian B. Roman, Radiology
- Steffen Sammet, Radiology
- Kenji Suzuki, Radiology
- Rodney D. Wiersma, Radiation and Cellular Oncology Emeritus Professor
- Kuno Doi, Radiology
- David N. Levin, Radiology

The Medical Physics program at the University of Chicago is recognized internationally for its research excellence and is housed within the Committee on Medical Physics. Many of the investigators are leaders in their respective specialties. Also, because the departments are located in the Medical Center of the University, there is strong interaction between the clinical and research staff. Faculty with primary interest in diagnostic imaging hold appointments in the Department of Radiology, whereas faculty with primary interest in the physics of radiation therapy hold appointments in the Department of Radiation and Cellular Oncology. The Committee on Medical Physics offers programs leading to S.M. and Ph.D. degrees in medical physics. Although most students are admitted directly for study toward the Ph.D. degree, the S.M. degree may occasionally be awarded as a terminal degree and in some cases as a transitional degree en route to the Ph.D. Two years of residency are required for the S.M. degree, during which students may elect specialized training directed toward either research or clinical support applications of physics in radiology or radiation oncology. Normally four or five years of residency are required for the Ph.D. degree.
Medical Physics researchers at the University have available to them many state of the art machines:

- 1.5T MR scanners
- 3T MR scanner
- 1.5 T and 3.0 T scanners
- 9.4 T MRI/MRS system
- Electron paramagnetic resonance imaging spectrometers
- 16-, 32-, and 64 slice helical CT scanners
- Advanced 256- slice helical cone-beam scanner
- Advanced 256-slice dual-energy helical cone-beam scanner
- Dual energy chest radiography system
- Full field digital mammography systems
- PET/CT scanner
- 30\% Sensitivity Dual Head Small-Animal PET Scanner
- Computer controlled dual energy linear accelerators with multileaf collimators, dynamic treatment capability and solid state megavoltage imagers and kilovoltage 2D and cone beam imaging capabilities
- Computer controlled high dose rate remote after loading brachytherapy system
- Virtual reality display system
- Computed radiography systems
- High quality laser digitizers and printers
- Multi-detector SPECT systems
- Cardiac first pass gamma camera
- Single detector gamma camera
- Real time quantitative PCR machine
- Zeiss Surgical Microscope
- Harvard small animal ventilator
- Micro-interventricular pressure and volume catheters
- MRI compatible fiber optic pressure transducer
- Physiological data acquisition and analysis system
- Class II Cell Culture hood
- Zeissfluorescence microscope with associated CCD camera and image acquisition and analysis computer system
- Microplate reader
- Sorvall RC-6 High speed ultracentrifuge
- Bio-rad gel documentation and analysis workstation
- Epson 10000XL flat bed color scanner to scan radiographic or radiochromic film
- Harshaw automated thermoluminescent reader
- Philips 250 kVp orthovoltage machine
- Diagnostic and mammography x-ray systems
- Dual-head SPECT systems
- Triple-head SPECT scanner
- Xenogen IVIS 200 for bioluminescence and fluroescence animal imaging
- VisEn FMT for fluorescence moleculat tomography in animal imaging
- Olympus OV-100 for fluorescence animal imaging
- GMI/GE Triumph Flex miceoPET/SPECT/CT Pre-Clinical Imaging System
- Vevo 770 ultrasound imaging ssystem for animal imaging
- Super-Resolution Single-Photon Emission Microscope (SPEM)
- High-resolution digital x-ray imaging system
- Computer-aided detection system for mammography
- High-resolution display monitors and workstations
- General use and specialized image processing and display computers linked via a high speed network

Inquiries concerning the graduate program should be addressed to Maryellen L . Giger, Ph.D., Chair of the Committee on Medical Physics, Director of the Graduate Programs in Medical Physics, Department of Radiology, MC 2026, 5841 South Maryland Avenue, Chicago, IL 60637, or e mail: m-giger@uchicago.edu.

MEDICAL PHYsics COURSES

## Committee on Microbiology

Chair

- Olaf Schneewind

Professors

- Joy Bergelson, Ecology \& Evolution
- Robert Daum, Pediatrics
- Tatyana Golovkina, Microbiology
- Jean Greenberg, Molecular Genetics \& Cell Biology
- Robert Haselkorn, Molecular Genetics \& Cell Biology
- Bernard Roizman, Microbiology
- Raymond Roos, Neurology
- Lucia Rothman Denes, Molecular Genetics \& Cell Biology
- Olaf Schneewind, Microbiology

Associate Professors

- Kenneth Alexander, Pediatrics
- Sean Crosson, Biochemistry and Molecular Biology
- James Mastrianni, Neurology
- Dominique Missiakas, Microbiology
- Tao Pan, Biochemistry \& Molecular Biology
- Glenn Randall, Microbiology
- Wei Jen Tang, Ben May Department for Cancer Research

Assistant Professors

- Juliane Bubeck Wardenburg, Pediatrics and Microbiology
- David Boone, Medicine
- Juan Martinez, Microbiology

The primary purpose of the Committee on Microbiology is to produce research scientists and teachers in microbiology by offering formal instructions; by fostering informal dissemination of information among the faculty, fellows and students engaged in research in microbiology; and by administering a program of study leading to the degree of Doctor of Philosophy. Through its faculty, activities and educational program, the Committee on Microbiology integrates studies in various clinical and non clinical departments of the Division of the Biological Sciences.The Committee on Microbiology maintains maximum flexibility in its program to cater to students developing interests. Students with backgrounds in any appropriate field (physics, chemistry, biology, biochemistry, and medicine) may commence work in microbiology upon entering the graduate program of the Division of the Biological Sciences. The committee offers a program of study leading to a Ph.D.The Committee on Microbiology sponsors a seminar series,
which brings to campus prominent microbiologists from all over the world to discuss their research and meet with Microbiology faculty and students. Another regular activity sponsored by the Committee is the Microbiology Data Club. Data Club meetings feature a current graduate student, postdoctoral fellow or other training fellow in Microbiology presenting his/her research data. Microbiology Data Club meetings are open to the University community, offering an informal forum for the discussion of microbiology within the Chicago scientific community.The Committee on Microbiology is a member of the Biomedical Sciences Cluster, which also houses graduate programs of the Committee on Cancer Biology, the Committee on Immunology, the Committee on Molecular Metabolism and Nutrition, and the Department of Pathology's Molecular Pathogenesis and Molecular Medicine Graduate Program. The five academic units share a joint admissions committee, several courses, a seminar series and other events for students and faculty within the cluster. The goal of the cluster system is to encourage interdisciplinary interactions among both trainees and faculty, and to allow students flexibility in designing their particular course of study.The Ph.D. degree is administered by the Committee on Microbiology and is recommended when the student has fulfilled the requirements stipulated in his individual program; has met the divisional requirements for the degree; and, in the opinion of the committee, has attained competence in research in his field of specialization.

## Microbiology Courses

MICR 30600. Fundamentals of Bacterial Physiology. 100 Units. Edit Course Data default
This course meets one of the requirements of the microbiology specialization. BIOS 25256). This course introduces bacterial diversity, physiology, ultra-structure, envelope assembly, metabolism, and genetics. In the discussion section, students review recent original experimental work in the field of bacterial physiology. Instructor(s): D. Missiakas Terms Offered: Autumn
Prerequisite(s): BIOS 20181, 20191, or 20239/20234; or consent of instructor Equivalent Course(s): BIOS 25206

MICR 31600. Molecular Basis of Bacterial Diseases. 100 Units. Edit Course Data default
This course meets one of the requirements of the microbiology specialization. This lecture/discussion course involves a comprehensive analysis of bacterial pathogens, the diseases that they cause, and the molecular mechanisms involved during pathogenesis. Students discuss recent original experimental work in the field of bacterial pathogenesis.
Instructor(s): J. Martinez Terms Offered: Winter
Prerequisite(s): Completion of the general education requirement in the biological sciences
Equivalent Course(s): BIOS 25216

MICR 34600. Introduction to Virology. 100 Units. Edit Course Data - default This class on animal viruses considers the major families of the viral kingdom with an emphasis on the molecular aspects of genome expression and virushost interactions. Our goal is to provide students with solid appreciation of basic knowledge, as well as instruction on the frontiers of virus research.
Instructor(s): T. Golovkina, B. Roizman Terms Offered: Spring
Prerequisite(s): Completion of the general education requirement in the biological sciences and third- or fourth-year standing
Equivalent Course(s): BIOS 25287,GENE 34600

## Program in Cell and Molecular Biology

## Chair

- Jon Staley


## Faculty accepting students into their lab

## Professors

- Douglas K. Bishop, Radiation \& Cellular Oncology
- Edwin L. Ferguson
- Richard Fehon
- Benjamin Glick
- Michael Glotzer
- Jean Greenberg
- Stephen J. Kron
- Ilaria Rebay, Ben May Institute for Cancer Research
- Lucia Rothman-Denes

Associate Professors

- David Kovar
- Jocelyn Malamy
- Jonathan P. Staley
- Aaron Turkewitz
- Jerrold Turner, Pathology

Assistant Professors

- Sally Horne-Badovinac
- Margaret Gardel, Physics
- Mohan Gupta
- Ed Munro
- John Reinitz, Statistics
- Michael Rust
- Alex Ruthenburg

Faculty not accepting students into their lab
Professors

- Robert Haselkorn
- Robert Josephs
- Bernard Roizman, Microbiology
- Janet D. Rowley, Medicine
- Ursula B. Storb

Associate Professors

- Gayle K. Lamppa
- Laurens J. Mets

Emeritus Faculty

- Kwen Sheng Chiang
- Wolfgang Epstein
- Rochelle Easton Esposito
- Anthony Mahowald
- Terence E. Martin
- Theodore L. Steck, Biochemistry \& Molecular Biology
- Bernard S. Strauss
- Edwin W. Taylor

The graduate program in Cell and Molecular Biology offers training in the fields of cell biology, molecular biology, and molecular genetics for:

- Graduate students who plan to pursue research careers and teaching in the emerging areas of modern biology
- Medical students
- Undergraduate students

Programs for the Ph.D. degree place great emphasis on sound preparation in cell biology, molecular biology, and genetics. For properly qualified advanced students, the department offers opportunities for research in cell biology, molecular biology, genetics, developmental biology, microbiology, plant molecular biology, and virology. Of special interest is the design of interdisciplinary programs that emphasize the frontiers of biology.

## The Degree of Doctor of Philosophy

The graduate program in Cell and Molecular Biology offers a program of study leading to the Doctor of Philosophy in Molecular Genetics and Cell Biology. A Ph.D. candidate must fulfill certain formal coursework requirements, pass one preliminary and one qualifying examination, and present a satisfactory dissertation describing the results of original research.
The program expects knowledge of and proficiency in cell biology, molecular biology, and genetics. This requirement will normally be met by fulfilling the formal coursework described here, but detailed degree programs are flexible. Courses taken at other institutions, in other departments, or as part of the Medical School curriculum may substitute for CMB courses with approval of the curriculum committee. To fulfill the requirements for a Ph.D., nine graded courses are required. In the program in Cell and Molecular Biology, a student must take one course in each of three areas during the first year:

- Cell biology
- Molecular biology
- Genetics

In addition to these core courses, a second course in one of these areas is required to develop greater proficiency in a subdiscipline. The total of four required courses can be selected from those marked with an asterisk ( ${ }^{*}$ ) in the list of courses. Three additional graded electives must be taken, one of which may be a reading course. They can be selected according to the student's interests and the availability of courses.

A student is also required to do three laboratory rotations before selecting an advisor and laboratory to pursue a Ph.D. dissertation. These rotations will be graded, and two will count towards the nine courses required for the Ph.D. All students are required to serve as teaching assistants for two quarters.
Students usually select a thesis advisor and begin laboratory research by the tenth month of the first year. To complete the Ph.D. degree, they must prepare, under the general direction of an appointed doctoral committee, a dissertation based upon their original research. Students are also required to submit, if not publish, at least one first author paper prior to their defense. A public seminar describing the results of the dissertation research must be presented and the dissertation must be successfully defended before the doctoral committee.

## Admissions

For information about applying to our graduate program, please visit our website at http://molbio.bsd.uchicago.edu/index.php.

## Molecular Genetics \& Cell Biology Courses

MGCB 31000. Fundamentals of Molecular Biology. 100 Units. Edit Course Data default
Third- or fourth-year standing. This course covers the structure of genetic material, replication, and transcription and its regulation. Other topics include post-
transcriptional regulation, chromatin and DNA repair (both after transcription), and protein synthesis.
Instructor(s): U. Storb, J. Staley Terms Offered: Winter
Prerequisite(s): Basic knowledge of genetics and biochemistry
Equivalent Course(s): BIOS 21208,BCMB 31000,GENE 31000
MGCB 31200. Molecular Biology-I. 100 Units. Edit Course Data - default
For course description contact Molecular Genetics \& Cell Biology.
Equivalent Course(s): BCMB 31200
MGCB 31300. Molecular Biology-2. 100 Units. Edit Course Data - default
For course description contact Biological Sciences.
Equivalent Course(s): BCMB 31300,DVBI 31300

MGCB 31500. Genetic Mechanisms. 100 Units. Edit Course Data - default For course description contact Biological Sciences.

MGCB 31600. Cell Biology I. 100 Units. Edit Course Data - default For course description contact Molecular Genetics \& Cell Biology. Equivalent Course(s): BCMB 31600,HGEN 31600

MGCB 31900. Introduction to Research. 100 Units. Edit Course Data - default For course description contact Molecular Genetics \& Cell Biology. Equivalent Course(s): BCMB 31900,DVBI 31900,GENE 31900,HGEN 31900

MGCB 34300. Image Processing in Biology. 100 Units. Edit Course Data - default Whether one is trying to read radio signals from faraway galaxies or to understand molecular structures, it is necessary to understand how to read, interpret, and process the data that contain the desired information. In this course, we learn how to process the information contained in images of molecules as seen in the electron microscope. We also deal with the principles involved in processing electron microscope images, including the underlying analytical methods and their computer implementation.
Instructor(s): R. Josephs Terms Offered: Spring
Prerequisite(s): One year of calculus
Equivalent Course(s): BIOS 21407
MGCB 35400. Advanced Developmental Biology. 100 Units. Edit Course Data default
This course provides both an overview of developmental biology and an in-depth coverage of selected topics, emphasizing the origins of classical concepts in the field as well as modern molecular and genetic approaches to the study of developmental processes. Subjects include cell fate determination, growth control, stem cells, signal transduction, neurogenesis, and cell polarity in developing systems. Underlying mechanisms are illuminated through discussion of key experiments. Discussion sections cover selected papers from the developmental biology literature, with emphasis on critical evaluation of experimental evidence.
Instructor(s): "E. Ferguson, R. Fehon" Terms Offered: Winter
Prerequisite(s): "BIOS 20182, 20192, or 20235"
Equivalent Course(s): BIOS 21227,DVBI 35400,GENE 35400

MGCB 35401. Gene Regulation. 100 Units. Edit Course Data - default
This course covers the fundamental theory of gene expression in prokaryotes and eukaryotes through lectures and readings in the primary literature. Natural and synthetic genetic systems arising in the context of E. coli physiology and Drosophila development will be used to illustrate fundamental biological problems together with the computational and theoretical tools required for their solution. These tools include large scale optimization, image processing, ordinary and partial differential equations, the chemical Langevin and Fokker-Planck equations, and the chemical master equation. A central theme of the class is the art of identifying biological problems which require theoretical analysis and choosing the correct mathematical framework with which to solve the problem.
Terms Offered: Winter
Prerequisite(s): Consent of instructor
Equivalent Course(s): STAT 35400,ECEV 35400
MGCB 35600. Vertebrate Developmental Biology. 100 Units. Edit Course Data default
This advanced-level course combines lectures, student presentations, and discussion sessions. It covers major topics on the developmental biology of embryos (e.g. formation of the germ line, gastrulation, segmentation, nervous system development, limb pattering, organogenesis). We make extensive use of the primary literature and emphasize experimental approaches (e.g. classical embryology, genetics, molecular genetics).
Instructor(s): V. Prince, K. Sharma Terms Offered: Spring
Prerequisite(s): BIOS 20180s or 20190, or AP 5 sequence
Equivalent Course(s): BIOS 21356,DVBI 35600
MGCB 36100. Plant Development and Molecular Genetics. 100 Units. Edit Course Data - default
This course examines the growth, differentiation, and development of plants at the molecular, cellular, and whole plant levels. Emphasis is placed on the signal transduction mechanisms that regulate the developmental and adaptive processes in plants. Students are especially encouraged to develop critical thinking and collaborative skills.
Instructor(s): J. Greenberg Terms Offered: Spring
Prerequisite(s): Completion of the general education requirement in the biological sciences
Equivalent Course(s): BIOS 23299,DVBI 36100,ECEV 32900

MGCB 36400. Developmental Mechanisms. 100 Units. Edit Course Data - default This course provides both an overview of developmental biology and an in-depth coverage of selected topics, emphasizing the origins of classical concepts in the field as well as modern molecular and genetic approaches to the study of developmental processes. Subjects include cell fate determination, growth control, stem cells, signal transduction, neurogenesis, and cell polarity in developing systems. Underlying mechanisms are illuminated through discussion of key experiments. Discussion sections cover selected papers from the development biology literature, with emphasis on critical evaluation of experimental evidence.
Instructor(s): E. Ferguson, R. Fehon Terms Offered: Winter
Prerequisite(s): BIOS 20182, 20192, 20187, or 20235
Equivalent Course(s): BIOS 21237,DVBI 36400

## Committee on Molecular METABOLISM AND NUTRITION

Chair

- Christopher Rhodes, Medicine

Professors

- John Alverdy, Surgery
- George Bakris, Medicine
- Graeme Bell, Medicine
- Deborah Burnet, Medicine
- Eugene Chang, Medicine
- Anita Chong, Surgery
- Anna DiRienzo, Human Genetics
- David Ehrmann, Medicine
- Murray Favus, Medicine
- Godfrey Getz, Pathology
- J. Michael Millis, Transplant Surgery
- Deborah Nelson, Neurobiology, Pharmacology and Physiology
- Louis Philipson, Medicine
- Victoria Prince, Organismal Biology and Anatomy
- Robert Rosenfield, Pediatrics
- F. Gary Toback, Medicine
- Eve Van Cauter, Medicine
- Roy Weiss, Medicine


## Associate Professors

- Marisa Alegre, Medicine
- Marc Bissonnette, Medicine
- Matthew Brady, Medicine
- Suzanne Conzen, Medicine
- Diane Deplewski, Pediatrics
- Yan Chun Li, Medicine
- Rebecca Lipton, Medicine
- Kay Macleod, Ben May Department for Cancer Research
- Mindy Schwartz, Medicine
- Carol Semrad, Medicine
- Xiaoxi Zhuang, Department of Neurobiology

Assistant Professor

- David Boone, Medicine
- Ron Cohen, Medicine
- Michael Grassi, Surgery
- Manami Hara, Medicine
- Helen Kim, Obstetrics \& Gynecology and Pediatrics
- Plamen Penev, Medicine
- Vivek Prachand, Surgery
- Brian Roman, Radiology
- Daniel Spergel, Medicine
- Xiao Jian Sun, Medicine
- Barton Wicksteed, Medicine


## Instructor

- Esra Tasali, Medicine

Research Associate (Professor)

- Catherine Reardon Alulis, Pathology

Research Associate (Assistant Professor)

- Mark Musch, Medicine

The Committee on Molecular Metabolism and Nutrition is a dynamic and interactive research unit of the University of Chicago offering interdisciplinary doctoral training in the molecular basis of biological processes as they relate to nutrition and human disease. The graduate program in Molecular Metabolism and Nutrition offers a program of study leading to the Doctor of Philosophy in Molecular Metabolism and Nutrition. Faculty expertise includes the areas of insulin secretion, diabetes genetics, nutritional regulation of epithelial cell biology, intestinal absorption, adaptation, and malabsorption, water/nutrient/electrolyte transport, nutriceuticals, atherogenesis, abnormalities in lipid and lipoprotein metabolism, vitamin D research, insulin metabolic signaling, transcription factors and adipogenesis, impact of nutrition on reproductive biology, glucocorticoid action and sleep research. A mixture of nationally recognized senior faculty and dynamic junior faculty provide a stimulating and supportive environment designed to guide graduate students through course work and research training. Major resources include transgenic mouse facilities, flow cytometry, microscope imaging suites, microarray and gene chip facilities, computational labs and facilities for human research. The Committee works closely with the government sponsored Diabetes Research and Training Center, Digestive Disease Research Core Center, Training Program in Digestive Diseases and Nutrition, and the Clinical Research Center to offer a broad array of choices for research topics.

The Committee on Molecular Metabolism and Nutrition is a member of the Biomedical Sciences Cluster, which also includes graduate programs from the Committee on Cancer Biology, the Committee on Immunology, the Committee on Microbiology and the Department of Pathology's Molecular Pathogenesis and Molecular Medicine Graduate Program. The five academic units share several common courses, a seminar series, and additional common events for students and faculty within the cluster. The goal of the cluster system is to encourage interdisciplinary interactions among both trainees and faculty, and to allow students flexibility in designing their particular course of study.

## ADMISSION

Students interested in obtaining the Ph.D. in Molecular Metabolism and Nutrition should apply directly to the Committee on Molecular Metabolism and Nutrition by December 1st of each year and indicate Molecular Metabolism and Nutrition as their field of specialization.

## The Degree of Doctor of Philosophy

Ph.D. requirements include:

- Completion of 9.5 course credits consisting of basic science, metabolism and elective courses.
- A preliminary exam in the form of a mock NIH-style grant proposal.
- A dissertation based on original research.
- A final thesis examination.


## MOLECULAR METABOLISM AND NUTRITION COURSES

## MOMN 40300. Systems Analysis of Proteins and Post-Translational

 Modifications. 100 Units. Edit Course Data - defaultProteins play a major role in all cellular processes and their modification represents a major vehicle for expanding the genetic code of the cellular proteome (the inventory of all protein species in a cell). Given the crucial roles in the major cellular pathways and diseases such as cancer, proteins and PTM studies are a critical aspect of most biological projects. This course will cover concepts (including biochemistry, proteomics/systems biology, molecular biology, and bioinformatics), and practical techniques for identifying and quantifying proteins and PTMs. Topics include, but are not limited to quantification of protein interactions, abundances, modifications including phosphorylation, ubiquitination, and lysine acetylation, and subsequent discussion of biochemical and functional roles of proteins and PTMs in regulating biological networks.
Instructor(s): R. Jones, Y. Zhao, P. Nash Terms Offered: Spring
Prerequisite(s): BIOS 20200
Equivalent Course(s): BIOS 21346,CABI 40300,IMMU 40300

## Committee on Neurobiology

Chair

- Christian Hansel

Professor

- Francisco Bezanilla, Biochemistry and Molecular Biology
- Harriet de Wit, Psychiatry
- Glyn Dawson, Pediatrics
- Aaron P. Fox, Neurobiology, Pharmacology and Physiology
- Elliot S. Gershon, Psychiatry
- Jay M. Goldberg, Neurobiology, Pharmacology and Physiology
- Steve Goldstein, Pediatrics
- Christopher Gomez, Neurology
- William Green, Neurobiology
- Elizabeth Grove, Neurobiology
- Dorothy Hanck, Medicine
- Christian Hansel, Neurobiology
- Un Jung Kang, Neurology
- Richard P. Kraig, Neurology
- Bruce T. Lahn, Human Genetics
- Anning Lin, Ben May Department of Cancer Research
- Daniel Margoliash, Organismal Biology and Anatomy
- Peggy Mason, Neurobiology
- Martha McClintock, Psychology
- Deborah Nelson, Neurobiology, Pharmacology and Physiology
- Eduardo Perozo, Pediatrics
- Brian Popko, Neurology
- Nanduri Prabhakar, Medicine
- Raymond P. Roos, Neurology
- Marsha Rosner, Ben May Department of Cancer Research
- Eric A. Schwartz, Neurobiology, Pharmacology and Physiology
- S. Murray Sherman, Neurobiology
- Sangram Sisodia, Neurobiology
- Steven L. Small, Neurology
- Sara Szuchet, Neurology
- Wei-Jen Tang, Ben May Department of Cancer Research
- V. Leo Towle, Neurology
- Ming Xu, Anesthesia and Critical Care

Associate Professor

- James Brorson, Neurology
- Melina Hale, Organismal Biology and Anatomy
- Nicholas Hatsopoulos, Organismal Biology and Anatomy
- Leslie Kay, Psychology
- Andrea King, Psychiatry
- Philip E. Lloyd, Neurobiology, Pharmacology and Physiology
- Jeremy Marks, Pediatrics
- Kathleen J. Millen, Human Genetics
- Dario Maestriperi, Psychology
- James A. Mastrianni, Neurology
- Daniel McGehee, Anesthesia and Critical Care
- Victoria Prince, Organismal Biology and Anatomy
- Clifton Ragsdale, Neurobiology
- Anthony T. Reder, Neurology
- Steven Roth, Anesthesia and Critical Care
- Kamal Sharma, Neurobiology
- Betty Soliven, Neurology
- Gopal Thinakaran, Neurobiology
- Paul Vezina, Psychiatry
- Xiaoxi Zhuang, Neurobiology

Assistant Professor

- David Biron, Physics
- Stephanie Dulawa, Psychiatry
- David Freedman, Neurobiology
- Christopher J. Lowe, Organismal Biology and Anatomy
- Jason MacLean, Neurobiology
- Abraham Palmer, Human Genetics
- Brian Prendergast, Psychology
- Daniel Spergel, Medicine

Emeritus Faculty

- Robert L. Perlman, Pediatrics

The Committee on Neurobiology is an interdepartmental committee designed to provide training and instruction for students interested in the biology of the nervous system, and to encourage communication and the exchange of ideas
between faculty members and students interested in neurobiology. Recent technical and conceptual developments in neuroscience have produced remarkable growth in this field. The committee reflects this growth in its structure, having members from different departments whose research interests include a broad spectrum of approaches from the biochemical and molecular to the behavioral and comparative. The committee aims to provide broad training in technical and theoretical aspects of the neurosciences.

## The Degree of Doctor of Philosophy

Students initially are admitted to the Division of the Biological Sciences and must meet divisional requirements. The progress of each student will be supervised during the first one or two years by the chair of the Committee on Neurobiology until the student chooses a thesis advisor. Upon choosing a thesis advisor, an advisory committee chaired by a faculty member who is not the student's thesis advisor is formed. The advisory committee consists of at least four faculty members with a majority being members of the Committee on Neurobiology. As a student's focus changes, the composition of the advisory committee may be modified.

Each student is required to take at least nine basic science courses. Usually these courses will be taken during the first year and part of the second year. Required courses include a series of courses on cellular, developmental, molecular and systems neurobiology and a course in cell biology. Elective courses focus on topics such as neuropharmacology, systems neurophysiology, development, physiology of ion channels and statistics.

During the first year, in addition to taking courses, students rotate through different laboratories. There is not a required minimum of rotations but students usually rotate through two to four laboratories and pick a research lab by the end of their first year. Toward the end of the second year, students write a preliminary examination consisting of a critical essay, which is followed by an oral defense. The topic of this exam does not overlap with the expected topic of thesis research. During the third or fourth year, the student writes a thesis proposal and defends this before the advisory committee. For the purposes of the divisional requirements, this is the examination testing the candidate's qualifications for candidacy.
The original observations included in the final Ph.D. dissertation should be judged suitable for publication. The final oral examination for the Ph.D. degree consists of a public seminar and a private defense conducted by the advisory committee and by other such members of the University faculties as may be deemed suitable.

## COURSES

Courses that are currently established as part of the committee curriculum are listed below.

## Neurobiology, Committee on Courses

NURB 31900. Molecular Mechanisms of Cell Signaling. 100 Units. Edit Course
Data - default
Cells in the body communicate with each other by a variety of extracellular signals (e.g., hormones, neurotransmitters) and processes such as vision and olfaction, as well as diseases such as cancer, all involve aspects of such signaling processes. The subject matter of this course considers molecular mechanism of the wide variety of intracellular mechanisms that, when activated, change cell behavior. Both general and specific aspects of intracellular signaling are covered, with an emphasis on the structural basis of cell signaling.
Instructor(s): W.-J. Tang Terms Offered: Spring
Prerequisite(s): "BIOS 20181-20183 or 20191-20193, and 20200"
Equivalent Course(s): BIOS 26317,CPHY 31900
NURB 33800. Animal Models of Neuropsychiatric Disorders. 100 Units. Edit Course Data - default
This course will cover the development, validation, and use of animal models of neuropsychiatric disorders. A wide range of animal models will be covered including behavioral, pharmacological, and genetic models, with an emphasis on mouse models. The disorders covered will range from those with unknown etiology to those with known single-gene causes. Disorders covered will include schizophrenia, mood disorders, obsessive-compulsive disorder, and autism spectrum disorders.
Instructor(s): S. Dulawa Terms Offered: Spring
Equivalent Course(s): BIOS 25129
NURB 34700. Neurobiology of Disease II. 100 Units. Edit Course Data - default This seminar course is devoted to understanding pathogenic mechanisms of neuronal death, neurodegenerative disease, and neuronal repair. Weekly seminars are given by experts in the basic and clinical aspects of neurodegenerative diseases. For each lecture, students are provided with a brief description of clinical and pathological features of a given set or mechanistic category of neurodegenerative diseases that is followed by a more detailed description of the current status of knowledge of several of the prototypical pathogenic mechanisms.
Instructor(s): C. Gomez, Staff Terms Offered: Spring
Prerequisite(s): BIOS 24246
Equivalent Course(s): BIOS 24247,CPNS 34700

NURB 40700. From Structure Coordinates to Protein Function. 100 Units. Edit Course Data - default
The course uses the atomic coordinate of proteins to explore how molecular machinery work in the context of physiological functions (vision, fight or flight) and human diseases (cancer). We begin by exploring protein components that make up the signal transduction pathway and how these components are assembled for the various physiological functions of humans. We then proceed to consider the physical properties of proteins. We conclude by discussing the protein-targeted therapeutics of human diseases. Computer graphic exercises and in-class student presentations complement the lecture topics.
Instructor(s): W.-J. Tang Terms Offered: Winter. L.
Prerequisite(s): Completion of a Biological Sciences Fundamentals sequence. Biochemistry strongly recommended. Recommended for AP5 students. Equivalent Course(s): BIOS 21339,CABI 40700

## Department of Organismal Biology and Anatomy

Chair

- Robert K. Ho


## Professors

- Michael I. Coates
- Martin Feder
- Edwin L. Ferguson, Molecular Genetics \& Cell Biology
- Robert K. Ho
- Michael LaBarbera
- Raphael Lee, Surgery
- Daniel Margoliash
- Victoria E. Prince
- Paul Sereno
- Neil H. Shubin

Associate Professors

- Melina E. Hale
- Nicholas G. Hatsopoulos
- Clifton Ragsdale, Neurobiology
- Callum Ross
- Urs C. Schmidt-Ott


## Assistant Professors

- Sliman Bensmaia
- Ilya Ruvinsky, Ecology and Evolution


## Lecturers

- Mark Westneat

Emeritus Faculty

- James A. Hopson
- R. Eric Lombard

The Department of Organismal Biology and Anatomy (OBA) has a long history of training students in integrative organismal biology. During the 1970's, the focus of the (then) Department of Anatomy shifted from the classic purview of Anatomy departments in the middle of the $20^{\text {th }}$ century - histology, neurobiology, and cell biology - to more comparative and functionally oriented topics and an explicit focus on vertebrate evolutionary biology and functional morphology. The
neurobiology section of the department expanded first into explicitly comparative areas and later into neuroethology. Over the next twenty years the department evolved into its present configuration with research and teaching foci which include biomechanics/functional morphology, organismal neurobiology, evolutionary developmental biology, and vertebrate evolutionary biology, all unified by a shared reference point in the biological hierarchy - the organism - an entity we see as the natural reference for all of the biological sciences since it is the natural unit of selection. We see the intellectual areas presently housed in OBA as inextricably and naturally connected. To understand the organismal level in biology requires an understanding of both how organisms have been shaped over evolutionary time scales and how they are generated on developmental time scales, the various interacting tissue and organ systems that generate organismal functions, and the mutual feedback among these functional, evolutionary, and developmental processes. The high degree of connectivity among our core disciplines is exemplified by the integrative nature of student dissertation projects in OBA and by the high level of interaction and collaboration among our faculty; both faculty and graduate student research in OBA frequently span several of these areas. In recent years there has been a resurgence of interest in and appreciation for organismal-level biology on the national level, putting molecular, genetic, and computational tools and information to use to understand broader systems-level questions. OBA has been actively positioning itself as a leader in research and graduate training in this endeavor.

Research and training in the Department focus on the integration of five overlapping areas:

- Biomechanics is concerned with the application of concepts and methods from engineering and physics to biology. It involves analyses of the mechanical forces involved in animal behaviors such as feeding and locomotion and in fluid flow in blood vessels and in other organ systems.
- Developmental biology is concerned with the processes underlying the development of organisms. Work on developmental biology in the department places particular emphasis on the interface between development and evolution.
- Neuroethology is concerned with the evolution of the nervous system and with the neuronal mechanisms underlying natural behaviors.
- Paleobiology is concerned with the interrelationships between organisms and with their evolutionary histories.
- Physiology is concerned with the mechanisms of organismal function. Work in the department on physiological problems focuses on the evolution of physiological systems and on the relationship of the organism to its environment.

Training in the department places an emphasis on familiarity with a broad range of ideas and skills in organismal biology. Although students can conduct research in any of the areas represented in the department, they are encouraged to develop research programs that capitalize on the talents of two or more faculty members with different perspectives. The department also encourages students to interact with other units on campus (such as the Department of Ecology and Evolution
and the Committees on Developmental Biology, Evolutionary Biology, Genetics, and Neurobiology) as well as the Field Museum of Natural History, the Brookfield and Lincoln Park Zoos and the Shedd Aquarium. Students earning doctorates through the department will be qualified, following suitable postdoctoral training, for research and teaching careers in biology departments, anatomy departments and museums.

## DEGREES

## MASTER OF SCIENCE

Students are not admitted to the department for the sole purpose of obtaining a Master of Science degree, but this degree is awarded to students from other academic units who require a Master of Science degree as one requirement for the doctorate.

## DOCTOR OF PHILOSOPHY

The requirements for the Doctor of Philosophy are as follows:

- Course requirements are individualized and are defined for students early in their stay in the department, based on the students background and interests. Students must fulfill the divisional requirement of serving as a teaching assistant in two courses.
- The preliminary examination, consisting of a written segment which covers a range of topics in organismal biology, as well as both the oral and written presentation of a directed research project or dissertation research proposal.
- The completion of a research project and the presentation of a dissertation satisfactory to the department faculty.
- The passing of a final oral examination.


## ADMISSION

We strongly advise students considering application to the department to begin preparation of their application early in the autumn quarter, so that all materials will arrive by the December 1, deadline. The department requires GRE General Test scores from all applicants, and strongly recommends submission of GRE subject test scores in biology. Foreign applicants whose first language is not English also must submit TOEFL test scores with their application materials. Further information also may be obtained from the department's home page on the World Wide Web, at http://pondside.uchicago.edu/darwin/, or by sending an email to Darwin@uchicago.edu.

## COURSES

Didactic and seminar courses are offered in each of the departmental research foci. The specific courses presented vary from year to year. A list of current courses can be obtained by contacting the Administrative Director of Graduate Programs.

Students are encouraged to take courses related to their interests in other academic units on campus.

## Organismal Biology \& AnATOmy Courses

ORGB 33750. Chordates: Evolution and Comparative Anatomy. 100 Units. Edit Course Data - default
Chordate biology emphasizes the diversity and evolution of modern vertebrate life, drawing on a range of sources (from comparative anatomy and embryology to paleontology, biomechanics, and developmental genetics). Much of the work is lab-based, with ample opportunity to gain firsthand experience of the repeated themes of vertebrate body plans, as well as some of the extraordinary specializations manifest in living forms. The instructors, who are both actively engaged in vertebrate-centered research, take this course beyond the boundaries of standard textbook content.
Instructor(s): M. Coates Terms Offered: Spring
Prerequisite(s): Biological Sciences Fundamentals sequence. Recommended for AP5 students.
Equivalent Course(s): BIOS 22250,EVOL 30250
ORGB 34200. Biological Fluid Mechanics. 100 Units. Edit Course Data - default Prior physics course required; prior chemistry and calculus courses recommended. This course introduces fluid mechanics and the interactions between biology and the physics of fluid flow (both air and water). Topics range from the fluid mechanics of blood flow to the physics (and biology) of flight in birds and insects.
Instructor(s): M. LaBarbera. L. Terms Offered: Winter
Prerequisite(s): Completion of the general education requirement for the biological sciences
Equivalent Course(s): BIOS 22242,EVOL 34200
ORGB 34300. Biomechanics of Organisms. 100 Units. Edit Course Data - default Prior chemistry, physics, and calculus courses recommended. This course examines how organisms cope with their physical environment, covering the properties of biological materials, mechanical analysis of morphology, and principles of design optimization. We emphasize support systems of organisms but also examine aspects of cardiovascular design. Mechanical properties of biomaterials are analyzed in relation to their underlying biochemical organization and biophysical properties, with mathematical treatment at an introductory level. The lab research project is optional.
Instructor(s): M. LaBarbera. L. Terms Offered: Winter 2013
Prerequisite(s): Completion of the general education requirement in the biological sciences
Equivalent Course(s): BIOS 22243,EVOL 34300

## Department of Pathology

## Chair

- Vinay Kumar, Pathology


## Professors

- Albert Bendelac, Pathology
- Richard DeMay, Pathology
- Yang Xin Fu, Pathology
- Godfrey Getz, Pathology
- John Hart, Pathology
- Aliya Husain, Pathology
- Thomas N. Krausz, Pathology
- Vinay Kumar, Pathology
- Stephen Meredith, Pathology
- Jonathon Miller, Pathology
- Anthony G. Montag, Pathology and Surgery
- José Quintans, Pathology and The College
- Hans Schreiber, Pathology
- Lucia Schuger, Pathology
- Jerome Taxy, Pathology
- Jerrold Turner, Pathology
- James Vardiman, Pathology
- Martin Weigert, Pathology
- Robert Wollmann, Pathology and Neurology
- K-T Jerry Yeo, Pathology

Associate Professors

- John Anastasi, Pathology
- Beverly Baron, Pathology
- Alexander Chervonsky, Pathology
- Thomas F. Gajewski, Pathology and Medicine
- Barbara Kee, Pathology
- Mark Lingen, Pathology
- Susana Marino, Pathology
- Shane Meehan, Pathology
- Ting-Wa Wong, Pathology

Assistant Professors

- Tatjana Antic, Pathology
- Anthony Chang, Pathology
- Karen M. Frank, Pathology
- Katja Gwin, Pathology
- Loren Joseph, Pathology
- Ivan Moskowitz, Pathology
- Jeffrey Mueller, Pathology
- Peter Pytel, Pathology
- Husain Sattar, Pathology
- Peter Savage, Pathology
- H. Rosie Xing, Pathology

Emeritus Faculty

- Cyril Abrahams, Pathology
- Frank W. Fitch, Pathology
- Seymour Glagov, Pathology
- Martin Goss, Pathology
- Zdenek Hruban, Pathology
- Josephine Morello, Pathology
- Hyman Rochman, Pathology
- Donald A. Rowley, Pathology
- Benjamin H. Spargo, Pathology
- Francis H. Straus II, Pathology


## Instructors

- Nikolina Babic, Pathology
- Sandeep Gurbuxani, Pathology
- Elie Richa, Pathology

Clinical Associates

- Jerome Dickstein, Pathology
- Ward Reeves, Pathology
- Elizabeth Sengupta, Pathology

The Department of Pathology previously joined with the Committee on Molecular Medicine to offer a joint program, Molecular Pathogenesis and Molecular Medicine. The Graduate Program in Molecular Pathogenesis and Molecular Medicine offers a program of study leading to the Doctor of Philosophy degree in Pathology. Fields of particular emphasis include immunobiology, vascular biology, and atherosclerosis, neurodegenerative disease, gastrointestinal epithelial biology, molecular oncology, and respiratory biology.

Instruction includes courses in biochemistry, defense reactions, cellular and molecular pathology, cell, molecular and genetic biology, cancer biology and immunology that are generally completed within the first two years of study. Each student must select a faculty sponsor who is willing to supervise his or her thesis research. Such faculty members are generally in the Department of Pathology but may be chosen from other departments in the Division of the Biological Sciences if the research program is considered suitable by the departmental graduate student advisory committee.

The Department of Pathology's graduate program is integrated within the Biomedical Sciences Cluster, which also includes graduate programs from the Committee on Cancer Biology, the Committee on Immunology, the Committee on Microbiology, and the Committee on Molecular Metabolism and Nutrition. The five academic units share several common courses and additional common events for students and faculty within the cluster. The goal of the cluster system is to encourage interdisciplinary interactions among both trainees and faculty, and to allow students flexibility in designing their particular course of study.

## ADMISSION

Students interested in obtaining the Ph.D. in Pathology should apply directly to the Molecular Pathogenesis and Molecular Medicine program by December 1st of each year and indicate Molecular Pathogenesis and Molecular Medicine as their field of specialization.

## The Degree of Doctor of Philosophy

Ph.D. requirements include:

1. Completion of 9.5 course credits consisting of basic science, pathology and elective courses
2. A preliminary exam in the form of a mock NIH-style grant proposal
3. A dissertation based on original research
4. A final thesis examination

## PATHOLOGY COURSES

PATH 30010. Immunopathology. 100 Units. Edit Course Data - default Five examples of diseases are selected each year among the following categories: autoimmune diseases, inflammatory bowel diseases, infection immunity, immunodeficiencies and gene therapy, and transplantation and tumor immunology. Each disease is studied in depth with general lectures that include, where applicable, histological analysis of diseased tissue samples and discussions of primary research papers on experimental disease models. Special emphasis is placed on understanding immunopathology within the framework of general immunological concepts and on experimental approaches to the study of immunopathological models.
Instructor(s): B. Jabri Terms Offered: Winter
Prerequisite(s): Consent of instructor
Equivalent Course(s): BIOS 25258,IMMU 30010

# CLINICAL DEPARTMENTS IN the Biological Sciences 

Faculty in the Division of the Biological Sciences participate in undergraduate and graduate medical education through the Pritzker School of Medicine, and maintain a vital clinical enterprise through the University of Chicago Medical Center. Twelve clinical departments offer a wide variety of educational and research opportunities to students and treatment options to patients. In addition, one of these departments, described in the section on the Basic Biological Sciences, offers graduate programs leading to the PhD degree: Radiology (Medical Physics). Brief descriptions of each of the clinical departments appear below. Additional details about our clinical departments can be found by visiting the Biological Sciences Division and Pritzker School of Medicine websites: http://www.bsd.uchicago.edu/ and http://pritzker.uchicago.edu/

## Department Of Anesthesia and Critical Care

The Department of Anesthesia and Critical Care offers clinical training and educational and research opportunities for qualified students at all levels. While one mission of the department is to provide high quality clinical anesthesia (including pain therapy, intensive care, and perioperative management), the Department of Anesthesia and Critical Care also maintains active research programs in neurobiology, echocardiography, patient safety, psychomotor pharmacology, clinical pharmacology (including herbal medications in conjunction with the TANG Center), and outcomes research. Educational opportunities for students occur at the undergraduate level, in graduate courses that are led by our faculty, during the course of the medical school curriculum, and at the post graduate level. We also provide pre doctoral and post doctoral positions in our laboratories and provide post residency clinical training in critical care, pain management, cardiothoracic anesthesia and pediatric anesthesia. Individuals seeking opportunities for research or study within the department are invited to call the Chairman of the Department of Anesthesia and Critical Care, Pritzker School of Medicine, 5841 South Maryland Avenue, MC 4028, Chicago, IL 60637, telephone: (773) 702-2545.

## Department of Family Medicine

The Department of Family Medicine was established by Bernard Ewigman, MD MSPH, who was recruited as the Founding Chairman in 2002. Since that time, the Department has grown to include many clinical practices, over 70 faculty members, medical student education, a residency program, fellowship programs, and a practice based research network. The Department is based primarily at the University of Chicago, the NorthShore University Health System and in the communities served both on the south and north sides of the Chicagoland area. The Department is unique in its focus on community based practice,
education in community based settings, and research and scholarship relevant to improving primary care in both urban and suburban practice and the health of the communities we serve.

## Department of Medicine

The Department of Medicine is staffed with over 200 full time members. The department's 14 subspecialty sections cover every field of internal medicine. These sections include cardiology, dermatology, endocrinology, emergency medicine, gastroenterology, geriatrics, general internal medicine, genetic medicine, hospital medicine, nephrology, infectious disease, hematology/ oncology, pulmonary/critical care medicine and rheumatology. Besides providing a full range of outpatient care and consultative services, these sections conduct basic, translational and clinical, research. The faculty not only is involved in extensive clinical teaching but also provides ample opportunities, facilities and support for clinical and research training.

Although the ultimate research effort of the Department is directed toward the study of disease, strict adherence to this principle imposes limits that are too narrow, since advancements in other branches of science promote health sciences as well. Students are encouraged to participate in clinical and laboratory research always taking place.

For further information, please contact: Executive Administrator, Department of Medicine, Pritzker School of Medicine, 5841 South Maryland Avenue; Chicago, IL 60637, (773) 702-9670.

## Department of Neurology

The Department of Neurology offers clinical training and research opportunities in the study of the nervous system and in neurological disorders. The department has a number of educational programs directed towards medical students, graduate students, residents and post residency fellows. These programs offer instruction in basic and translational research and in clinical neurology as well as the subspecialties of neurology that include pediatric neurology, neuroimmunology, neurovirology, clinical neurophysiology and sleep disorders, stroke, movement disorders and cognitive disorders. The department does not admit students or offer a degree program. Nevertheless, opportunities are available for students who have been admitted to a Ph.D. program to pursue research under the direction of the several of the department's faculty who direct laboratory research programs in basic neuroscience and/or neurological disease research. Post doctoral and post residency positions are also available. Candidates for graduate and post graduate study are invited to visit the faculty and explore opportunities for research. Please contact the department at (773) 702-6390.

## Department of Obstetrics and Gynecology

The Department of Obstetrics and Gynecology is located in the Chicago Lyingin Hospital in Hyde Park, which is an integral part of the University of Chicago Medical Center complex. The department is dedicated to the health care of women and has an outpatient clinic adjacent to the hospital. The faculty care for women with high risk pregnancies, gynecologic malignancies, those requiring complex gynecologic and pelvic reconstructive surgery as well as minimal invasive surgery, reproductive health and complex contraception, and problems of reproductive endocrinology \& infertility, including assisted reproductive technologies.

The educational activities of the department are multi-faceted and include medical students, residents and fellows under the supervision of the faculty. We have recently established an affiliation with an excellent community-based academic institution in Evanston, NorthShore University Health System. This led to a major expansion of our clinical and research activities which are carried out within the department at both sites and encompass basic translational laboratory investigation, clinical trials and population-based epidemiology. We encourage students, interns, and residents to participate in these scientific endeavors and a large number pursue careers in academic medicine.
Our Departmental activities take place in the outpatient setting, the labor and delivery suite, the operating rooms, the inpatient wards, and in our laboratories. Research opportunities are available in all the subspecialty areas as well as genetics. Subspecialty fellowships are also available in Family Planning, Maternal -Fetal Medicine and Urogynecology and Pelvic Reconstructive Surgery. For more information, please call (773) 702-6726.

## Department of Pathology

Please see the listing under Basic Biological Sciences.

## Department of Pediatrics

The Department of Pediatrics offers instruction and research in normal and abnormal growth and development of infants and children and in the prevention, diagnosis and treatment of illness in children. All educational activities are integrated with research and scholarly endeavors to advance knowledge in the field of child healthcare. The Department of Pediatrics has clinical and research facilities at the University of Chicago Children's Hospital; at La Rabida Children's Hospital and Research Center (children's chronic diseases); at the University of Chicago Friend Family Health Center at 55th and Cottage Grove Avenue; and at ambulatory clinical facilities at pediatric offices located in the southern suburbs and northwest Indiana.

Comprising over 100 faculty and research associates, the department conducts extensive research programs in a wide range of disciplines related to child health, growth, development and public policy. Research is conducted at all of the
sites mentioned above. Postdoctoral fellows, both M.D.s and Ph.D.s, as well as undergraduate medical students conduct research and receive research education guided by departmental faculty.

Candidates for graduate and post graduate study are invited to visit with the various faculty to explore a wide range of opportunities. Contact the office of the department chair at the University of Chicago Children's Hospital, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637, or call (773) 702-6205.

## DEPARTMENT OF PSYCHIATRY and Behavioral Neuroscience

Full time faculty in the Department of Psychiatry and Behavioral Neuroscience teach and deliver inpatient, outpatient, and consultation services in mood disorders, anxiety disorders, personality disorders, eating disorders, addictive disorders, electroconvulsive therapy, and schizophrenia. Primary and affiliated teaching and clinical institutions besides the University of Chicago Medical Center include Mercy Hospital, Evanston Hospital, and the Chicago Lakeshore Hospital. Assessments include psychiatric diagnostic evaluation, psychological testing, neuropsychological testing, and other structured evaluations. Interventions may include a broad range of individual, family, and group therapies, including cognitive behavioral, psychodynamic, and psychopharmacologic treatments. Specialties in the Child and Adolescent Section include attention deficit hyperactivity disorder, disruptive behavior disorders, developmental disorders, and behavioral and learning difficulties. Major research efforts across the Department are in molecular pharmacology, behavioral psychopharmacology, behavioral and molecular genetics, affective neuroscience and neuroimaging, and psychopharmacology.
The department does not offer any degrees, but elective opportunities are available for degree candidates from other programs. Major educational opportunities for medical students, graduate students, interns, residents, fellows, other physicians and clinical psychologists are linked to through http:// psychiatry.bsd.uchicago.edu/.

For more information, please contact the Psychiatry Office of Education at (773) 702-0529 or the Chair of Psychiatry at (773) 834-4083, further contact information available at http://psychiatry.bsd.uchicago.edu/.

## DEPARTMENT OF RADIATION and Cellular Oncology

The Department of Radiation and Cellular Oncology currently provides clinical radiation oncology services at two major practice locations: the University of Chicago's Center for Advanced Medicine (DCAM and the Outpatient Care Center (OCC) at the University of Illinois at Chicago. Approximately 1900 patients per year are treated at these facilities. The department facilities include six linear accelerators,
and three simulators. Computing facilities include VAX workstations for clinical use, and Sun, IBM, Silicon Graphics, DEC workstations for research use.

The department stresses both a basic science approach to radiation oncology and state of the art investigation of molecular aspects of cancer through joint research programs with faculty members in the Division of the Biological Sciences.

The Department of Radiation and Cellular Oncology, in conjunction with the Department of Radiology, offers programs leading to the S.M. and Ph.D. degrees to medical physics. For more information, refer to the Committee in Medical Physics listing.

## Department of Radiology

Please see the Graduate Program in Medical Physics listing under Basic Biological Sciences.

## Department of Surgery

The Department of Surgery has a very active research program spanning the basic, translational, and clinical sciences. While traditionally surgery has focused on the excision of diseased tissues and repair of injury, it is now equally concerned with specific interventions that facilitate tissue regeneration, supplement the body through the transplantation of organs and the implantation of synthetic materials and tissues developed in vitro, and target particular diseased cells or modulate the behavior of normal cells.

Research in the Department of Surgery is organized into several focus areas including transplantation immunology and inflammation, carcinogenesis and metastasis, tissue regeneration and engineering, epithelial pathobiology, and cardiothoracic and vascular research. Each of these areas encompasses multiple clinical specialties within the Department. The Department also leads the University of Chicago-Argonne Bioengineering Institute for Advanced Surgery and Endoscopy (BIASE), a collaborative effort with scientists at Argonne National Laboratory to develop novel therapeutic approaches and medically relevant instruments.

Faculty members of the Department of Surgery are members of a variety of graduate programs in the Biological Sciences Division, and are also extensively involved in the Medical Scientist Training Program (M.D.-Ph.D). Graduate and medical students interesting in participating in research within the Department should contact individual investigators or:

Karl S. Matlin, Ph.D.
Vice-Chairman of Research
Department of Surgery
University of Chicago
5841 S. Maryland Avenue, MC5032, Room J557 SBRI
Chicago, Illinois 60637-1470
773-834-2242
kmatlin@surgery.bsd.uchicago.edu

# The PritzKer SCHOOL OF MEDICINE 

## Mission

At the University of Chicago, in an atmosphere of interdisciplinary scholarship and discovery, the Pritzker School of Medicine is dedicated to inspiring diverse students of exceptional promise to become leaders and innovators in science and medicine for the betterment of humanity.

## Overview

The University of Chicago matriculated its first class of medical students in 1927 and today is a national leader in training physicians and physician-scientists. In recognition of the generous support extended to the medical school from the Pritzker family of Chicago, the medical school was renamed the Pritzker School of Medicine in 1968. The great traditions which underlie the school's history include the presence of a full-time teaching faculty devoted to working with students, a strong emphasis on research and discovery, and a commitment to translating the most recent advances in biomedical science to the bedside.

The Pritzker School of Medicine is unique among medical schools in that it is a part of the academic Division of the Biological Sciences. This situation offers medical students a wide array of opportunities for interdisciplinary research, learning and collaboration between the basic and clinical sciences. Surveys conducted by the Association of American Medical Colleges over the last several years consistently show the University of Chicago among the top schools in the nation as a producer of faculty members at academic medical centers.
In 2009, the Pritzker School of Medicine began rolling out a reorganized curriculum, known as the Pritzker Initiative. The new curriculum emphasizes active learning, integration among the clinical and basic sciences, and scholarship and discovery. The Pritzker curriculum begins with the introduction to the Human Body, which runs from early August through October and includes lectures from nearly 30 University of Chicago faculty members. Beginning in late September, first years students are introduced to the Scientific Foundation of Medicine series. This series spans the first two years of study guiding students through such themes as Response to Injury, Neurobiology, and Clinical Pathophysiology and Therapeutics. Students also begin seeing patients during their first quarter as part of the longitudinal Physician-Patient-Society-Systems (P2S2) course. This course includes modules on Health Care Disparities and the Social Context of Medicine. Students have access to a state-of-the-art clinical performance center which uses standardized patients and videotaped performance to educate students in taking a history, performing a physical examination, and clinical decision making. By the time students enter their clerkship rotations during the end of their second year of studies they are considered part of the health care team. During their clinical
years, students participate in eight clinical clerkships, a subinternship and a series of elective experiences at the nationally ranked University of Chicago Medical Center and NorthShore University HealthSystem.

Building on Pritzker's legacy of producing research scholars, the revamped curriculum also includes a Scholarship and Discovery thread which requires the completion of a mentored scholarly project. Students have the option to engage in scholarship in medical education, quality improvement, community health, and global health. During the pre-clinical years, students acquire core skills in research methodology and biostatistics and return to their designated scholarly area during their fourth year. The Pritzker School of Medicine's curriculum culminates with the Transitions to Internship Capstone course which provides graduating fourth year students with the practical skills they need to transition seamlessly into graduate medical education.

## The University of Chicago Medical Center

The University of Chicago Medical Center serves as the teaching hospital for the Pritzker School of Medicine. Routinely rated as one of the best hospitals in the United States by U.S. News \& World Report, the medical center is a leader in research and treatment of disorders such as cancer, gastrointestinal disease, diabetes, lung disease, heart disease, neurological disorders, musculoskeletal disorders and others. The center contains over one hundred specialty clinics and provides medical care to more than 300,000 patients a year.

The Medical Center consists of more than 3.5 million gross square feet in more than 25 buildings devoted to research, teaching and patient care. In 2009, the tenstory Knapp Center for Biomedical Discovery added another 330,000 square feet of research space. In 2013, the planned New Hospital Pavilion, designed by renowned architect Rafael Viñoly, will add another 1.2 million square feet of clinical space. The Medical Center currently has over 700 attending (or principal) physicians, as well as more than 600 residents and fellows (physicians working in advanced specialty training in medical science, leading to specialty board certification). Faculty members associated with the Medical Center rank fifth nationally in National Institutes of Health (NIH) research funding per investigator and in National Academy of Science membership per 100 faculty. The medical center is the major provider of health care for the immediate neighborhood and has engaged in a long-term effort to construct a more rational collaborative system of doctors' offices, clinics, community hospitals and academic centers to provide care for the 1.1 million people who live on the South Side of Chicago. Community-based training opportunities include relationships with nearby physicians and hospitals, and an academic affiliation with the NorthShore University Health System, which includes three suburban hospitals. At the tertiary care level, the medical center draws referrals from the entire region, including northern Indiana. Patients with particularly complex or obscure medical problems often travel long distances to the University of Chicago Medical Center for treatment. The center includes a National Cancer Institute Comprehensive Cancer Research Center; a Howard Hughes Medical Institute; a National Diabetes Research and Training Center; a National

Clinical Nutrition Research Unit; the Special Center for Research in Arteriosclerosis; the MacLean Center for Clinical Medical Ethics; the Joseph P. Kennedy, Jr. Mental Retardation Research Center; the Center for Health and the Social Sciences and the Clinical Pharmacology Center. It is also the site of two additional national clinical research units and has widely recognized research programs on digestive diseases, anti-cancer medications, cell biology of cardiac and skeletal muscle, transplantation biology, lipoprotein-cell surface interactions, nuclear medicine and imaging, and receptors and response proteins in reproductive tissue. It has regional burn and perinatal units and an emergency care center augmented by a specially equipped and staffed medical helicopter.
Requests for an application and other inquiries should be addressed to the Admissions Department, The University of Chicago Pritzker School of Medicine, 924 E. $57^{\text {th }}$ Street, BSLC 104, Chicago, IL 60637. Email: pritzkeradmissions@bsd.uchicago.edu

## NorthShore University Health System

Headquartered in Evanston, Ill., NorthShore University HealthSystem (NorthShore) is a comprehensive, fully integrated, healthcare delivery system that serves the greater North Shore and northern Illinois communities. The system includes four Hospitals - Evanston Hospital, Glenbrook Hospital, Highland Park Hospital and Skokie Hospital. In addition, the health system has more than 2,400 affiliated physicians, including a 600-physician, multispecialty physician group practice with over 70 office locations - NorthShore University HealthSystem Medical Group. Further, NorthShore is committed to excellence in its academic mission and supports teaching and research as the principal teaching affiliate for the University of Chicago Pritzker School of Medicine.

The NorthShore University HealthSystem Research Institute focuses on clinical and translational research, including leadership in outcomes research and clinical trials.

The HealthSystem has significant capabilities in a wide spectrum of clinical programs, including neurosciences, cancer, heart, orthopaedics, high-risk maternity and pediatrics. NorthShore is a national leader in the implementation of innovative technologies, including electronic medical records, (EMR). In 2003, the HealthSystem was among the first in the country to successfully launch a system wide EMR with demonstrable benefits in quality, safety and service to patients. NorthShore has been recognized by multiple national organizations for this notable achievement.

# COMbined MD/PHD PROGRAMS IN THE Division of The Biological Sciences and Pritzker School Of Medicine 

The University of Chicago's Pritzker School of Medicine has an exceptionally rich tradition of interdisciplinary scholarship. Each year, typically 15 to 20 percent of the graduating medical school class also graduates with a PhD. In the spirit of this tradition, The Pritzker School of Medicine offers a wide selection of joint degree programs for individuals interested in the critical interface of medicine, biological sciences, and society.

Students interested in combining clinical and biomedical research can combine their MD training with education toward a PhD in one of the degree granting units (see section on Basic Sciences) within the Biological Sciences Division. The Pritzker School of Medicine is also home to several highly competitive and award winning NIH funded MD/PhD training programs including the Medical Scientist Training Program (MSTP) and the Growth and Development Training Program (GDTP). Students interested in pursuing a PhD degree in the Humanities or Social Sciences can do so as part of a unique MD-PhD program in Medicine, Social Sciences and Humanities (MESH). This program includes the NIH funded MD-PhD program in Medicine, the Social Sciences and Aging. Students may also graduate with additional master degrees in business, law or policy.

## Medical Scientist Training Program

The University of Chicago Medical Scientist Training Program is a challenging interdisciplinary training program in biomedical sciences which leads to an MD from the Pritzker School of Medicine and to a PhD in the newly-created Interdisciplinary Scientist Training Program (ISTP). Our trainees graduate prepared to assume successful leadership roles in the evolving world of $21^{\text {st }}$ century academic biomedicine. Being one of the earliest programs to obtain federal funding in 1967, the MSTP at the University of Chicago is currently one of the longest running in the country.

The MD is awarded through the Pritzker School of Medicine, one of the top 15 graduate schools in the nation. With the introduction of the Pritzker Initiative in Autumn 2009, students will be educated in smaller classes with more individual attention from faculty, with an emphasis on active learning and scholarship, will be integrated among disciplines when possible, and in an atmosphere that highlights the relationship between basic and clinical sciences.

For their graduate work, trainees will be part of the ISTP, the degree-granting arm of the MSTP. This program is a novel, adaptable mechanism for students to obtain highly-integrated, interdisciplinary training. Trainees will be part of a flexible PhD program that offers superb educational opportunities and rigorous training in the highly integrated environment of Chicago Biomedicine at The University of Chicago. The ISTP also provides a programmatic identity that fosters a seamless
progression of our students through the medical and graduate phases of their training.

The program is designed for students who seek broad careers in biomedical related research and a desire to apply both clinical and research expertise to solve the most pressing problems in medical science. Typically students begin their fulltime PhD research after completion of their second year of medical studies and return to medical school after they have successfully defended their PhD thesis. On average, MSTP trainees complete both degrees in 8 years.

## Growth and Development Training Program

The Growth and Development Training Program (GDTP) is a unique opportunity available to University of Chicago medical students who decide to pursue an advanced PhD degree after they have started medical school. The program began over 40 years ago and in 2003 received the first NICHD Mentor Award for Excellence in Research Training.

Entry into the program is available for students who have completed two years (occasionally one year) of medical studies. Students wishing to be considered for the program generally acquire relevant laboratory experience, fulfill at least some graduate courses requirements and seek out a research sponsor and graduate degree unit during their first two years of medical studies, in anticipation of their application to the program.

The program is unique in that it offers medical students the opportunity to pursue a Ph.D. degree after they have started medical school. This represents a major opportunity for students at the Pritzker School of Medicine, who frequently become so enthusiastic about research during their first or second year of medical school that they decide to take a leave from medical studies to pursue a Ph.D. degree. A wide variety of Ph.D. degree granting units is available to trainees, most often in the Biological Sciences Division.
Students interested in the program may submit formal applications in the winter quarter of their first or second year of medical studies. When all necessary supporting material, including transcripts and letters of recommendation, is received, the students undergo two formal interviews. Decisions are announced in the spring, with appointment to the grant in July. Demonstrated interest and commitment to basic research, as evidenced by prior experience and accomplishment, as well as strong academic record, are major criteria for selection.

Trainees in the program receive a maximum of five years of support which generally includes three years of support during the Ph.D. phase and the remainder of the M.D. training (the two clinical years). Financial aid covers full tuition, fees and a stipend supplemented to national competitive levels to support living expenses.

For further information about this program, please visit: http://
pritzker.uchicago.edu/jointdegrees/gdtp/

## MD-PhD Program in Medicine, Social SCiences and Humanities (MESH)

The program is based on the premise that physicians should acquire special competence in another area of scholarship in order to address the overlapping social, economic, scientific, ethical, legal and humanistic problems which medicine as an enterprise, and as a profession, faces today.

Doctoral studies may be pursued in any of the departments within the social sciences (including Anthropology, Economics, History, Philosophy, Political Science, Psychology or Sociology) or humanities, in the Committee on Social Thought or the Conceptual and Historical Studies of Science Division, or the schools of divinity or public policy. Research may also be conducted through the Center for Health and the Social Sciences, the Morris Fishbein Center for the Study of the History and Science of Medicine, or the MacLean Center for Clinical Medical Ethics. Following completion of their doctoral studies, students in the program are expected to return to medical school to resume work toward the M.D. degree.

For further information about this program, please visit: http:// pritzker.uchicago.edu/jointdegrees/mesh/

# THE DIVISION OF THE PHYSICAL SCIENCES 

Dean

- Robert Fefferman

Associate Dean

- Michael J. Foote

Dean of Students

- Richard Hefley

The Division of the Physical Sciences includes the Departments of Astronomy \& Astrophysics, Chemistry, Computer Science, Geophysical Sciences, Mathematics, Physics, and Statistics. It also includes the Enrico Fermi Institute, the James Franck Institute, and the (interdivisional) Institute for Biophysical Dynamics. Graduate degrees are awarded only by the departments and the Biophysical Sciences program, but students in physical sciences programs often conduct their research under the auspices of the research institutes.

Undergraduate programs in the physical sciences are administered by the College. Detailed descriptions of programs leading to the bachelor's degree may be found in the College's annual publication, Courses and Programs of Study.

## ADmission TO GRaduate Programs in the Division

Applicants for admission to graduate studies in a particular branch of the Physical Sciences should refer to individual department entries for specific admissions requirements.

An applicant who has received a bachelor's degree or the master's degree from an accredited college or university may be admitted on the basis of his or her previous academic record.

An applicant who has completed at least two years of college work with superior standing in the basic courses of a special field and an adequate record of general studies but who does not have a four year bachelor's degree may be admitted to the division to study toward a higher degree. However, failure to qualify for a higher degree leaves the student with no degree. Admission on this basis is recommended only for those with high aptitude for their major field and with not more than two deficiencies in general education covering the areas of English, modern foreign languages, humanities, social science, and biological science.

A person may be admitted as a graduate student at large or as a returning scholar for the purpose of studying a definite subject or subjects for which he or she has an adequate background. Admission is considered upon the basis of an abbreviated application, such credentials as may be appropriate, and a clearly defined statement
of objectives. Application is made to the Graham School of General Studies, Judd Hall, 5835 Kimbark Avenue, Chicago, IL 60637.

## Financial Aid

Most graduate students at the doctoral level in the Division of the Physical Sciences receive some form of financial support. Almost all advanced students engaged in thesis research have research assistantships and receive stipends from the research sponsor's contract or grant. A merit tuition scholarship normally accompanies such assistantships. Since teaching experience is a requirement for the Ph.D. degree in all departments, many students, usually in their first and second years of graduate study, serve as teaching assistants in undergraduate courses offered by their departments. Other forms of support include fellowships provided by the National Science Foundation, the U.S. Department of Education, and various private foundations. The University provides a limited number of special scholarships and fellowships for outstanding students from its own student aid funds and from privately endowed funds.

## DEGREES

Normally students admitted to a degree program are expected to be in continuous, full time residence until the degree has been conferred.
Since individual departmental degree requirements may change, students should always contact their department for current degree requirements and regulations.

## MASTER OF SCIENCE

Each department offers a Master of Science program; however, most students enter graduate study with the objective of obtaining a Ph.D. degree.

There are, however, several special masters programs in the division for students who want to specialize in specific areas in the physical sciences without getting a Ph.D. The Department of Mathematics offers a program, Master of Science in Financial Math, which focuses on mathematics in finance. The Department of Computer Science offers a professional master's program to students who seek employment in the computer industry. The interdisciplinary master's program in the Physical Sciences is aimed at students who wish to broaden or deepen their knowledge of a specific area in the physical sciences. Finally, the Division, together with the Harris School, offers a Masters degree in Environmental Science and Policy.
Master of Science students are required to register full time in the division for a minimum of three quarters, during which time they must satisfactorily complete a minimum of nine individual courses.

## DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy is conferred in recognition of high accomplishment and ability in the candidate's chosen field. It is understood that the completion of a specified number of courses and a given period of residence do
not ensure the granting of this degree. The requirements for the degree of Doctor of Philosophy are as follows:

1. Completion of the University's residence requirements.
2. Admission to candidacy for the degree. Admission to advanced work in the division does not necessarily imply admission to candidacy for a degree, which is contingent upon the recommendation of the department in which the student is working. At the appropriate time departments will submit to the dean of students in the division, on behalf of each student, an application requesting approval of admission to candidacy. Approval of the application certifies that:

- The candidate has begun investigation for a dissertation
- The candidate's department recommends admission to candidacy (following satisfactory completion of individual examination requirements)
- The candidate has satisfied any foreign language requirement of his or her department

3. The passing of final examination(s) in accordance with one of the following plans:

- A basic examination in the major fields of interest in the department or departments of specialization and a final oral examination in the field covered by the dissertation, or
- In the absence of a preliminary or basic examination, passing comprehensive examinations covering major fields of interest in the department of specialization, including the field of the dissertation.

4. Acceptance by the department and the Dissertation Office of a dissertation submitted for the degree.

# Divisional Master's Program in the Physical Sciences 

## Director

- Jonathan L. Rosner

The Division of the Physical Sciences offers a one year program leading to the degree of Master of Science in Physical Sciences. The program is interdisciplinary in character with a focus on general education. It will be of interest to those who wish to broaden or deepen their knowledge in areas of physical science but do not seek a Ph.D., and also to those who are undecided about seeking a Ph.D. degree or what area of research specialization to choose. In addition, it should be of interest to students who plan to obtain a Ph.D., but wish to strengthen their background in their chosen area of specialization before starting a Ph.D. program.

Students in the program are required to complete nine courses and a master's research project. The courses are chosen from among the courses being offered in the division, and at least four of these courses must be graduate courses in a single department or associated with a specified interdepartmental track (such as environmental science, biochemistry/physics, computational methods in physical science, and optics/imaging). In order to accommodate students who are seeking to broaden their knowledge of physical science, a student may be allowed to take as many as three advanced undergraduate courses in fields outside of his or her undergraduate major. In all cases, the director and the student's advisor must approve the chosen curriculum.
A typical masters project would consist of performing or assisting with a laboratory research experiment (for experimentalists) or performing some numerical simulation experiments (for theorists). The project normally is chosen in the winter quarter and carried out during the spring quarter. A masters paper summarizing the results of the project is required.

## ADMISSION

A student seeking admission to the program normally must have a bachelor's degree in a traditional discipline of the physical sciences. GRE scores for the general test (verbal, quantitative, and analytical) must be submitted, and it is strongly recommended that the GRE subject score in an area of physical science also be submitted. TOEFL scores are required for applicants from foreign (non English speaking) countries. The application deadline is February 1 for admission for the following autumn, although later applications will be considered on a space available basis.

Interested persons should contact the Office of the Dean of Students in the Division of the Physical Sciences, Room 116, Jones Laboratory, 5747 South Ellis Avenue, Chicago, IL 60637, telephone: (773) 702-8789, e mail: rhefley@uchicago.edu.

## DEPARTMENT OF ASTRONOMY AND ASTROPHYSICS

## Chair

- Edward "Rocky" Kolb

Professors

- John Carlstrom
- Kyle Cudworth
- Joshua A. Frieman
- Doyal A. Harper, Jr.
- Stephen Kent
- Edward Kibblewhite
- Alexei Khokhlov
- Edward W. Kolb
- Arieh Königl
- Richard G. Kron
- Donald Q. Lamb, Jr.
- Stephan Meyer
- Angela Olinto
- Patrick E. Palmer
- Robert Rosner
- Noel M. Swerdlow
- Simon P. Swordy, Physics
- James W. Truran, Jr.
- Michael Turner
- Donald G. York


## Associate Professors

- Fausto Cattaneo
- Scott Dodelson
- Nickolay Y. Gnedin
- Wayne Hu
- Andrey Kravtsov

Assistant Professors

- Hsiao-Wen Chen
- Michael Gladders
- Clement Pryke

Emeritus Faculty

- James W. Cronin
- Roger Hildebrand
- Richard H. Miller
- Takeshi Oka, Chemistry
- Eugene Parker
- Peter O. Vandervoort

The Department of Astronomy \& Astrophysics awards the Ph.D. degree, and carries on programs of research and graduate instruction on the quadrangles of the University; at Adler Planetarium, Chicago; at Apache Point Observatory, Sunspot, New Mexico; and at the Yerkes Observatory, Williams Bay, Wisconsin.

## ADMISSION

Students seeking admission to the department for graduate study should have the training in physics and mathematics that is represented by the conventional bachelor's degree. Candidates for admission should request an admissions packet from the director of admissions. Applicants must submit recent scores on the Graduate Record Examination Aptitude and Advanced Physics tests.

## Program of Study

The program leading to the Ph.D. degree in Astronomy \& Astrophysics has four parts: a program of eighteen required and elective courses, a research project, the candidacy examination, and research leading to a dissertation. The program and the requirements for graduate degrees are summarized below. A more detailed description of the program and the degree requirements can be obtained from the Director of Admissions, 5640 South Ellis Avenue, Chicago, IL 60637. This additional information is also available on line at http:// astro.uchicago.edu/academics/prospective.html. Students may apply online athttps://gradapplication.uchicago.edu/intro/ast/intro1.cfm, or request application forms at http://astro.uchicago.edu/academics/request.html.
During the first academic year, students normally take the course sequence:

| ASTR 30100 | Stars | 100 |
| :--- | :--- | :--- |
| ASTR 30200 | Astrophysics-2 | 100 |
| ASTR 30300 | Astrophysics-3 | 100 |
| ASTR 30400 | Astrophysics-4 | 100 |
| ASTR 30500 | Radiative Processes in Astrophysics ${ }^{100}$ | 100 |
| ASTR 30600 | Radiation Measurements/Inst | 100 |


| ASTR 30700 | Prep: Summer Research Project | 100 |
| :--- | :--- | :--- |
| PHYS 33000 | Mathematical Methods of Physics | 100 |
| or PHYS 34100 <br> or CHEM 36100 | Advanced Quantum Mechanics I | Wave Mechanics and Spectroscopy |
| PHYS 32200 <br> or PHYS 34200 <br> or CHEM 36200 | Advanced Electrodynamics I | Advanced Quantum Mechanics II |
| Quantum Mechanics | 100 |  |

Astronomy 30100-30700; and either PHYS 33000 Mathematical Methods of Physics and PHYS 32200 Advanced Electrodynamics I or PHYS 34100 Advanced Quantum Mechanics I and PHYS 34200 Advanced Quantum Mechanics II; or CHEM 36100 Wave Mechanics and Spectroscopy and CHEM 36200 Quantum Mechanics.

These basic courses provide the foundation for subsequent study. Students with unusually strong preparation may be excused from one or more of these courses. During the summer quarter following the first academic year students undertake a research project. This project may be carried out on the University campus, in one of the laboratories or observatories of the University, at a national laboratory or national observatory, or in another suitable research facility. Students enroll in ASTR 30700 during spring quarter of their first year as they prepare for this project, and in Astronomy 30900 in fall quarter of their second year to present a seminar reporting on the project.

At the beginning of the second academic year, students take the Ph.D. candidacy examination. After passing the examination, they begin research leading to the doctoral dissertation under the direction of a faculty member. During the second and subsequent years of graduate study, students take ASTR 30900, and at least eight elective courses. Four of the electives must normally be chosen from among a list that includes the upper $3 x$ level courses in Astronomy as well as several appropriate Physics courses. The remaining electives typically are $3 x$ level or $4 x$ level courses in Astronomy \& Astrophysics. With the approval of the dissertation committee, other graduate level lecture courses in the Division of the Physical Sciences may be substituted for some of the elective courses described above. The selection of topics in the advanced $4 x$ level courses and the times at which they are offered are governed by the interests of the faculty and students. Participation in research is an important part of the graduate program. In a $3 x$ level research course, (ASTR 37100) students work closely with members of the faculty on problems of current research. The research courses at the $4 x$ level involve independent research, including research leading to the doctoral dissertation.
During the academic year, the department offers a weekly colloquium series dealing with current research in astronomy, astrophysics, and related fields. These colloquia are given by visiting scientists as well as members of the faculty. A number of other seminars on specialized topics in astrophysics are held each week throughout the year, including a weekly series of lectures by the faculty on their research programs.

## The Degree of Doctor of Philosophy

Students who enter the department intending to proceed toward the degree of Doctor of Philosophy are normally required to complete the $3 x$ level program of lecture courses described above. With the approval of the student's dissertation committee, modifications of this requirement may be made. Students are expected to maintain a grade point average of at least 3.0 in their course work.
At the end of the first year, after completing the basic $3 x$ level program, students who wish to begin research for the degree of Doctor of Philosophy must pass both the written and oral portions of the candidacy examination, which includes the subject matter of the basic $3 x$ level astronomy courses and the required physics courses. The candidacy examination is offered at the beginning of the autumn quarter. A student whose performance on this examination does not merit continuation in the program may retake the examination once. Ordinarily, students who do not proceed toward the Ph.D. are given the opportunity to complete the master's degree. Graduate students who are permitted to proceed toward the degree of Doctor of Philosophy may elect to receive an incidental Master of Science degree after having passed the candidacy exam.

The requirements for the degree of Doctor of Philosophy include the divisional requirements. In particular, a student who is permitted to begin research for the dissertation based on a satisfactory performance on the candidacy examination must still formally establish candidacy for the degree according to divisional requirements. A degree candidate must fulfill a two quarter teaching requirement, which is explained in detail in the departmental graduate program document. A candidate for the degree must submit a dissertation acceptable to the department and pass a final oral examination on the dissertation. The Ph.D. degree is awarded only after the dissertation or a paper based on the dissertation is submitted for publication in a recognized scientific journal. Demonstration of proficiency in a foreign language is not required.

## FACILITIES FOR RESEARCH

A student may perform the research for the doctoral dissertation on the quadrangles of the University or at the Yerkes Observatory.Astudent working at either location has access to the complete facilities of the department.

Moreover, there exists in the other departments and in the institutes of the Division of the Physical Sciences a variety of research programs which bear on modern astrophysics. Contact with persons working in these programs is possible and is encouraged. In fact, students research programs may be carried out under the direction of faculty members in these departments and institutes.
Computing resources for the department include a multiprocessor SUN SPARC server, networked printers, and a multitude of workstations and PCs, with Ethernet and LocalTalk (AppleTalk) connections in every room. This equipment is linked via ethernet with the computation facilities of the Division of the Physical Sciences, which include SUN and SGI servers, and a high speed line links them to the super computer facilities of the National Center for Supercomputer Applications
at the University of Illinois at Urbana and of the Argonne National Laboratory (operated by the University of Chicago). These resources form a powerful facility for computational astrophysics.

The principal instruments at the Yerkes Observatory are the 40 inch refracting telescope and the 41 inch and 24 inch reflecting telescopes, all of which are used for both instrument testing and research. The department's adaptive optics group has actively used the 41 inch reflector in recent years, and the astrometric program uses the refractor extensively. The Yerkes Observatory also houses an excellent library as well as engineering facilities and shops that are heavily used in developing instrumentation for the department's wide ranging activities.

The University of Chicago is a member of the Astrophysical Research Consortium, a consortium of several universities that has built and operates a 3.5 meter new technology telescope on Sacramento Peak in Sunspot, New Mexico. This remotely operated facility was designed to permit rapid changes in instrumentation and in observing mode.

The University is also a key partner in the Sloan Digital Sky Survey (SDSS). The SDSS is a project for which a 2.5 meter new technology telescope is mapping the Northern Galactic sky cap with five band photometry and obtaining redshifts of approximately one million galaxies and one hundred thousand QSOs.

By arrangement, facilities of the Argonne National Laboratory may be used by students in the department. These include unique facilities for experimental nuclear astrophysics, and a computation center equipped with vector and parallel processing computers.

Students also may take advantage of the resources of the Fermi National Accelerator Laboratory (Fermilab) in Batavia, Illinois, including the computational facilities, through its Institute for Cosmology and Particle Physics, funded by the National Aeronautics and Space Administration, or through the program in Experimental Astrophysics.

In recent years, some students have also used national facilities such as the National Radio Astronomy Observatory, the National Optical Astronomy Observatories, and the NASA Ames Research Center.

## Astronomy and Astrophysics COURSES

ASTR 30100. Stars. 100 Units. Edit Course Data - default
For course description contact Astronomy and Astrophysics.
ASTR 30200. Astrophysics-2. 100 Units. Edit Course Data - default For course description contact Astronomy and Astrophysics.

ASTR 30300. Astrophysics-3. 100 Units. Edit Course Data - default For course description contact Astronomy and Astrophysics.

ASTR 30400. Astrophysics-4. 100 Units. Edit Course Data - default For course description contact Astronomy and Astrophysics.

ASTR 30500. Radiative Processes in Astrophysics. 100 Units. Edit Course Data default

ASTR 30600. Radiation Measurements/Inst. 100 Units. Edit Course Data - default For course description contact Astronomy and Astrophysics.

ASTR 30700. Prep: Summer Research Project. 100 Units. Edit Course Data - default For course description contact Astronomy and Astrophysics.

ASTR 30900. Research Project Sem: Astr. 100 Units. Edit Course Data - default For course description contact Astronomy and Astrophysics.

ASTR 37100. Precandidacy Research: Astron. Var Units. Edit Course Data - default For course description contact Astonomy and Astrophysics.

# Graduate Program in Biophysical Sciences 

Chair

- Tobin R. Sosnick

Web Site
http://biophysics.uchicago.edu/
The Graduate Program in Biophysical Sciences is designed to transcend traditional departmental boundaries for the purpose of training scientists who will excel at addressing biological problems using quantitative and physical approaches. The program, which grants a Ph.D. degree from both the Biological and Physical Science Divisions, serves the needs of students who have strong backgrounds in the physical sciences and are intrigued by the interface of the physical, biological and computational sciences. Dual mentorship is a fundamental component of the program. Each student chooses a pair of dissertation advisors from across our diverse faculty and fully participates in both of these research groups.
The participating faculty in the program are drawn from The Physical and The Biological Sciences Divisions, and Argonne National Laboratory and hold appointments in:

## Departments \& Committees

- Ben May Dept. for Cancer Research
- Biochemistry \& Molecular Biology
- Cancer Biology
- Cell \& Molecular Biology
- Cell Physiology
- Chemistry
- Computational Neuroscience
- Computer Sciences
- Developmental Biology
- Genetics, Genomics \& Systems Biology
- Immunology
- Mathematics
- Microbiology
- Neurobiology
- Pathology
- Pediatrics
- Physics


## INSTITUTES \& CENTERS

- Inst. for Biophysical Dynamics
- Computation Institute
- Inst. for Genomics \& Systems Biology
- James Franck Institute
- Center for Adv. Radiation Sources
- Materials Research Science \& Engineering Center
- Office of Shared Research Facilities


## CURRICULUM

The curriculum assumes that entering students are well-grounded in the physical sciences. During the first year, students are expected to take one class per quarter from both the Biological Sciences Division and the Physical Sciences Division (6 courses total). The Biological Organization Series consists of courses chosen to rapidly teach the fundamental biology necessary to enter a laboratory and begin serious interdisciplinary research. To build upon students' strengths in the physical sciences, the first year includes three courses chosen from a list of graduate courses offered in Chemistry or Physics. The curriculum can be modified to fit the strengths and weaknesses in a student's background.

Students undertake a series of laboratory rotations as part of the process of identifying a dissertation topic. These rotations are usually performed during the Summer Quarter after the first academic year.

## InTERDISCIPLINARY PRACTICAL TRAINING

One of the unique advantages of the program is the 3 quarter laboratory course: From Production to Measurement and Analysis. In this intense, 16 hour a week course students deeply explore a series of important current instruments and techniques while carrying out the systematic characterization of several genes and their expressed proteins. The genes are chosen from the long list of 'unknown ORFs - Open reading frames that have been predicted by genome sequencing projects, but have never been examined further.
The laboratory course is managed by a full-time course director who works closely with the students to provide experimental and intellectual continuity. The laboratory course covers (1) sample preparation and high throughput selection methods (e.g. engineering, expression, synthesis, and labeling of proteins and nucleic acids) and high throughput selection methods (phage display, in vitro selection); (2) measurement (spectroscopy and imaging including single molecule methods, NMR, x-ray diffraction, and mass spectrometry, etc.); and (3) computational approaches (extracting information from large data sets, bioinformatics, simulation and modeling). Although it is impossible to cover all biophysical methods, the process of mastering a subset of the important techniques gives students the confidence and foundation to build in any direction.

The first section of this course is the four-week Biological Research Immersion, which starts in late August and ends before the start of Fall Quarter. The course continues through the Autumn and Winter Quarters.
The program in Biophysical Sciences is an inherently collaborative training program, and the foundation of collaboration is the ability to coherently express complex ideas. As part of the laboratory course, students are expected to give frequent presentations, both oral and written: Analysis of recent papers, background preparation before research seminars, overviews of upcoming experimental techniques, experimental proposals, and presentations of results. As a group, students also participate in two large projects during the year - building an advanced optical instrument from basic components, and writing a software package to simulate a biological process.

## DUAL MENTORSHIP

In order to truly bridge the expertise and approach of two scientific fields it is necessary to fully participate in both. The research program each professor maintains is a vibrant and dedicated research group whose members share in the daily successes and frustrations of their related questions. It is this shared intellectual exertion that moves a subject forward, and it is this environment that most efficiently teaches the deepest understanding. In our experience, this dual mentorship creates an unparalleled learning structure and will lead to the development of unimagined science.

For a list of trainers and their affiliations, details about admissions, and current information about this new and innovative program, see http:// biophysics.uchicago.edu/

## Department of Chemistry

## Chair

- Richard F. Jordan


## Professors

- Laurie Jeanne Butler
- Karl F. Freed
- Philippe M. Guyot Sionnest
- Chuan He
- Gregory Hillhouse
- Michael D. Hopkins
- Rustem F. Ismagilov
- Richard F. Jordan
- Stephen Kent, Biochemistry \& Molecular Biology
- Ka Yee Christina Lee
- Donald H. Levy
- Milan Mrksich
- Viresh Rawal
- Norbert F. Scherer
- Steven J. Sibener
- Hisashi Yamamoto
- Luping Yu

Associate Professors

- Aaron Dinner
- Sergey A. Kozmin
- David Mazziotti
- Dmitri Talapin
- Joseph A. Piccirilli, Biochemistry \& Molecular Biology

Assistant Professors

- Gregory Engel
- Jared Lewis
- Yossi Weizmann
- Jun Yin


## Emeritus Faculty

- R. Stephen Berry
- Brice Bosnich
- Robert N. Clayton, Geophysical Sciences
- Philip E. Eaton
- Robert Gomer
- Jack Halpern
- Robert Haselkorn, MGCB
- John C. Light
- James R. Norris, Jr.
- Takeshi Oka
- Stuart A. Rice

The Ph.D. program in the Department of Chemistry offers wide opportunity and unusual flexibility for advanced study and research, and is designed to encourage individuality, independence, and excellence in students. Most students select their research advisor by winter quarter of their first year and are engaged in research by the spring quarter. The department has neither a system of cumulative examinations nor a written major examination. There are relatively few course requirements and great flexibility as to which courses may be taken.
In the Division of the Physical Sciences barriers between departments are low. Students in the Department of Chemistry often take courses in other departments and can even earn the degree in chemistry for research that has been done under the supervision of a member of another department. Students are encouraged to fashion special programs of study under the guidance of the faculty.

## APPLICATION

A completed application will include undergraduate transcripts, three letters of recommendation, and the results of the GRE examination (to include the advanced test in chemistry). Foreign applicants must also submit the results of the TOEFL or IELTS.

Students are normally admitted beginning with the autumn quarter of each year. The sequential nature of some of our courses makes this the best time to begin graduate studies. Although applications may be considered at any time at the discretion of the admissions committee, students are strongly encouraged to complete their applications by December 31st. The department has no admissions quota and in recent years the entering class has numbered between 20 and 38.
A well defined Master of Science program of appropriate rigor is maintained, but the Department of Chemistry does not offer financial support to students whose degree goal is the master's degree. This degree is neither a prerequisite for, nor a forerunner of, the Ph.D. degree, although it may be acquired along the way if a student so desires.
The Department of Chemistry participates actively in the Medical Scientist Training Program (MSTP) administered by the Pritzker School of Medicine at the University of Chicago. MSTP is a structured six year program leading to both the M.D. degree and the Ph.D. in chemistry. Full tuition and a stipend are awarded for
the six year period. MSTP is funded by the National Institute of General Medical Sciences and is open only to U.S. citizens.

## Financial Support

All students admitted to the Ph.D. program are offered financial support. Generally this takes the form of a first year teaching assistantship which provides a complete merit tuition scholarship and pays a competitive monthly stipend. Teaching assistants are usually assigned to one of the undergraduate laboratory courses. Duties involve supervising one class section (13-18 students) for one afternoon per week, holding a discussion session and office hours, and assisting with grading. The total time required is about fifteen hours per week.

By the end of the third quarter students have usually selected their research supervisor. An appointment as a research assistant (stipend plus tuition) normally continues throughout the period of research.

There are several special supplemental fellowships and scholarships offered by the department and the University. All students seeking admission are automatically considered in the competition for these awards. No separate application is required. Students are urged to compete for the many national and other external fellowships available.

## ADVANCED DEGREES

The department administers basic examinations in the fields of inorganic, organic, and physical chemistry in the autumn, winter, and spring quarters. Graduate students are expected to take these examinations upon entering the department. Deficiencies evidenced by these examinations must be remedied and the examinations passed prior to the end of the third quarter of residence (not counting summer quarter).

In the first year, students must satisfactorily complete nine courses. At least six of these must be 30000 level courses from the offerings of the Department of Chemistry or of related departments in the Divisions of the Physical and the Biological Sciences, and of these six courses, at least two shall be in different areas of chemistry, e.g., inorganic, organic, or physical chemistry. For this purpose, inorganic chemistry courses are defined as Chemistry 30100-31100, organic chemistry courses as Chemistry 32100-33400, and physical chemistry courses as Chemistry 36100-38700. Grades of $C$ or better are expected. The remaining three courses may include Chemistry 35000 and/or 40000 level chemistry research courses; however, one may not register for these courses during the autumn quarter. An advisor assists students in formulating programs of study that will best satisfy personal needs and departmental requirements. Courses taken outside the department to satisfy the first year requirements must be approved by the advisor.
Students who have completed all courses with grades of C or better ( P in research courses) may be recommended for the S.M. degree; these students may, at the
discretion of a faculty member, be required to submit a paper on their work in CHEM 35000 or a 40000 level research course.
At the end of the spring quarter in the first year, the faculty review the student's overall record. Course performance is a major part of this review; a B average or better in all 30000 level courses (excluding CHEM 35000) is expected. At this time the department will advise students whether they are qualified to continue studies and to prepare for the Ph.D. candidacy examination described below. A student seeking admission to Ph.D. candidacy must take the candidacy examination before the end of his or her fifth quarter in residence (normally October for this purpose summer quarter is counted as a quarter in residence). This examination is based on the student's written research prospectus and on the discussion of scientific papers selected by the examining committee. The student presents the research prospectus to the committee, and must be prepared to discuss the relevant chemical literature, progress to date, plans for future work, and the relationship of the research to other chemical problems. The student is expected to conduct a critical analysis of the scientific papers selected by the committee.

The faculty review the recommendations of the candidacy examining committee and, after consideration of the student's academic record, vote on whether or not to recommend that the student be admitted to candidacy. All candidates for the Ph.D. degree are required to participate in some form of teaching. Normally this involves serving as a teaching assistant for three quarters.

The Ph.D. degree is granted upon satisfactory completion of scholarly research work, presented in a written thesis, discussed in a public seminar, and defended orally before a faculty committee.

Students should especially note the following:

- It is the responsibility of the individual research sponsor to monitor the progress of a student's research. Unsatisfactory progress may result in termination of financial support and/or dismissal from the Ph.D. program.
- The department will recommend formal admission to candidacy as soon as the student has:
- Satisfied the basic examination requirement
- Satisfied the course requirements
- Passed the candidacy examination
- Demonstrated satisfactory progress in research and teaching
- Students should consider satisfying any or all course requirements by taking proficiency examinations. Application to take a proficiency examination should be made directly to the person who will be teaching the particular course. The examinations will be administered during the first week of the quarter in which the course is offered. No stigma is attached to failing a proficiency examination.


## Chemistry Courses

CHEM 30100. Advanced Inorganic Chemistry. 100 Units. Edit Course Data - default Group theory and its applications in inorganic chemistry are developed. These concepts are used in surveying the chemistry of inorganic compounds from the standpoint of quantum chemistry, chemical bonding principles, and the relationship between structure and reactivity.
Instructor(s): M. Hopkins Terms Offered: Autumn
Prerequisite(s): CHEM 20100 and CHEM 26100
CHEM 30200. Synthesis and Physical Methods in Inorganic Chemistry. 100 Units. Edit Course Data - default
This course covers theoretical and practical aspects of important physical methods for the characterization of inorganic molecules. Topics may include NMR, IR, RAMAN, EPR, and electronic and photoelectron spectroscopy; electrochemical methods; and single-crystal X-ray diffraction.
Instructor(s): C. He Terms Offered: Winter
Prerequisite(s): CHEM 30100
CHEM 30400. Organometallic Chemistry. 100 Units. Edit Course Data - default This course covers preparation and properties of organometallic compounds (notably those of the transition elements, their reactions, and the concepts of homogeneous catalysis).
Instructor(s): G. Hillhouse Terms Offered: Autumn
Prerequisite(s): CHEM 20100
CHEM 30500. Nanoscale Materials. 100 Units. Edit Course Data - default
This course provides an overview of nanoscale phenomena in metals, semiconductors, and magnetic materials (e.g., the fundamental aspects of quantum confinement in semiconductors and metals, superparamagnetism in nanoscale magnets, electronic properties of nanowires and carbon nanotubes, surface plasmon resonances in nanomaterials, photonic crystals). Special attention is paid to preparative aspects of nanomaterials, colloidal and gas-phase syntheses of nanoparticles, nanowires, and nanotubes. Engineered nanomaterials and their assemblies are considered promising candidates for a variety of applications, from solar cells, electronic circuits, light-emitting devices, and data storage to catalysts, biological tags, cancer treatments, and drug delivery. The course covers state-of-the art in these and other areas. Finally, the course provides an overview of the experimental techniques used for structural characterization of inorganic nanomaterials (e.g., electron microscopy, X-ray diffractometry, small-angle X-ray scattering, STM, AFM, Raman spectroscopy).
Instructor(s): D. Talapin Terms Offered: Spring
Prerequisite(s): CHEM 20200 and 26300, or consent of instructor

CHEM 30600. Chemistry of the Elements. 100 Units. Edit Course Data - default This course surveys the descriptive chemistries of the main-group elements and the transition metals from a synthetic perspective, and reaction chemistry of inorganic molecules is systematically developed.
Instructor(s): D. Talapin Terms Offered: Winter
Prerequisite(s): CHEM 20100
CHEM 30900. Bioinorganic Chemistry. 100 Units. Edit Course Data - default This course covers various roles of metals in biology. Topics include coordination chemistry of bioinorganic units, substrate binding and activation, electron-transfer proteins, atom and group transfer chemistry, metal homeostasis, ion channels, metals in medicine, and model systems.
Instructor(s): C. He Terms Offered: Spring
Prerequisite(s): CHEM 20200 and 22200/23200
CHEM 31100. Supramolecular Chemistry. 100 Units. Edit Course Data - default This course develops the concepts of supramolecular chemistry (both organic and metal-based systems) and its applications. Coordination chemistry is introduced as a background to metal-based supramolecular systems. The chemistry and physical properties of transition metal complexes are presented, including crystal field theory, molecular orbital theory, magnetism, and electronic spectra. The mechanisms by which molecular motors operate are presented and reference is made to synthetic systems that attempt to emulate biological molecular motors.
Prerequisite(s): CHEM 20200 and 22200/23200
CHEM 32100. Physical Organic Chemistry I. 100 Units. Edit Course Data - default This course focuses on the quantitative aspects of structure and reactivity, molecular orbital theory, and the insight it provides into structures and properties of molecules, stereochemistry, thermochemistry, kinetics, substituent and isotope effects, and pericyclic reactions.
Instructor(s): J. Lewis Terms Offered: Autumn
Prerequisite(s): CHEM 22200/23200 and 26200, or consent of instructor
CHEM 32200. Organic Synthesis and Structure. 100 Units. Edit Course Data default
This course considers the mechanisms, applicability, and limitations of the major reactions in organic chemistry, as well as of stereochemical control in synthesis. Instructor(s): V. Rawal Terms Offered: Autumn
Prerequisite(s): CHEM 22200/23200 or consent of instructor
CHEM 32300. Tactics of Organic Synthesis. 100 Units. Edit Course Data - default This course discusses the important classes for organic transformation. Topics include carbon-carbon bond formation; oxidation; and reduction using a metal, nonmetal, or acid-base catalyst. We also cover design of the reagents and the scope and limitation of the processes.
Instructor(s): H. Yamamoto Terms Offered: Winter
Prerequisite(s): CHEM 22200/23200 or consent of instructor

CHEM 32400. Physical Organic Chemistry II. 100 Units. Edit Course Data - default Topics covered in this course include the mechanisms and fundamental theories of free radicals and the related free radical reactions, biradical and carbene chemistry, and pericyclic and photochemical reactions.
Prerequisite(s): CHEM 32100
CHEM 32500. Bioorganic Chemistry. 100 Units. Edit Course Data - default A goal of this course is to relate chemical phenomena with biological activities. We cover two main areas: (1) chemical modifications of biological macromolecules and their potential effects; and (2) the application of spectroscopic methods to elucidate the structure and dynamics of biologically relevant molecules.
Instructor(s): L. Yu
Equivalent Course(s): BCMB 32500
CHEM 32900. Polymer Chemistry. 100 Units. Edit Course Data - default
This course introduces a broad range of polymerization reactions and discusses their mechanisms and kinetics. New concepts of polymerization and new materials of current interest are introduced and discussed. We also discuss the physical properties of polymers, ranging from thermal properties to electrical and optical properties in both a solution state and a solid state. Our emphasis is on structure/ property relationship.
Prerequisite(s): CHEM 22200/23200 and 26300
CHEM 33000. Complex Chemical Systems. 100 Units. Edit Course Data - default This course describes chemical systems in which nonlinear kinetics lead to unexpected (emergent) behavior of the system. Autocatalytic and spatiotemporal pattern forming systems are covered, and their roles in the development and function of living systems are discussed.
Prerequisite(s): CHEM 22200/23200 and MATH 20100, or consent of instructor
CHEM 33100. New Synthetic Reactions and Catalysts. 100 Units. Edit Course Data - default

This course presents recent highlights of new synthetic reactions and catalysts for efficient organic synthesis. Mechanistic details and future possibilities are discussed. Prerequisite(s): CHEM 23300

CHEM 33200-33300. Chemical Biology I-II. Edit Course Data - default
This course emphasizes the concepts of physical organic chemistry (e.g., mechanism, molecular orbital theory, thermodynamics, kinetics) in a survey of modern research topics in chemical biology. Topics, which are taken from recent literature, include the roles of proteins in signal transduction pathways, the biosynthesis of natural products, strategies to engineer cells with novel functions, the role of spatial and temporal inhomogeneities in cell function, and organic synthesis and protein engineering for the development of molecular tools to characterize cellular activities.

CHEM 33200. Chemical Biology I. 100 Units. Edit Course Data - default Instructor(s): S. Kozmin Terms Offered: Winter
Prerequisite(s): Basic knowledge of organic chemistry and biochemistry

CHEM 33300. Chemical Biology II. 100 Units. Edit Course Data - default<br>Instructor(s): S. Kent Terms Offered: Spring<br>Prerequisite(s): Basic knowledge of organic chemistry and biochemistry

CHEM 33400. High-Throughput Methods in Chemistry. 100 Units. Edit Course Data - default
The course focuses on discovery of reactions, bioactive compounds, and materials by construction of chemical libraries and screening them for desired properties. Instructor(s): S. Kozmin

CHEM 35000. Intro To Research: Chemistry. Var Units. Edit Course Data - default For course description contact Chemistry.

CHEM 36100. Wave Mechanics and Spectroscopy. 100 Units. Edit Course Data default
This course presents the introductory concepts, general principles, and applications of wave mechanics to spectroscopy.
Instructor(s): K. Freed Terms Offered: Autumn
Prerequisite(s): CHEM 26300
CHEM 36200. Quantum Mechanics. 100 Units. Edit Course Data - default
This course builds upon the concepts introduced in CHEM 36100 with greater detail provided for the role of quantum mechanics in chemical physics.
Instructor(s): D. Mazziotti Terms Offered: Winter
Prerequisite(s): CHEM 36100
CHEM 36300. Statistical Thermodynamics. 100 Units. Edit Course Data - default This course covers the thermodynamics and introductory statistical mechanics of systems at equilibrium.
Instructor(s): A. Dinner Terms Offered: Autumn
Prerequisite(s): CHEM 26100-26200
CHEM 36400. Advanced Statistical Mechanics. 100 Units. Edit Course Data default
Topics covered in this course may include statistics of quantum mechanical systems, weakly and strongly interacting classical systems, phase transitions and critical phenomena, systems out of equilibrium, and polymers.
Instructor(s): G. Voth Terms Offered: Winter
Prerequisite(s): CHEM 36300 or equivalent
CHEM 36500. Chemical Dynamics. 100 Units. Edit Course Data - default This course develops a molecular-level description of chemical kinetics, reaction dynamics, and energy transfer in both gases and liquids. Topics include potential energy surfaces, collision dynamics and scattering theory, reaction rate theory, collisional and radiationless energy transfer, molecule-surface interactions, Brownian motion, time correlation functions, and computer simulations.
Instructor(s): S. Sibener Terms Offered: Spring
Prerequisite(s): CHEM 36100 required; 36300 recommended

CHEM 36800. Advanced Computational Chemistry and Biology. 100 Units. Edit Course Data - default
The theme for this course is the identification of scientific goals that computation can assist in achieving. The course is organized around the examination of exemplary problems, such as understanding the electronic structure and bonding in molecules and interpreting the structure and thermodynamic properties of liquids. The lectures deal with aspects of numerical analysis and with the theoretical background relevant to calculations of the geometric and electronic structure of molecules, molecular mechanics, molecular dynamics, and Monte Carlo simulations. The lab consists of computational problems drawn from a broad range of chemical and biological interests. L.
Instructor(s): K. Freed Terms Offered: Spring
Prerequisite(s): CHEM 26100-26200, or PHYS 19700 and 23400
Note(s): This course may not be used to meet requirements for the BS degree.
CHEM 36900. Materials Chemistry. 100 Units. Edit Course Data - default This course covers structural aspects of colloidal systems, surfactants, polymers, diblock copolymers, and self-assembled monolayers. We also cover the electronic properties associated with organic conducting polymers, organic light-emitting devices, and transistors. More novel topics of molecular electronics, nanotubes, quantum dots, and magnetic systems are also covered. The aim of the course is to provide a broad perspective of the various contributions of chemistry to the development of functional materials.

CHEM 37100. Advanced Spectroscopies. 100 Units. Edit Course Data - default This linear and nonlinear spectroscopy course includes notions on matter-radiation interaction, absorption, scattering, and oscillator strength. They are applied mostly with the optical range, but we briefly touch upon microwave (NMR, ESR) and X-rays at the extreme. We cover nonlinear optical processes such as coherent Raman, harmonic, and sum-frequency; induced transparency; slow light; and Xray generation. We also cover coherent and incoherent dynamical probes, such as pump-probe, echos, and two-dimensional spectroscopy.

CHEM 37200. Statistical Mechanics of Polymers/Glasses. 100 Units. Edit Course Data - default
The material in this course is designed to describe the basic statistical mechanics of polymers in dilute and semi-dilute solutions, including the use of path integrals and renormalization group methods. Lattice models are used to describe polymer melts and blends, focusing on miscibility and the descent into glass formation.
Prerequisite(s): CHEM 36400 or equivalent
CHEM 38700. Biophysical Chemistry. 100 Units. Edit Course Data - default This course develops a physicochemical description of biological systems. Topics include macromolecules, fluid-phase lipid-bilayer structures in aqueous solution, biomembrane mechanics, control of biomolecular assembly, and computer simulations of biomolecular systems.

CHEM 51100. Scientific Methods and Ethics. 100 Units. Edit Course Data - default This course prepares students for independent research by introducing them to the general methodology of scientific research.

## DEPARTMENT OF COMPUTER SCIENCE

## Chair

- John Goldsmith


## Professors

- Yali Amit, Statistics
- Laszlo Babai
- Andrew Chien
- Todd Dupont
- Ian Foster
- John Goldsmith, Linguistics
- Stuart A. Kurtz
- John Lafferty
- David B. MacQueen
- Ketan Mulmuley
- Partha Niyogi
- Michael J. O Donnell
- Alexander Razborov
- John Reppy
- L. Ridgway Scott
- Janos Simon
- Robert I. Soare
- Rick L. Stevens

Associate Professors

- Pedro Felzenszwalb
- Anne Rogers


## Assistant Professors

- Nina Hinrichs
- Gordon Kindlmann
- Risi Kondor

Adjunct faculty

- Geraldine Brady (adjunct assistant professor)
- Todd Nugent (adjunct assistant professor)
- Mark Shacklette (adjunct professor)
- Andrew R Siegel (adjunct associate professor)
- Michael Spertus (adjunct associate professor)

The Department of Computer Science is dedicated to advancing and improving the knowledge, understanding, and practice of computer science through basic research and education.

## ReSEARCH

We construe the field of computer science broadly, to include the complementary concepts of computation, information, and communication. We employ modes of inquiry and creation from pure mathematics to experiment and observation to design and engineering. We investigate computation, information, and communication as inherently interesting phenomena; we also investigate the many ways in which computational concepts engage other topics: artificial computational tools for science and scholarship, computational infrastructure for society.

Our current research may be classified into artificial intelligence, computational mathematics, programming systems, networks and distributed systems, scientific computing, and theoretical computer science.

## ARTIFICIAL INTELLIGENCE

We use language, vision, and learning as the organizing themes driving work in artificial intelligence.

Computational mathematics, scientific computing; mathematical, algorithmic, language and systems aspects of numerical computing; parallel and high performance computing.

## PROGRAMMING SYSTEMS

Our faculty emphasizes the formal definition, design, and implementation of programming languages, formal methods for software design, concurrency, and applications of scripting languages in scientific computing.

## NeTWORKS AND DISTRIBUTED SYSTEMS

Our faculty advance the principles, practice, and applications of large scale distributed and collaborative systems, particularly through leadership roles in the global computing grid and the study of peer to peer networks. Research areas include the design, implementation, and evaluation of systems, protocols, and applications.

## THEORETICAL COMPUTER SCIENCE

We investigate the fundamental descriptive and algorithmic concepts underlying the computational process and the intrinsic limitations to efficient computation. Our faculty specialize in complexity theory, computational geometry, algorithms, discrete random processes, distributed computing, combinatorics, computability theory, and programming language semantics.

In addition to these more traditional areas, we have a growing commitment to research in applied computing. Examples include: developing mathematical and computational methods to measure and graphically depict structure in threedimensional imaging modalities (like MRI and CT) and combining molecular dynamics simulations with chemical experimental data to gain an understanding of the motions and kinetics of biological molecules.

These efforts are enhanced by strong connections to the Computation Institute, which develops computational tools and techniques for a broad range of disciplines, including biological and physical sciences, medicine, law, the arts, and humanities; the James Franck Institute, which focuses on condensed matter physics; and the Institute for Biophysical Dynamics, which provides a forum for studying questions that arise at the boundary between the biological and physical sciences. In addition, we have collaborations with faculty in academic departments, including geophysics, linguistics, mathematics, physics, psychology, and statistics, as well as with the Division of Mathematics and Computer Science at Argonne National Laboratory (ANL). ANL is operated by the University of Chicago for the US Department of Energy.

## Graduate Programs

We offer two graduate curricula in computer science.

1. A graduate professional curriculum leading to the Master of Science (S.M.) degree, for students who wish to enter or advance themselves in computer science practice.
2. A graduate research curriculum leading to the Ph.D. degree that prepares students to perform advanced basic research in computer science either in industry or academia. Teaching experience is available for students preparing for academic careers.

Acquire further information about our Professional Programs or through our website http://masters.cs.uchicago.edu/ by writing to our CSPP Admissions, Department of Computer Science, University of Chicago, 1100 East 58th Street, Chicago, IL 60637, by telephoning 773834 3388. You may email any questions to our questions@cs.uchicago.edu email address.

Acquire further information about our educational programs by writing to Admissions, Department of Computer Science, University of Chicago, 1100 East 58th Street, Chicago, IL 60637, by telephoning (773) 702-6011, or through the Web at http://www.cs.uchicago.edu/.

## The Ph.D. Program

The department offers two Ph.D. tracks: a standard track and a computational mathematics track.

The detailed requirements for the Ph.D. degree and for the S.M. degree within the Ph.D. program can be found by visiting the Department's web page at http:// www.cs.uchicago.edu/. Here is a brief summary:

Our research curriculum does not offer an S.M. program; students admitted to the Ph.D. program receive their S.M. degrees along the way toward their Ph.D.

To obtain an S.M. degree, students in the Ph.D. program must fulfill the following requirements:

- Course requirements. Complete CMSC 31100 Big Ideas in Computer Science, plus a sequence of five core courses and four electives. The core courses include two in Theory, two in Systems, and one in Artificial Intelligence. Please refer to the web page for details regarding the core courses.

A modified set of core courses applies to the computational mathematics track (see the web site). The list of electives is frequently updated; we refer to the web page.
Students must complete the course requirements by the end of their second year of study. Students must receive a grade of at least B in all the nine courses and have a GPA of at least 3.00 in the five core courses.

- Write a Master's paper and pass a Master's examination.

To obtain a Ph.D. degree, students must meet enhanced S.M. requirements, including at least B on each of the nine courses and a GPA of at least 3.25 on the five core courses; plus the following:

- Pass the Candidacy exam
- Write and defend a Doctoral Thesis which contains significant original research in computer science.


## Financial Aid for Students in The Ph.D. Program

We expect to support all students who make satisfactory progress toward a doctorate. This support includes full tuition and a monthly stipend during the academic year that is competitive with offers made by other top ranked schools. To earn their stipends, students will have to perform part time work for the department as teaching assistants, research assistants, members of the technical staff, etc. The department also encourages prospective students to apply for all externally funded grants and fellowships for which they qualify.

## Admission to the Ph.D. Program

While most of our graduate students have majored in mathematics or computer science as undergraduates, applicants with other backgrounds have also been successful in our department. Students will succeed in the program if they are motivated to do research and have a strong general intellectual preparation to study in a particular field of computer science.

Students also need a reasonable foundation in mathematics, including calculus and linear algebra.

The required background for students depends on their intended areas of specialization. Applicants who expect to specialize in computational mathematics or theoretical computer science will need a more substantial mathematics background that includes advanced proof-based courses such as analysis, abstract algebra, probability and measure theory, logic, topology.

Applicants who expect to work in artificial intelligence (AI) will also want to have had some background in cognition, such as linguistics, cognitive psychology, or AI.

For specializing in programming languages and systems, the necessary background is much of a typical undergraduate computer science curriculum: programming languages, data structures, operating systems and algorithms.

Applicants interested in more application-oriented areas such as computational biology and visualization should have a more diverse background, including familiarity with topics like signal processing, applied mathematics, computer graphics, or statistics.

The department encourages all potential students to take an advanced test of the Graduate Record Examination (GRE). That advanced test does not need to be in computer science or mathematics, although these are generally the most helpful. In certain areas, such as Theory or AI, a mathematics GRE tends to be more helpful than a computer science GRE.

## TEACHING OppORTUNITIES FOR Students in the Ph.D. Program

The department takes its undergraduate teaching responsibilities very seriously, and offers supervised teaching opportunities, including lecturing, acting as teaching assistants, and working as lab assistants to its best graduate students. The program allows students to develop their teaching abilities and gain significant classroom experience.

## COMPUTING FACILITIES

In addition to general University computing facilities and our Undergraduate Computing Laboratory (which contains about four dozen Macintosh computers and two dozen Linux workstations with extensive peripherals and software), the Ryerson Research Computing Service provides the faculty, students, and postdoctoral associates in computer science with state of the art computing resources. We have the flexibility to adapt quickly to new research needs.

The resources include: 24 hour 7 day interactive computing services on a number of shared Unix/Linux computing servers and workstations interconnected by high speed ethernet; a workstation on each desktop (a total of more than 200 workstations); wireless connections; substantial amounts of personal file storage, backed up nightly for reliability and accessible transparently from all departmental
computers; printer service; web servers and access to the Internet; Linux clusters for research in parallel computing and High Performance Computing. The department also has access to highly parallel machines at ANL.

## COURSES

For the list of courses offered and the course descriptions, please consult the departmental web page at http://www.cs.uchicago.edu/courses.

## DEPARTMENT OF THE Geophysical Sciences

## Chair

- Michael J. Foote


## Professors

- David Archer
- Andrew M. Davis
- Michael J. Foote
- John E. Frederick
- Lawrence Grossman
- David Jablonski
- Susan M. Kidwell
- Michael C. LaBarbera, Organismal Biology \& Anatomy
- Douglas R. MacAyeal
- Michael J. Pellin
- Raymond T. Pierrehumbert
- Frank M. Richter
- David B. Rowley


## Associate Professors

- Nicolas Dauphas
- Dion L. Heinz
- Noboru Nakamura

Assistant Professors

- C. Kevin Boyce
- Fred Ciesla
- Albert S. Colman
- Pamela Martin
- Elisabeth J. Moyer
- Mark Webster

Research Associate (Prof.)

- Bruce A. Buffett
- Visiting Professor
- Ho Kwang Mao

Emeritus Faculty

- Alfred T. Anderson, Jr.
- Victor Barcilon
- Roscoe R. Braham, Jr.
- Robert N. Clayton
- Paul B. Moore
- Robert C. Newton
- David Raup
- William H. Reid
- Ramesh C. Srivastava
- Alfred M. Ziegler


## Program of Graduate Study

## OVERVIEW AND PHILOSOPHY

The department serves graduate students who seek the Ph.D. in earth, planetary, geological and environmental sciences and the paleontological and paleobiological disciplines of biological and historical sciences broadly conceived.
The Ph.D. signifies the graduate's mastery of the problems, techniques and knowledge covering the full spectrum of intellectual pursuit in the many disciplines listed above. The degree additionally acknowledges the candidate's contribution to specialized knowledge through original research conducted in experimental, observational and theoretical venues. The M.S. is also awarded to graduate students in the program, and is given in recognition of post-undergraduate scholarship. Students considering the program of graduate study should realize, however, that it is conceived primarily for study and research leading to the Ph.D.
The Department of Geophysical Sciences was created in 1961 when the departments of geology and meteorology of the university were united to better embrace the multidisciplinary nature of research and scholarship applied to earth, its place in the cosmos and its environmental and biological history. The precursor Department of Geology was founded in the 1890's and reflected the University of Chicago's distinctively modern philosophy toward education and research. What is today lauded as new, namely the approach to physical, chemical, biological and natural science of earth that values connections and multidisciplinary ways of thinking, was the original organizing principle of the university's activities in earth science at the time the university was first created. Faithful to its original conception, the department is exemplified today by the diverse, yet interactive, composition of the faculty, students and research activities.
Our program distinguishes itself from those at other institutions through our rigorous adherence to a principle that the path to knowledge in earth sciences is best traveled when disciplinary ways of thinking are applied interactively. To follow this path, our students and faculty engage each other in a constant exchange of ideas that spans a variety of specialized interests and disciplines. Indeed, the range of specialized interests and disciplines encompassed by our single intimate community
is, at typical universities elsewhere, housed in separate departments. The exchange of ideas our community offers is both literal (as when research techniques from one discipline are applied in another) and figurative (as when students of diverse background and interests attend a common seminar), and is marshaled through our philosophical view that intellectual power is drawn from many sources. The tension created by bringing together disparate disciplines with differing traditions leads to constructive discourse in our community.

## AREAS OF STUDY

Research, classroom teaching and seminar activity in the program reflect the long tradition of esteem directed toward multidisciplinary knowledge. Graduate study and research today thus ranges from geochemical approaches to nucleosynthesis and planet forming cosmochemistry to geomorphology, from evolutionary paleobiology to multi cellular automata, and from oceanic conveyor-belt circulation systems and biogeochemical cycles to subduction zone petrology. Graduate students are exposed to the breadth of intellectual activity in the physical and natural science of the earth through courses they take during their first two years of study and through weekly attendance of seminars where both faculty and visiting scientists present research lectures. Graduate students are expected to develop two skills. First is the ability to conduct scientific discourse across the full range of disciplines. Second is the ability to conduct original research leading to unique contributions in an area of specialization.

Research and teaching within the program is further amplified by associations with other groups within the university. The most notable programs allied with ours are: the committee on evolutionary biology (CEB, research on the evolution of life), the chemistry department (research on atmospheric and environmental chemistry), the materials research lab (research on planetary and interplanetary materials at high pressure and temperature), the Argonne National Lab (environmental chemistry, advanced computing, the advanced photon source, CARS), the environmental science program (teaching and public policy debate) and the environmental statistics program (analysis of environmental trends).

## STUDENT ADVISING

A distinctive element in the everyday life of the department is the mentoring relationship the faculty of the department provide for students of the program. In our program, students are regarded as colleagues, not subordinates. Students participate in an apprenticeship which is designed to teach through active learning both the tangible and intangible professional skills needed of a scientist. Students are guided in their learning and research activities by mentorship engaging both the program faculty and fellow students. This mentorship oversees both the course work activity and the student's research, and is conceived as a means of establishing the student as a full partner in research and scholarship. Formal mentoring activities involve regular academic advisory committee meetings that include a combination of faculty covering the student's field of specialty and faculty covering allied fields where cross disciplinary exchange of ideas or techniques may prove helpful to the student's progress. In addition to formal activities, mentoring also proceeds along
informal avenues: the department faculty prides itself in maintaining an open door atmosphere, where students seeking help or advice can readily find it down the hall.

## RESEARCH

Dissertation research can address any aspect of physical, chemical, biological and natural sciences of the earth, its life and environment, and the solar system environment from which the planets were formed. Typically, dissertation research begins in the second year of the student's residence after courses taken in preparation for the preliminary examination have been completed and an oral research prospectus has been defended.

## TEACHing, OUTreach and Professional Skills Development

Young scientists are faced with an ever increasing demand for breadth in the scope of their professional skills: from teaching to proposal writing, and from website design to mountaineering. To help prepare our students for the varied challenges they will encounter in their post graduate career, we involve them to the maximum extent possible in teaching, research planning, public outreach and field activity. While there are no strict requirements for teaching activities, the majority of our students participate in at least some teaching as laboratory assistants for the large, undergraduate-level classes taught by our faculty. Typical demands on a graduate student's time might involve four to eight hours a week of student contact time, and four to six hours a week of preparation and grading. To emphasize the value the university places on graduate student participation in undergraduate teaching, a slightly larger stipend is provided to teaching assistants over research assistants. In addition to teaching, our graduate students typically become involved in the scientific funding process through exposure to the efforts undertaken by faculty in the securing of research funds through the writing of proposals. Public outreach is also an important element of professional skills, and is emphasized through scientific web site development (required by funding agencies for grants funded in support of scientific research) and other activities (e.g., local science fairs and lectures at surrounding schools) which emphasize contact with the general public. Many of our graduate students engage in deep-field activity in various parts of the world. Field activities in the recent past have included dive trips to Central America for taphonomic research, fossil collecting expeditions to the St. Elias Mountains, and glaciological survey work on the Ross Ice Shelf and its icebergs.

## Curriculum

The diversity of intellectual pursuit encompassed by the program places students and faculty into a challenging position when confronted with the need to design a curriculum capable of preparing students of the program to become Ph.D. scientists. Our approach to this challenge is to focus on thinking tools that prepare students for research. Thinking tools embody knowledge of methodologies, awareness of fundamental scientific problems, understanding of current research areas and creative thought when encountering difficult questions. These tools are taught, in part, by a curriculum of courses that delve deeply into various subsets of knowledge covered by the department's scholarly interests. While a
student may enter the program with the ultimate goal of writing a dissertation in one area of specialization, courses taken in closely allied areas of specialization are often, by virtue of practicality, all that our curriculum offers. While this may seem detrimental to progress toward specialized research, in practice, the specific subject material used to build the student's base of knowledge and rigorous understanding of thought and methodologies is not strongly correlated with the student's subsequent success. Our curriculum of courses thus focuses on teaching notions of understanding and methodologies that are universal in their application to a wide range of specialized phenomena.

## Required Course Activities

This time period is divided into two parts, the pre-candidacy phase where the student focuses on course work and general scholarship, and the candidacy phase where the student focuses on specialized research directed to the completion of the dissertation. While flexibility is a distinct advantage of the department's small, intimate setting of graduate study compared to other, larger programs, graduate students are normally expected to progress through their study as follows. Classes are taken through the first two years of residence at the university, and a preliminary examination is taken normally in the spring of the second year. Classes are selected from the department's graduate courses, appropriate upper-level undergraduate courses and courses offered elsewhere in the university. Selection of courses is made through consultation with a faculty advisory committee, which meets regularly through the first two years of the student's residence.

The preliminary examination taken at the end of the second year of residence serves to promote students to candidacy for the Ph.D. The purpose of the examination is to ensure the student's progress in the two goals of graduate study: breadth of fundamental knowledge, and depth of knowledge in a particular area of specialization (chosen normally to be consistent with the student's anticipated dissertation topic).
The preliminary examination has two parts. The written part (taken either in one single sitting or as a series of written tests taken in conjunction with final exams of courses, depending on the particular situation) covers the aspects of knowledge addressed in courses and in the weekly seminars which students are expected to attend. The oral part requires the student to present a research prospectus to a committee of faculty advisors. The topic of this prospectus is normally expected to be the student's planned research activity directed toward the dissertation.

## THE DISSERTATION

The Ph.D. degree is awarded to the candidate who has completed a written dissertation, defended it orally to a body of scientists which includes members of the department's faculty (who have the responsibility to vote in favor or against acceptance of the dissertation), and who have submitted the dissertation to the university dissertation office in proper form.

## COURSES

Courses listed below are modified from year to year. Students are expected to consult course schedules published by the University for information regarding courses offered on an infrequent basis. A student's course load is expected to be two to four classes per quarter during the first five quarters (not including Summer Quarter) of residence. Over this period, the student will take a mixture of high level (designated by numbers greater than 30000) and medium level (designated by numbers in the 20000s) classes listed under the department's offerings, and appropriate courses offered by other departments of the university.

## Geophysical Sciences Courses

GEOS 35100. Fndls Of Fluid Mechanics. 100 Units. Edit Course Data - default For course description contact Geophysical Sciences.

GEOS 35200. Geophysical Fluid Dynamics. 100 Units. Edit Course Data - default For course description contact Geophysical Sciences.

GEOS 35300. Dynamics of Viscous Fluids. 100 Units. Edit Course Data - default For course description contact Geophysical Sciences.

GEOS 36300. Invertebrate Paleobiology and Evolution. 100 Units. Edit Course Data - default
This course provides a detailed overview of the morphology, paleobiology, evolutionary history, and practical uses of the invertebrate and microfossil groups commonly found in the fossil record. Emphasis is placed on understanding key anatomical and ecological innovations within each group and interactions among groups responsible for producing the observed changes in diversity, dominance, and ecological community structure through evolutionary time. Labs supplement lecture material with specimen-based and practical application sections. An optional field trip offers experience in the collection of specimens and raw paleontological data. Several "Hot Topics" lectures introduce important, exciting, and often controversial aspects of current paleontological research linked to particular invertebrate groups. Instructor(s): M. Webster L. Terms Offered: Autumn
Prerequisite(s): GEOS 13100 and 13200, or equivalent. Students majoring in biological sciences only; Completion of the general education requirement in the biological sciences, or consent of instructor. Equivalent Course(s): GEOS 26300,BIOS 23261,EVOL 32400

GEOS 36400. Principles of Paleontology. 100 Units. Edit Course Data - default The focus of this course is on the nature of the fossil record, the information it provides on patterns and processes of evolution through geologic time, and how it can be used to solve geological and biological problems. Lectures cover the principles of paleontology (e.g., fossilization, classification, morphologic analysis and interpretation, biostratigraphy, paleoecology, macroevolution); labs are systematic, introducing major groups of fossil invertebrates. (L) Instructor(s): M. Foote Terms Offered: Spring
Prerequisite(s): GEOS 13100-13200, or completion of the general education requirement in the biological sciences, or consent of instructor. Equivalent Course(s): GEOS 26400,BIOS 23255,EVOL 32300

## Department of Mathematics

Chair

- Peter S. Constantin

Professors

- Jonathan L. Alperin
- Laszlo Babai, Computer Science
- Alexander A. Beilinson
- Peter S. Constantin
- Kevin D. Corlette
- Jack D. Cowan
- Vladimir Drinfeld
- Todd Dupont, Computer Science
- Alex Eskin
- Benson Farb
- Robert A. Fefferman
- Victor Ginzburg
- George I. Glauberman
- Denis Hirschfeldt
- Kazuya Kato
- Carlos E. Kenig
- Robert Kottwitz
- Gregory Lawler
- J. Peter May
- Madhav Vithal Nori
- Niels O. Nygaard
- Leonid Polterovich
- Paul J. Sally
- Wilhelm Schlag
- L. Ridgway Scott, Computer Science
- Robert I. Soare, Computer Science
- Panagiotis Souganidis
- Sidney Webster
- Shmuel Weinberger
- Robert Zimmer

Associate Professors

Assistant Professors

- Miklos Abert
- Ioan Bejenaru
- Roger Lee
- Antonio Montalban
- Luis Silvestre
- Andrej Zlatos

Instructors

- Vigleik Angeltveit
- Rina Anno
- David Constantine
- Francisco Gancedo
- Dubi Kelmer
- Dano Kim
- Caroline Klivans
- William Lopes
- Maryanthe Malliaris
- David McReynolds
- Amir Mohammadi
- Artem Pulmetov
- Pierre Py
- Luca Scala
- Benjamin Schmid
- Sugwoo Shin
- Michael Shulman
- Eva Marie Strawbridge
- Weiran Sun
- Sandeep Varma
- Liang Xiao
- Nathalie Wahl Emeritus Faculty
- Walter L. Baily
- Spencer Bloch
- Leo P. Kadanoff, Physics
- Norman Lebovitz
- Matam P. Murthy
- Raghavan Narasimhan
- Melvin G. Rothenberg

The Department of Mathematics provides a comprehensive education in mathematics which takes place in a stimulating environment of intensive research activity. The graduate program includes both pure and applied areas of mathematics. Ten to fifteen graduate courses are offered every quarter. Several seminars take place every afternoon. There is an active visitors program with mathematicians from around the world coming for periods from a few days to a few months. There are four major lecture series each year: the Adrian Albert Lectures in Algebra, the Antoni Zygmund and Alberto Calderón Lectures in Analysis, the Unni Namboodiri Lectures in Topology, and the Charles Amick Lectures in Applied Mathematics. The activities of the department take place in Eckhart and Ryerson Halls. These contiguous buildings are shared with the Departments of Statistics and Computer Science. The Department of Mathematics and the Department of Computer Science have several joint appointments, and they coordinate their activities. The Department of Mathematics also has joint appointments and joint activity with the Department of Physics.

## Graduate Degrees in Mathematics

The graduate program of the Department of Mathematics is oriented towards students who intend to earn a Ph.D. in mathematics on the basis of work done in either pure or applied mathematics. The department also offers the degree of Master of Science in mathematics, which is acquired as the student proceeds on to the Ph.D. degree. Students are not admitted with the Master of Science degree as their final objective. In addition, the department offers a separate Master of Science in Financial Mathematics degree program which is taught in the evenings. See The Degree of Master of Science in Financial Mathematics below for more information.

The divisional requirements for these degrees can be found in the section on the Division of the Physical Sciences in these Announcements. The departmental requirements for students choosing the program in applied mathematics are described below under the heading, Graduate Degrees in Applied Mathematics. Otherwise, the requirements are as follows.

## The Degree of Master of Science

The candidate must pass, to the instructor's satisfaction, the nine basic first year graduate courses in the areas of
Algebra

| MATH 32500 | Algebra I $^{100}$ | true |
| :--- | :--- | :---: |
| MATH 32600 | Algebra II $^{100}$ | true |
| MATH 32700 | Algebra III $^{100}$ | true |
| Analysis |  |  |


| MATH 31200 | Analysis I ${ }^{100}$ | true |
| :--- | :--- | :--- |
| MATH 31300 | Analysis II ${ }^{100}$ | true |
| MATH 31400 | Analysis III ${ }^{100}$ | true |
| Topology |  | true |
| MATH 31700 | Topology and Geometry I ${ }^{100}$ | true |
| MATH 31800 | Topology and Geometry II ${ }^{100}$ | true |

With the approval of the department, the exceptionally well prepared student may place out of one or more of these courses, and substitute a more advanced course.

If any of these courses are not passed to the instructor's satisfaction, the student will be required to take an oral exam in those subject areas before receiving the Master of Science degree.

The student must also pass a reading exam (in a form approved by the department) in French, German or Russian.

## The Degree of Doctor of Philosophy

For admission to candidacy for the Doctor of Philosophy, an applicant must demonstrate the ability to meet both the divisional requirements and the departmental requirements for admission.

The applicant must satisfy the above mentioned requirements for the degree of Master of Science in mathematics.

The applicant must satisfactorily complete an oral topic presentation. This presentation covers material that is chosen by the student in consultation with members of the department and is studied independently. The topic presentation is normally made by the end of the student's second year of graduate study.

The applicant must also successfully complete the department's program of preparatory training in the effective teaching of mathematics in the English language at a level commensurate with the level of instruction at the University of Chicago.

After successful completion of the topic presentations, the student is expected to begin research towards the dissertation under the guidance of a member of the department. The remaining requirements are to:

1. Complete a dissertation containing original, substantial, and publishable mathematical results
2. Present the contents of the dissertation in an open lecture
3. Pass an oral examination based both on the dissertation and the field of mathematics in which it lies

## Graduate Degrees in Applied Mathematics

The Department of Mathematics, through the Computational and Applied Mathematics Program (CAMP), offers interdisciplinary programs in applied mathematics leading to S.M. and Ph.D. degrees. These programs overlap with but are different from the program in pure mathematics and allow for variations depending on the direction of applications the student chooses. Students choosing the applied mathematics program will participate in courses and seminars not only with pure mathematics students, but also with students in the sciences who have chosen an applied mathematics emphasis in their own departments.

Expanded activity in applied mathematics is occurring within the Department of Mathematics and in the Division of the Physical Sciences. Moreover, the department recognizes that students enter applied mathematics from diverse backgrounds, and that some otherwise well qualified students may require more than one year to satisfy the requirements described below.

To obtain the degree of Master of Science in mathematics under the auspices of CAMP, the candidate must meet the departmental requirements stated above, with the modification that the nine graduate courses to be passed are not restricted to those listed above. These nine courses must, however, include the analysis sequence:

## MATH

Analysis I-II-III ${ }^{100}$
300
31200-31300-31400
They must also include a second, approved three quarter sequence of mathematics courses. This will normally be a sequence of applied mathematics courses emphasizing differential equations, ordinary and partial, and their numerical treatment. They may, however, consist of the algebra or topology sequence.

A third approved sequence of courses may be chosen from the offerings of the Department of Mathematics or from those of another department. Possible choices of sequences outside the Department of Mathematics are:
Astronomy \& Astrophysics

| ASTR 30100 | Stars | true |
| :--- | :--- | :--- |
| ASTR 30200 | Astrophysics-2 | true |
| ASTR 30300 | Astrophysics-3 | true |

Chemistry
CHEM 36100 Wave Mechanics and Spectroscopy ${ }^{100}$ true

| CHEM 36200 | Quantum Mechanics ${ }^{100}$ | true |
| :--- | :--- | :--- |
| CHEM 36300 | Statistical Thermodynamics ${ }^{100}$ | true |

Economics

| ECON 30500 | Game Theory | true |
| :--- | :--- | :--- |
| ECON 30600 | Course ECON 30600 Not Found | true |
| ECON 30700 | Decision Theory | true |

Geophysical Sciences

| GEOS 35100 | Fndls Of Fluid Mechanics | true |
| :--- | :--- | :---: |
| GEOS 35200 | Geophysical Fluid Dynamics | true |
| GEOS 35300 | Dynamics of Viscous Fluids | true |
| Physics |  | true |
| PHYS 31500 | Course PHYS 31500 Not Found | true |
| PHYS 32300 | Advanced Electrodynamics II ${ }^{100}$ | true |

The requirements for the Ph.D. in applied mathematics are the same as the departmental requirements listed above.

## The Degree of Master of Science in Financial Mathematics

The program on financial mathematics is designed to produce graduates with a good understanding of the theoretical background of pricing models for financial derivatives, but more importantly a real understanding of the underlying assumptions and an ability to critically ascertain the applicability and limitations of the various models. A significant part of the program will be taught by professionals from the financial industry and will be devoted to examining how models behave in practice under a variety of market conditions, to examine how realistic the underlying assumptions are and to understand what happens when these assumption are violated. Students will learn to use the models to set up hedges and to evaluate the effectiveness of these hedges by simulating various market conditions.

The program consists of four components: Mathematics, Probability Theory, Economics, and Financial Applications and Simulations.

The Mathematics component runs over three quarters, Probability Theory over two quarters and Economics over one quarter. The Financial Applications and Simulations is a three quarter component. Courses in each component meet for three hours per week except for the courses in the Financial Applications component which will meet for four hours for a total of ten hours of instruction per week. The Mathematics and Probability Theory will be taught by faculty members from the Departments of Mathematics and Statistics, respectively. The Economics course will be taught by a faculty member from the Department of Economics. The Financial Applications courses will be taught by professionals from financial institutions and will also include a computer lab.
The contents and curriculum for the program has been worked out jointly by faculty members at the University and by practitioners in the field to insure the relevance of the material. The teaching of the program relies heavily on the use of computer simulations to illustrate the material. This both makes it possible to cover more material and teaches students to implement the theory at every stage.

Various software packages are licensed to the program and will be provided free of charge for the course work. Course material and assignments will be available and submitted on line.

The program has a nine quarter-course requirement for obtaining the Master of Science degree. The program is structured to allow part time enrollment to complete the program over two or three years. The courses will be taught evenings at the main campus of the University located in Hyde Park.

The requirements for acceptance to the program are a solid undergraduate background in mathematics, ideally a major in mathematics or science/engineering, with some background also in probability theory. Some experience in $\mathrm{C} / \mathrm{C}++$ programming will also be useful. Persons with practical experience in the financial industry but with less of a mathematical background will be considered but may be required to acquire additional skills in mathematics.
The following are representative lists of courses in Financial Mathematics and in the Ph.D. Program. For up-to-date information please consult the web page of the Department at: http://www.math.uchicago.edu.

## Mathematics COURSES

MATH 30200-30300. Computability Theory I-II. Edit Course Data - default The courses in this sequence are offered in alternate years.

MATH 30200. Computability Theory I. 100 Units. Edit Course Data - default CMSC 38000 is concerned with recursive (computable) functions and sets generated by an algorithm (recursively enumerable sets). Topics include various mathematical models for computations (e.g., Turing machines and Kleene schemata, enumeration and s-m-n theorems, the recursion theorem, classification of unsolvable problems, priority methods for the construction of recursively enumerable sets and degrees).
Instructor(s): R. Soare Terms Offered: Winter
Prerequisite(s): Consent of department counselor. MATH 25500 or consent of instructor.
Equivalent Course(s): CMSC 38000
MATH 30300. Computability Theory II. 100 Units. Edit Course Data - default CMSC 38100 treats classification of sets by the degree of information they encode, algebraic structure and degrees of recursively enumerable sets, advanced priority methods, and generalized recursion theory.
Instructor(s): R. Soare Terms Offered: Winter, Spring
Prerequisite(s): Consent of department counselor. MATH 25500 or consent of instructor.
Equivalent Course(s): CMSC 38100

MATH 30500. Computability and Complexity Theory. 100 Units. Edit Course Data - default

Part one of this course consists of models for defining computable functions: primitive recursive functions, (general) recursive functions, and Turing machines; the Church-Turing Thesis; unsolvable problems; diagonalization; and properties of computably enumerable sets. Part two of this course deals with Kolmogorov (resource bounded) complexity: the quantity of information in individual objects. Part three of this course covers functions computable with time and space bounds of the Turing machine: polynomial time computability, the classes P and NP, NPcomplete problems, polynomial time hierarchy, and P-space complete problems. Instructor(s): A. Razborov Terms Offered: Winter
Prerequisite(s): Consent of department counselor and instructor Equivalent Course(s): CMSC 38500

MATH 30900-31000. Model Theory I-II. Edit Course Data - default MATH 30900 covers completeness and compactness; elimination of quantifiers; omission of types; elementary chains and homogeneous models; two cardinal theorems by Vaught, Chang, and Keisler; categories and functors; inverse systems of compact Hausdorf spaces; and applications of model theory to algebra. In MATH 31000, we study saturated models; categoricity in power; the CantorBendixson and Morley derivatives; the Morley theorem and the Baldwin-Lachlan theorem on categoricity; rank in model theory; uniqueness of prime models and existence of saturated models; indiscernibles; ultraproducts; and differential fields of characteristic zero.

MATH 30900. Model Theory I. 100 Units. Edit Course Data - default
MATH 30900 covers completeness and compactness; elimination of quantifiers; omission of types; elementary chains and homogeneous models; two cardinal theorems by Vaught, Chang, and Keisler; categories and functors; inverse systems of compact Hausdorf spaces; and applications of model theory to algebra.
Terms Offered: This course is offered in alternate years. Not offered 2010-11.
Will be offered 2011-12.
Prerequisite(s): MATH 25500 or 25800
Note(s): This course is offered in alternate years. Not offered 2010-11. Will be offered 2011-12.

MATH 31000. Model Theory II. 100 Units. Edit Course Data - default
MATH 31000 covers saturated models; categoricity in power; the CantorBendixson and Morley derivatives; the Morley theorem and the BaldwinLachlan theorem on categoricity; rank in model theory; uniqueness of prime models and existence of saturated models; indiscernibles; ultraproducts; and differential fields of characteristic zero.
Terms Offered: Spring
Prerequisite(s): MATH 30900
Note(s): This course is offered in alternate years. Not offered 2011-11. Will be offered 2011-13.

MATH 31200-31300-31400. Analysis I-II-III. Edit Course Data - default
Topics include Lebesgue measure, abstract measure theory, and Riesz representation theorem; basic functional analysis (Lp-spaces, elementary Hilbert space theory, Hahn-Banach, open mapping theorem, and uniform boundedness); RadonNikodym theorem, duality for Lp-spaces, Fubini's theorem, differentiation, Fourier transforms, locally convex spaces, weak topologies, and convexity; compact operators; spectral theorem and integral operators; Banach algebras and general spectral theory; Sobolev spaces and embedding theorems; Haar measure; and PeterWeyl theorem, holomorphic functions, Cauchy's theorem, harmonic functions, maximum modulus principle, meromorphic functions, conformal mapping, and analytic continuation.

MATH 31200. Analysis I. 100 Units. Edit Course Data - default
Topics include: Real Variables; Measure theory, including the Radon-Nikodym theorem and differentiation theory; Lp spaces; The Riesz representation theorem; Fourier series; Hilbert transform.
Terms Offered: Autumn
Prerequisite(s): MATH 26200, 27000, 27200, and 27400; and consent of director or co-director of undergraduate studies

MATH 31300. Analysis II. 100 Units. Edit Course Data - default
Topics include: basic principles of functional analysis, distribution theory, Fourier transform, Sobolev and other classical function spaces; bounded operators, compact operators, spectral theory, Fredholm theory, applications to partial differential equations, boundary value problems and variational principles.
Terms Offered: Winter
Prerequisite(s): MATH 31200
MATH 31400. Analysis III. 100 Units. Edit Course Data - default
Topics include basic complex analysis, Riemann mapping theorem (including continuity up to the boundary), Picard theorems, Riemann surfaces, and further topics in analysis.
Terms Offered: Spring
Prerequisite(s): MATH 31300
MATH 31700-31800-31900. Topology and Geometry I-II-III. Edit Course Data default
MATH 31700 covers smooth manifolds, tangent bundles, vector fields, Frobenius theorem, Sard's theorem, Whitney embedding theorem, and transversality. MATH 31800 considers fundamental group and covering spaces; Lie groups and Lie algebras; and principal bundles, connections, introduction to Riemannian geometry, geodesics, and curvature. Topics in MATH 31900 are cell complexes, homology, and cohomology; and Mayer-Vietoris theorem, Kunneth theorem, cup products, duality, and geometric applications.

MATH 31700. Topology and Geometry I. 100 Units. Edit Course Data - default MATH 31700 covers smooth manifolds, tangent bundles, vector fields, Frobenius theorem, Sard's theorem, Whitney embedding theorem, and transversality.
Terms Offered: Autumn
Prerequisite(s): MATH 26200, 26300, 27000, 27200, and 27400; and consent of director or co-director of undergraduate studies

MATH 31800. Topology and Geometry II. 100 Units. Edit Course Data - default MATH 31800 considers fundamental group and covering spaces; Lie groups and Lie algebras; and principal bundles, connections, introduction to Riemannian geometry, geodesics, and curvature.
Terms Offered: Winter
Prerequisite(s): MATH 31700

## MATH 31900. Topology and Geometry III. 100 Units. Edit Course Data default

Topics in MATH 31900 are Riemannian metrics, connections and curvature on vector bundles, the Levi-Civita connection, and the multiple interpretations of curvature. Geodesics and the associated variational formalism (formulas for the 1st and 2nd variation of length), the exponential map, completeness, and the influence of curvature on the topological structure of a manifold (positive versus negative curvature) are also included. Lie groups, t he Chern-Weil description of characteristic classes, the Gauss-Bonnet theorem and possibly the Hodge Theorem are covered.
Terms Offered: Spring
Prerequisite(s): MATH 31800
MATH 32500-32600-32700. Algebra I-II-III. Edit Course Data - default
MATH 32500 deals with groups and commutative rings. MATH 32600 investigates elements of the theory of fields and of Galois theory, as well as noncommutative rings. MATH 32700 introduces other basic topics in algebra.

MATH 32500. Algebra I. 100 Units. Edit Course Data - default
MATH 32500 deals with rings, fields, algebras, ideals, maximal ideals,zero divisors and nilpotent elements, idempotents. PIDs, UFDs, Euclidan rings. Also included are the Chinese remainder theorem, PID implies UFD, polynomial rings and Gauss' lemma, spectrum of an element of an algebra, structure of finite dimensional commutative $\mathrm{C}^{*}$-algebras without nilpotent elements, group algebra of a group, duality and Fourier transform for finite abelian groups. Also included are modules: simple, semisimple, cyclic, finitely generated, and free modules. Topics may also include Schur's lemma, Wedderburn theory, Jacobson density theorem, structure theory of finitely generated modules over PIDs, and applications to finitely generated abelian groups and to linear algebra.
Terms Offered: Autumn
Prerequisite(s): MATH 25700-25800-25900, and consent of director or co-director of undergraduate studies

MATH 32600. Algebra II. 100 Units. Edit Course Data - default
MATH 32600 investigates commutative rings and homology, Noetherian rings and modules, the Hilbert basis theorem, integral extensions, the going-up theorem, localisation, exactness of localisation, finitely generated algebras over a field, varieties, the Noether normalisation lemma, Hilbert's Nullstellensatz, dimension. Also included is a discussion of the dictionary between commutative algebra and algebraic geometry. Other possible topics include: Kahler differentials, smoothness, completions, power series rings, the p-adic numbers, Ext and Tor, Dedekind domains, the spectrum of a commutative ring and the sheaf associated to a module.
Terms Offered: Winter
Prerequisite(s): MATH 32500
MATH 32700. Algebra III. 100 Units. Edit Course Data - default MATH 32700 introduces additional basic topics in algebra. According to the inclinations of the instructor, this course may cover: Galois theory, algebraic number theory, algebraic curves, multilinear algebra (tensor, symmetric and exterior algebras), Lie algebras, homological algebra and/or the cohomology of groups.
Terms Offered: Spring
Prerequisite(s): MATH 32600
MATH 37500. Algorithms in Finite Groups. 100 Units. Edit Course Data - default
We consider the asymptotic complexity of some of the basic problems of computational group theory. The course demonstrates the relevance of a mix of mathematical techniques, ranging from combinatorial ideas, the elements of probability theory, and elementary group theory, to the theories of rapidly mixing Markov chains, applications of simply stated consequences of the Classification of Finite Simple Groups (CFSG), and, occasionally, detailed information about finite simple groups. No programming problems are assigned.
Instructor(s): L. Babai Terms Offered: Spring
Prerequisite(s): Consent of department counselor. Linear algebra, finite fields, and a first course in group theory (Jordan-Holder and Sylow theorems) required; prior knowledge of algorithms not required
Note(s): This course is offered in alternate years.
Equivalent Course(s): CMSC 36500

MATH 38300. Numerical Solutions to Partial Differential Equations. 100 Units. Edit Course Data - default
This course covers the basic mathematical theory behind numerical solution of partial differential equations. We investigate the convergence properties of finite element, finite difference and other discretization methods for solving partial differential equations, introducing Sobolev spaces and polynomial approximation theory. We emphasize error estimators, adaptivity, and optimal-order solvers for linear systems arising from PDEs. Special topics include PDEs of fluid mechanics, max-norm error estimates, and Banach-space operator-interpolation techniques.
Instructor(s): L. R. Scott Terms Offered: Spring. This course is offered in alternate years.
Prerequisite(s): Consent of department counselor and instructor Equivalent Course(s): CMSC 38300

## Department of Physics

## Chair

- Edward Blucher

Professors

- Edward C. Blucher
- Marcela Carena
- John Eric Carlstrom, Astronomy \& Astrophysics
- Henry J. Frisch
- Philippe M. Guyot Sionnest, Chemistry
- Jeffrey A. Harvey
- Eric Isaacs
- Heinrich Martin Jaeger
- Woowon Kang
- Kwang Je Kim
- Young Kee Kim
- David Kutasov
- Kathryn Levin
- Zheng Tian Lu
- Emil J. Martinec
- Gene F. Mazenko
- Frank S. Merritt
- Stephan Meyer, Astronomy \& Astrophysics
- Sidney R. Nagel
- Pier Oddone
- Mark J. Oreglia
- James E. Pilcher
- Paolo Privitera
- Thomas F. Rosenbaum
- Jonathan L. Rosner
- Robert Rosner, Astronomy \& Astrophysics
- Guy Savard
- Melvyn J. Shochet
- Michael Turner, Astronomy \& Astrophysics
- Carlos E.M. Wagner
- Yau Wai Wah
- Robert M. Wald
- Paul B. Wiegmann
- Thomas A. Witten

Associate Professors

- Juan I. Collar
- Florencia Canelli
- Cheng Chin
- Ilya Gruzberg
- Savdeep Sethi
- Scott Wakely
- Wendy Zhang

Assistant Professors

- David Biron
- Margaret Gardel
- Daniel Holz
- Richard Hill
- William Irvine
- LiangTao Wang

Emeritus Faculty

- Isaac D. Abella
- Albert V. Crewe
- James W. Cronin
- Dean Eastman
- Peter G.O. Freund
- Robert P. Geroch
- Roger H. Hildebrand
- Leo P. Kadanoff
- Riccardo Levi Setti
- Dietrich Müller
- Yoichiro Nambu
- Eugene Parker
- John P. Schiffer
- S. Courtney Wright

The Department of Physics offers advanced degree opportunities in many areas of experimental and theoretical physics, supervised by a distinguished group of research faculty. Applications are accepted from students of diverse backgrounds and institutions: graduates of research universities or four year colleges, from the
U.S. and worldwide. Most applicants, but not all, have undergraduate degrees in physics; many have had significant research experience. Seeking to identify the most qualified students who show promise of excellence in research and teaching, the admissions process is highly selective and very competitive.

## Doctor of Philosophy

During the first year of the doctoral program, a student takes introductory graduate physics courses and usually serves as a teaching assistant assigned to one of the introductory or intermediate undergraduate physics courses. Students are encouraged to explore research opportunities during their first year. Students are also encouraged to take the candidacy examination as soon as they feel that they are prepared for it. After passing the candidacy exam and identifying a research sponsor, the student begins dissertation research while completing course requirements. Within a year after research begins, a Ph.D. committee is formed with the sponsor as chairman. A student continues research, from time to time consulting with the members of the committee, until completion of the dissertation. The average length of time for completion of the Ph.D. program in physics is about six years. In addition to fulfilling University and divisional requirements, a candidate for the degree of Doctor of Philosophy in physics must:

1. Pass the candidacy examination. This examination on basic physics covers fundamental material usually studied in upper division undergraduate courses (mechanics, electricity and magnetism, special relativity, statistical mechanics, and quantum mechanics) and requires some knowledge of particles and fields and of the structure of matter. The candidacy examination is given every September and March and must be passed by the autumn quarter of the student's third year after matriculation.
2. Fulfill the experimental physics requirement by completing PHYS 33400 Adv Experimental Physicsor PHYS 33500 Adv Experimental Physics Project.
3. Pass four post candidacy advanced graduate courses devoted to the broad physics research areas of (A) Condensed Matter Physics, (B) Particle Physics, (C) Large Scale Physics (i.e. Astrophysics and/or Cosmology related), and (D) Intermediate Electives. The four courses selected must include at least one from each of the categories (A), (B), and (C).
4. Pass two other advanced ( 40000 level) courses either in physics or in a field related to the student's Ph.D. research. The latteral requires department approval.
5. Within the first year after beginning research, convene a first meeting of the Ph.D. committee to review plans for the proposed thesis research and for fulfilling the remaining Ph.D. requirements.
6. One to two quarters prior to the defense of the dissertation, hold a pre-oral meeting at which the student and the Ph.D. committee discuss the research project.
7. Defend the dissertation before the Ph.D. committee.
8. Submit for publication to a refereed scientific journal the thesis which has been approved by the Ph .D. committee or a paper based on the thesis. A letter from the editor acknowledging receipt of the thesis must be provided to the department office.

Consult a department adviser for more details.

## MASTER OF SCIENCE

The graduate program of the Department of Physics is oriented toward students who intend to earn a Ph.D. degree in physics. Therefore, the department does not offer admission to students whose goal is the Master of Science degree. However, the department does offer a master's degree to students who are already in the physics Ph.D. program or other approved graduate programs in the University. Normally it takes one and a half years for a student to complete the master's program. A master's degree is not required for continued study toward the doctorate.
In addition to fulfilling University and Divisional requirements, a candidate for the degree of Master of Science in physics must:

1. Demonstrate a satisfactory level of understanding of the fundamental principles of physics by either (a) passing the Ph.D. candidacy examination at the master's level or higher or (b) passing nine approved courses with a minimum grade point average of 2.5. Six of the nine courses must be:

| PHYS 31600 | Advanced Classical Mechanics ${ }^{100}$ | 100 |
| :--- | :--- | :--- |
| PHYS 33000 | Mathematical Methods of Physics ${ }^{100}$ | 100 |
| PHYS 34100 | Advanced Quantum Mechanics I ${ }^{100}$ | 100 |
| PHYS 34200 | Advanced Quantum Mechanics II ${ }^{100}$ | 100 |
| PHYS 32200 | Advanced Electrodynamics I ${ }^{100}$ | 100 |
| PHYS 35200 | ${\text { Statistical Mechanics }{ }^{100}}^{100}$ |  |

2. Complete the Experimental Physics requirement (PHYS 33400 Adv Experimental Physics or PHYS 33500 Adv Experimental Physics Project).

## TEACHING OppORTUNITIES

Part of the training of graduate students is dedicated to obtaining experience and facility in teaching. Most first year students are supported by teaching assistantships, which provide the opportunity for them to engage in a variety of teaching related activities. These may include supervising undergraduate laboratory sections, conducting discussion and problem sessions, holding office hours, and grading written work for specific courses. Fellowship holders are invited to participate in these activities at reduced levels of commitment to gain experience in the teaching of physics. During the Autumn quarter first year graduate students attend the weekly workshop, Teaching and Learning of Physics, which is an important element in their training as teachers of physics.

## TEACHING FACILITIES

All formal class work takes place in the modern lecture halls and classrooms and instructional laboratories of the Kersten Physics Teaching Center. This building also houses special equipment and support facilities for student experimental projects, departmental administrative offices, and meeting rooms. The center is situated on the science quadrangle near the John Crerar Science Library, which holds over $1,000,000$ volumes and provides modern literature search and data retrieval systems.

## Research Facilities

Most of the experimental and theoretical research of Physics faculty and graduate students is carried out within the Enrico Fermi Institute, the James Franck Institute and the Institute for Biophysical Dynamics. These research institutes provide close interdisciplinary contact, crossing the traditional boundaries between departments. This broad scientific endeavor is reflected in students' activities and contributes to their outlook toward research.

In the Enrico Fermi Institute, members of the Department of Physics carry out theoretical research in particle theory, string theory, field theory, general relativity, and theoretical astrophysics and cosmology. There are active experimental groups in high energy physics, nuclear physics, astrophysics and space physics, infrared and optical astronomy, and microwave background observations. Some of this research is conducted at the Fermi National Accelerator Laboratory, at Argonne National Laboratory (both of these are near Chicago), and at the European Organization for Nuclear Research (CERN) in Geneva, Switzerland.

Physics faculty in the James Franck Institute study chemical, solid state, condensed matter, and statistical physics. Fields of interest include chaos, chemical kinetics, critical phenomena, high Tc superconductivity, nonlinear dynamics, low temperature, disordered and amorphous systems, the dynamics of glasses, fluid dynamics, surface and interface phenomena, nonlinear and nanoscale optics, unstable and metastable systems, laser cooling and trapping, atomic physics, and polymer physics. Much of the research utilizes specialized facilities operated by the institute, including a low temperature laboratory, a materials preparation laboratory, x-ray diffraction and analytical chemistry laboratories, laser equipment, a scanning tunneling microscope, and extensive shop facilities. Some members of the faculty are involved in research at Argonne National Laboratory.
The Institute for Biophysical Dynamics includes members of both the Physical Sciences and Biological Sciences Divisions, and focuses on the physical basis for molecular and cellular processes. This interface between the physical and biological sciences is an exciting area that is developing rapidly, with a bi-directional impact. Research topics include the creation of physical materials by biological self assembly, the molecular basis of macromolecular interactions and cellular signaling, the derivation of sequence structure function relationships by computational means, and structure function relationships in membranes.

In the areas of chemical and atomic physics, research toward the doctorate may be done in either the physics or the chemistry department. Facilities are available for research in crystal chemistry; molecular physics; molecular spectra from infrared to far ultraviolet, Bose Einstein condensation, and Raman spectra, both experimental and theoretical; surface physics; statistical mechanics; radio chemistry; and quantum electronics.

Interdisciplinary research leading to a Ph.D. degree in physics may be carried out under the guidance of faculty committees including members of other departments in the Division of the Physical Sciences, such as Astronomy \& Astrophysics, Chemistry, Computer Science, Geophysical Sciences or Mathematics, or related departments in the Division of the Biological Sciences.

## ADmission and Student Aid

Most students entering the graduate program of the Department of Physics of the University of Chicago hold a bachelor's or master's degree in physics from an accredited college or university.

December 28 is the deadline for applications for admission in the following autumn quarter. The Graduate Record Examination given by the Educational Testing Service is required of all applicants. Applicants should submit recent scores on the verbal, quantitative, and analytic writing tests and on the advanced subject test in physics. Arrangements should be made to take the examination no later than early December in order that the results be available in time for the department's consideration. Applicants from non English speaking countries must provide the scores achieved on the TOEFL or the IELTS.

All full time physics graduate students in good standing receive financial aid. Most graduate students serve as teaching assistants in their first year.

For information regarding application for admission, e-mail physics@uchicago.edu or write to: Graduate Affairs, Department of Physics, University of Chicago, 5720 South Ellis Avenue, Chicago, IL 60637-1434. A departmental counselor will be glad to answer questions. Use URL http:// physics.uchicago.edu/ to access the department's World Wide Web home page for further information.

## PHYSICS COURSES

PHYS 31600. Advanced Classical Mechanics. 100 Units. Edit Course Data - default This course begins with variational formulation of classical mechanics of point particles, including discussion of the principle of least action, Poisson brackets, and Hamilton-Jacobi theory. These concepts are generalized to continuous systems with infinite number of degrees of freedom, including a discussion of the transition to quantum mechanics.
Terms Offered: Autumn
Prerequisite(s): PHYS 18500

PHYS 32200-32300. Advanced Electrodynamics I-II. Edit Course Data - default This two-quarter sequence covers electromagnetic properties of continuous media, gauge transformations, electromagnetic waves, radiation, relativistic electrodynamics, Lorentz theory of electrons, and theoretical optics. There is considerable emphasis on the mathematical methods behind the development of the physics of these problems.

PHYS 32200. Advanced Electrodynamics I. 100 Units. Edit Course Data default
Terms Offered: Winter
Prerequisite(s): PHYS 22700 and 23500
PHYS 32300. Advanced Electrodynamics II. 100 Units. Edit Course Data default
Terms Offered: Spring
Prerequisite(s): PHYS 32200
PHYS 33000. Mathematical Methods of Physics. 100 Units. Edit Course Data default
Topics include complex analysis, linear algebra, differential equations, boundary value problems, and special functions.
Terms Offered: Autumn
Prerequisite(s): PHYS 22700
PHYS 33400. Adv Experimental Physics. 100 Units. Edit Course Data - default For course description contact Physics.

PHYS 34100-34200. Advanced Quantum Mechanics I-II. Edit Course Data - default This two-quarter sequence covers wave functions and their physical content, onedimensional systems, WKB method, operators and matrix mechanics, angular momentum and spin, two- and three-dimensional systems, the Pauli principle, perturbation theory, Born approximation, and scattering theory.

PHYS 34100. Advanced Quantum Mechanics I. 100 Units. Edit Course Data default
Terms Offered: Autumn
Prerequisite(s): PHYS 23500, and PHYS 22100 or MATH 20500
PHYS 34200. Advanced Quantum Mechanics II. 100 Units. Edit Course Data default
Terms Offered: Winter
Prerequisite(s): PHYS 34100

PHYS 35200. Statistical Mechanics. 100 Units. Edit Course Data - default
This course covers principles of statistical mechanics and thermodynamics, as well as their applications to problems in physics and chemistry.
Terms Offered: Winter
Prerequisite(s): PHYS 19700 and 23500

## Department of Statistics

## Chair

- Yali Amit

Professors

- Yali Amit
- Mihai Anitescu, Argonne National Laboratory
- Mathias Drton
- Paul Fischer, Argonne National Laboratory
- Lars Hansen, Economics
- John Lafferty
- Steven P. Lalley
- Gregory Lawler, Mathematics
- Peter McCullagh
- Mary Sara McPeek
- Per Mykland
- John Reinitz
- Michael Leonard Stein
- Matthew Stephens
- Stephen M. Stigler
- Ronald Thisted, Health Studies
- Kirk Wolter


## Associate Professors

- Dan Liviu Nicolae, Medicine
- Michael J. Wichura
- Wei Biao Wu

Assistant Professors

- Nina Hinrichs, Computer Science
- Imre Risi Kondor, Computer Science
- Lek-Heng Lim
- Debashis Mondal

Senior Lecturers

- Mei Wang


## Lecturer

- Yibi Huang

The modern science of statistics involves the invention, study, and development of principles and methods for modeling uncertainty through mathematical probability, for designing experiments, surveys and observational programs, and for analyzing and interpreting empirical data. Problems arising throughout the sciences and in business and technology drive the development of statistical methods. The interplay between applied and theoretical problems is at the core of what the department and its degree programs are about. Faculty and graduate students are currently working on statistical and probabilistic problems in fields such as genetics, computer vision, speech recognition, finance, environmental science, clinical trials, and demography. Other faculty and students are working on abstract topics in mathematical statistics and probability theory. Mathematics plays a major role in all statistical activity, whether of an abstract nature or dealing with specific techniques for analyzing data.
The department offers programs leading to the degrees of Master of Science and Doctor of Philosophy. Instruction in statistics is designed to accommodate both students specializing in statistics and also those studying statistics as a tool for use in their own specialties. The graduate program in statistics provides a broad-based education in statistics, probability and their applications to the social, biological, and physical sciences. The faculty have diverse research interests and a student able to take advantage of this intellectual breadth will be well suited to the program.

## Program of Study

A student applying to the program should normally have taken advanced calculus, linear algebra, probability, and a few courses in statistics. Additional courses in mathematics, especially a course in real analysis, will be helpful for Ph.D. students. Some familiarity with computers and programming is expected. Even so, students who have not taken courses in all of these areas should not be discouraged from applying, especially if they have a substantial background, through study or experience, in some area of science or other discipline involving quantitative reasoning and empirical investigation. Because statistics is an empirical and interdisciplinary field, a strong background in some area of potential application of statistics is a considerable asset. Indeed, a student's background in mathematics and in science or another quantitative discipline is more important than his or her background in statistics in determining the ability of the student to do statistical research.

The master's program offers this degree with an orientation toward survey methods, medical statistics, and finance or toward other fields of specialization of the faculty. For a student with a solid background in mathematics and statistics, the program can be completed in one year. There is a course sequence: currently, five courses on applied and theoretical statistics plus four electives. A master's paper is required and is presented as a seminar.

Reflecting the diversity of the students, the Ph.D. program is flexible in terms of the timing and content of coursework and research. The following describes a typical path for a student with a solid background in mathematics and some familiarity with statistics. During the first year, the student takes courses in probability theory and stochastic processes, mathematical statistics, and applied
statistics. These three areas receive roughly equal emphasis and serve as the foundation for all later work. A substantial component of the applied courses is the use of advanced statistical programming languages, such as R, for data analysis. At the start of the second year, the student takes preliminary examinations covering all these areas. During the second year, students take more advanced and specialized courses, depending on their interests. The selection of courses offered varies from year to year, but there is always a variety of courses in probability and in theoretical and applied statistics sufficient to address quite diverse interests. In the third year, students normally begin to work with a thesis advisor and initiate their doctoral research. One common way to get started in research is to take a reading course with a prospective advisor. After making substantial research progress, the student prepares a paper, typically early in the fourth year, that is distributed to the faculty and students and is discussed in an open departmental workshop. A completed dissertation is presented in a formal departmental seminar, and then a final oral examination completes the program for the Ph.D. In recent years, nearly all students have completed the Ph.D. within five years of entering the program. Students who have significant graduate training before entering the program can obtain their doctorate in four years.

Some students must postpone taking one of the usual first-year courses in order to strengthen their background in that area first. This delay does not usually slow the student's progress through the remainder of the program.

Most students receiving a doctorate proceed to faculty appointments in research universities. A substantial number take positions in government or industry, in research groups and the National Institutes of Health, in communications and in commercial pharmaceutical research groups, and in finance. The department has an excellent track record in placing new Ph.D.s.

## Program in Biostatistics

Doctoral students with an interest in applying statistical methods and doing research in biology and medicine can do so by tailoring their doctoral program to emphasize biostatistics. Courses are offered every year in areas such as biometry, survival analysis, medical imaging, and clinical trials. The Biostatistics Workshop, cosponsored with the Department of Health Studies, meets regularly in the Medical Center, and is a forum in which graduate students, physicians, and medical researchers meet to discuss all aspects of quantitative methods in medicine. Through the workshop, students in statistics have the opportunity to participate in current medical research. Consequently, in recent years students from the department have coauthors on scientific papers in areas such as genetics, anesthesiology, geriatrics, and emergency medicine.

## Teaching

Part of every statistician's job is to evaluate the work of others and to communicate knowledge, experience, and insights. Every statistician is, to some extent, an educator, and the department provides graduate students with some training for
this aspect of their professional lives. The department expects all doctoral students, regardless of their professional objectives and sources of financial support, to take part in a graduated program of participation in some or all phases of instruction, from grading, course assisting, and conducting discussion sections, to being a lecturer with responsibility for an entire course.

## CONSULTING

Students in the degree programs are required to complement their training in statistics with experience and study in some field where statistics is important. Courses and study in empirical science and summer employment offer opportunities in this direction. The department operates a consultation program, under the guidance of the faculty, that serves mainly students and faculty throughout the University. All degree candidates in statistics must participate in these consulting activities, at a level appropriate to their training and prior experience, as an integral part of their degree program. An informal seminar meets regularly to provide a forum for presenting and discussing problems, solutions and topics in statistical consultation.

## Application

Students interested in learning more about the department's admission procedures and obtaining other information about the department and University may visit our web site at http://www.stat.uchicago.edu/. The online application for admission can be accessed at http://stat.uchicago.edu/admissions/ or by applying directly at https:// grad-application.uchicago.edu/.

## FACILITIES

The department is housed in several adjacent floors of Eckhart Hall. All students have office spaces in one of several student office suites. A small departmental library and conference room is a common meeting place for formal and informal gatherings of students and faculty. The mathematics and statistics branch of the University Library is located on the second floor of Eckhart Hall. The major computing facilities of the department are based on a network of Linux workstations for the faculty and students. These facilities are available around the clock.

## Statistics Throughout the University

In addition to the courses, seminars, and programs in the Department of Statistics, courses and workshops of direct interest to statisticians are offered throughout the University, most notably in the programs in statistics, econometrics and finance in the Chicago Booth School of Business and in the research programs in economics, sociology, and education associated with NORC (National Opinion Research Center).

For courses in Statistics, see the Time Schedules at http:// timeschedules.uchicago.edu/ or visit the department web site at http:// www.stat.uchicago.edu/.

## The Enrico Fermi Institute

Director

- Emil J. MartinecProfessors


## Professors

- Edward Blucher, Physics
- Marcela Carena, Physics
- John Eric Carlstrom, Astronomy \& Astrophysics
- Nicolas Dauphas, Geophysical Sciences
- Andrew Davis, Geophysical Sciences
- Henry J. Frisch, Physics
- Lawrence Grossman, Geophysical Sciences
- Jeffrey A. Harvey, Physics
- Craig Hogan, Astronomy \& Astrophysics
- Wayne Hu, Astronomy \& Astrophysics
- Alexei Khokhlov, Astronomy \& Astrophysics
- Edward James Kibblewhite, Astronomy \& Astrophysics
- Kwang Je Kim, Physics
- Young Kee Kim, Physics
- Edward W. Kolb, Astronomy \& Astrophysics
- Arieh Königl, Astronomy \& Astrophysics
- Andrey Kravtsov, Astronomy \& Astrophysics
- David Kutasov, Physics
- Donald Quincy Lamb, Jr., Astronomy \& Astrophysics
- Zheng-Tian Lu, Physics
- Emil J. Martinec, Physics
- Frank S. Merritt, Physics
- Stephan Meyer, Astronomy \& Astrophysics
- Sidney Nagel, Physics
- Angela V. Olinto, Astronomy \& Astrophysics
- Mark J. Oreglia, Physics
- James E. Pilcher, Physics
- Paolo Privitera, Astronomy \& Astrophysics
- Robert Rosner, Astronomy \& Astrophysics
- Guy Savard, Physics
- Melvyn J. Shochet, Physics
- Michael Turner, Astronomy \& Astrophysics
- Carlos E.M. Wagner, Physics
- Yau Wai Wah, Physics
- Robert M. Wald, Physics
- Paul B. Wiegmann, Physics
- Donald G. York, Astronomy \& Astrophysics

Associate Professors

- Florencia Canelli, Physics
- Juan Collar, Physics
- Andrey Kravtsov, Astronomy \& Astrophysics
- Savdeep Sethi, Physics
- Scott wakely, Physics

Assistant Professors

- Richard Hill, Physics
- Liantao Wang, Physics

Emeritus Faculty

- Robert N. Clayton, Geophysical Sciences
- James W. Cronin, Physics
- Robert P. Geroch, Physics
- Roger H. Hildebrand, Physics
- Leo P. Kadanoff, Physics
- Riccardo Levi Setti, Physics
- Dietrich Müller, Physics
- Yoichiro Nambu, Physics
- Takeshi Oka, Chemistry
- Jonathan L. Rosner, Physics
- James Wellington Truran, Jr., Astronomy \& Astrophysics
- S. Courtenay Wright, Physics

Founded at the end of World War II with a faculty that included Nobel laureates Enrico Fermi and Harold Urey, the Enrico Fermi Institute has played a central role in the development of basic research in nuclear physics and nuclear chemistry, elementary particle physics, and astrophysics. Of the many Nobel laureates associated with the institute, James Cronin and Yoichiro Nambu are currently in residence as Professors Emeritus. Early research at the EFI examined the nature of nuclear structure and the origin of cosmic rays, and also established carbon 14 dating for research in geophysics and archeology. Today these interdisciplinary traditions continue among the areas most actively pursued at the Enrico Fermi Institute, including high-energy experimental physics, theoretical particle physics,
quantum field theory, astronomy and high-energy astrophysics, cosmology, general relativity, solar and planetary research, nuclear cosmochemistry, electron and ion microscopy, and solar energy concentration.

All members of the EFI faculty hold one or more joint appointments in the Departments of Astronomy \& Astrophysics, Chemistry, Geophysical Sciences, Mathematics, or Physics. The scientific staff of the EFI also includes a number of senior scientists, senior research associates, research scientists, and postdoctoral research associates. Every year, a few outstanding young scientists from an international group of applicants are appointed as Enrico Fermi Fellows or as Robert R. McCormick Fellows. Students, both graduates involved in thesis projects and undergraduates taking their first steps in research, also play an important role in the intellectual life of the EFI.

EFI faculty and scientific and technical staff occupy part of the Accelerator Building, the High Energy Physics Building, the Laboratory for Astrophysics \& Space Research, and the Astronomy \& Astrophysics Center. Experimental research is conducted not only within these laboratories on campus but also at outside facilities such as the Argonne National Laboratory and the Fermi National Accelerator Laboratory, both about an hour's drive from campus, and the European Center for Nuclear Research (CERN) in Geneva, Switzerland, as well as Salt Lake City, Utah in collaboration with the University of Utah. Equipment designed and constructed at the EFI also is used in experiments on mountain observatories, balloons, the space shuttle, and many spacecraft, including those on missions to the inner and outer planets and beyond the edge of the solar system.

## THE JAmes Franck Institute

Director

- Heinrich M. Jaeger

Professors

- Laurie J. Butler, Chemistry
- Todd Dupont, Computer Science
- Karl F. Freed, Chemistry
- Philippe M. Guyot Sionnest, Chemistry
- Eric D. Isaacs, Physics
- Heinrich M. Jaeger, Physics
- Woowon Kang, Physics
- Ka Yee Lee, Chemistry
- Kathryn Levin, Physics
- Donald H. Levy, Chemistry
- Gene F. Mazenko, Physics
- Sidney R. Nagel, Physics
- Thomas F. Rosenbaum, Physics
- Norbert F. Scherer, Chemistry
- Steven J. Sibener, Chemistry
- Paul Wiegmann, Physics
- Thomas A. Witten, Physics
- Luping Yu, Chemistry

Associate Professors

- Aaron Dinner, Chemistry
- Ilya Gruzberg, Physics
- Dion L. Heinz, Geophysical Sciences
- David Mazziotti, Chemistry
- Wendy Wei Zhang, Physics

Assistant Professors

- David Biron, Physics
- Cheng Chin, Physics
- Greg Engel, Chemistry
- Margaret Gardel, Physics

Emeritus Faculty

- R. Stephen Berry, Chemistry
- Dean Eastman, Physics
- Robert Gomer, Chemistry
- Leo P. Kadanoff, Physics
- John C. Light, Chemistry
- Stuart A. Rice, Chemistry


## AbOUT THE INSTITUTE

The James Franck Institute is the premier institute in the U.S. for interdisciplinary research at the intersection of physics, chemistry and materials science. The Institute is home to scientists from condensed matter physics, physical and materials chemistry, atomic, molecular and optical physics, and biophysics. Several of its thirty-three faculty members are affiliated as well with departments such as computer science, geophysics, mathematics, and with other research institutes on campus or with nearby Argonne National Laboratory. Most of the faculty in the Institute are also associated with the Chicago Materials Research Center, one of the select Research Science and Engineering Centers (MRSECs) supported by the National Science Foundation.
The James Franck Institute was established after World War II as the Institute for the Study of Metals, with the present name being adopted in 1967 to reflect the emerging wider range of research activities covering the full spectrum of solids, liquids, and gases. Today, high-profile experimental and theoretical research in the Institute covers the areas of nanoscience, chemical kinetics and dynamics, phase transitions and far-from-equilibrium phenomena, dynamical systems, materials behavior under extreme deformations, low-temperature transport phenomena and superconductivity, ultracold atomic matter, molecular beams, laser spectroscopy, surface phenomena, polymer chemistry and physics, and biophysics. The Institute provides a nurturing environment for scientists of different disciplines to interact and aid each other's research, and it extends to pre- and postdoctoral researchers the opportunity to do research in a unique interdisciplinary setting. Housed in the new Gordon Center for Integrative Science building, the Institute provides state-of-the-art laboratory space and operates a number of specialized research facilities. These include a low-temperature (cryogenics) laboratory, materials preparation and spectroscopic facilities, scanning probe and electron microscopes, and extensive shop and computer facilities.

In an age where much cutting-edge research lies at the boundaries between traditional disciplines, the James Franck Institute fosters creative interdisciplinary work at the forefront of science.

## INSTITUTE FOR BIOPHYSICAL DYNAMICS

## Director

- Chuan He, Chemistry


## Professors

- Francisco Bezanilla, Biochemistry and Molecular Biology
- Benjamin Glick, Molecular Genetics and Cell Biology
- Rustem Ismagilov, Chemistry
- Stephen Kent, Biochemistry and Molecular Biology
- Anthony A. Kossiakoff, Biochemistry and Molecular Biology
- Ka Yee C. Lee, Chemistry
- Keith Moffat, Biochemistry and Molecular Biology
- Tao Pan, Biochemistry and Molecular Biology
- Eduardo Perozo, Biochemistry and Molecular Biology
- Benoit Roux, Biochemistry and Molecular Biology
- Norbert Scherer, Chemistry
- L. Ridgway Scott, Computer Science, Mathematics
- Tobin R. Sosnick, Biochemistry and Molecular Biology
- Gregory Voth, Chemistry

Associate Professors

- Aaron Dinner, Chemistry
- Ronald Rock, Biochemistry and Molecular Biology

Assistant Professors

- David Biron, Physics
- Margaret Gardel, Physics
- Edwin Munro, Molecular Genetics and Cell Biology

Emeritus Faculty

- James R. Norris, Jr., Chemistry

Exciting frontiers in scientific research lie at the interface of the physical and biological sciences, outside the traditional boundaries of existing scientific disciplines. It is the purpose of the Institute for Biophysical Dynamics to create a stimulating environment to foster novel research at this important interface. Critical examination of a biological system as basic as a single cell raises questions so complex that they cannot even be stated in terms of a single discipline: the questions overflow the normal boundaries of biology and spill into the various branches of the physical sciences. Fortunately, converging trends in the biological and physical
sciences permit the development of a detailed, molecular-level understanding of the structure, diversity and function of biological entities within the cell.
The University of Chicago established the Institute for Biophysical Dynamics to meet these challenges with a new approach to scientific research. The Institute brings together experimentalists, theoreticians, and computational scientists to forge a scientific culture of open exchange of ideas and of collaboration across disciplines and among laboratories.
To provide educational training, the Institute has established programs to involve undergraduate, graduate and postdoctoral students in this new crossdisciplinary approach to science. This culture of interdisciplinary research will catalyze exchanges among researchers in industry, Argonne National Laboratory, and many diverse groups (e.g. ranging from neurobiology and cell biology to physics and computer science) at the University.

# The Professional Schools 

## THE UNIVERSITY OF CHICAGO BOOTH SCHOOL OF BUSINESS

Founded in 1898, the University of Chicago Booth School of Business is the second-oldest business school in the United States and one of the most distinguished. The school's programs consistently rank highly in surveys, and the school has a strong reputation for innovation in both research and teaching. For example, Chicago Booth faculty have made significant contributions in the areas of finance, the economics of regulation, and decision making. For more than a century, Chicago Booth has been known as an innovator in business education and a creator of ideas.

In autumn 2004 Chicago Booth opened its Hyde Park Center. Named the Charles M. Harper Center in 2007, this new facility brought together all of Chicago Booth's previously existing Hyde Park campus buildings into one 415,000-square-foot space. Located at 5807 South Woodlawn Avenue, Harper Center was designed around how teachers want to teach and how students want to learn. With the opening of Harper Center, Chicago Booth could lay claim to the best business school facilities in the world. Chicago Booth is the only business school with permanent campuses on three continents. Built in 1994, Gleacher Center, off Michigan Avenue in downtown Chicago, provides state-of-the-art executive education and conference facilities and is home to the school's part-time MBA programs. In London, Woolgate Exchange is the home of the school's Executive MBA Program Europe. In Singapore, the House of Tan Yeok Nee, a renovated historic building in the center of Singapore's business and government district, is the location for the Executive MBA Program Asia.

The University of Chicago Booth School of Business offers six programs of study leading to a degree: four leading to an MBA (the Full-Time MBA Program, the Evening MBA Program, the Weekend MBA Program, and the Executive MBA Program), one leading to an IMBA (the International MBA Program), and the PhD Program.

## The MBA Program

The MBA curriculum is designed to prepare students for significant careers in management. It encompasses both the basic disciplines that underlie management and the operational areas specific to business. The courses are designed to provide understanding of the components of managerial decision making while furnishing perspective on the role of business as an economic, political, and social institution.

The MBA experience is not restricted to the classroom at Chicago Booth. Although Booth is not a case study institution, a substantial percentage of the total course work, depending on the student's choice of classes, will consist of various kinds of cases and applied analyses. Because of the school's location in one of the world's major commercial centers, students meet business, economic, labor, and political
leaders at the numerous lecture and seminar series held on campus and through alumni and friends in Chicago's business community.

Freedom of choice is a way of life at Chicago Booth. Professors are free to use the teaching method they believe to be most effective; students are free to choose the courses and professors from whom they can best learn. In addition, students are encouraged to make use of the resources of the entire university and take advantage of the critical and intellectual diversity that thrives on the campus. The Chicago Booth MBA is characterized by a willingness to experiment, to judge people by their performances rather than their origins, to judge ideas by their consequences rather than their antecedents.

Chicago Booth's Leadership Effectiveness and Development Program (LEAD) was founded in 1989 as one of the first experiential leadership programs at a major business schools. Held during autumn quarter and lead by second-year student facilitators, the program provides a common educational experience within a curriculum that has always offered exceptional flexibility. This required, noncredit course for full-time program students is designed to enhance self-awareness and interpersonal effectiveness through a varied and highly interactive curriculum. Through these experiences, students will enhance their mastery of three of the most important aspects of leadership: building relationships, inspiring others, and influencing outcomes. Other class activities in autumn quarter revolve around the 10 student cohorts assigned during LEAD that help build a sense of community, instill the value of teamwork, and acquaint students with the school.

The school admits persons with a wide variety of backgrounds. The normal prerequisite is a four-year bachelor's degree, or equivalent, from an accredited institution. Students who do not have a bachelor s degree may apply to the school for special eligibility. Those interested in consideration for special eligibility must receive approval before an application is submitted and should, therefore, write to the director of admissions for further information.

Requests for an application and other inquiries should be addressed to the Office of Admissions and Financial Aid, The University of Chicago Booth School of Business, 5807 South Woodlawn Avenue, Chicago, Illinois 60637, phone: 773.702.7369, email: admissions@ChicagoBooth.edu.

## The International MBA Program

The University of Chicago Booth School of Business also offers an international MBA (IMBA) degree. This program provides students with in-depth training in business fundamentals as well as the skills and training required to be competitive at the global level.

The core of the IMBA program draws on the traditional strengths of the school's MBA program. Students enjoy flexibility in course selection, few absolute course requirements, and access to the best business faculty in the world. They grasp the fundamentals of business and develop the skills necessary to apply those fundamentals in real world situations.

In addition, IMBA students develop a broad set of intercultural skills necessary for successful careers in international business. They master a foreign language, spend at least one term of study abroad, participate in specialized multicultural programming, and potentially work on real company projects as part of specially tailored project courses while studying overseas. International education is delivered by Booth faculty, world-renowned scholars from other units of the university (such as East Asian Studies or International Relations), and by faculty from partner universities around the globe.
Though the IMBA contains additional requirements, the IMBA program is completed in the same time frame as the traditional MBA program. As a result, most students should expect to complete the program in the twenty-one months usually required for the MBA program. Since expertise in international business is implicit in the IMBA degree, recognition of an international business concentration would be redundant; therefore, no IMBA student may declare an international business concentration.

Acceptance into the IMBA program is based first on gaining admission to the FullTime MBA Program. During the first quarter of enrollment students may declare their intention to follow the IMBA curriculum. To obtain an MBA application, contact the Office of Admissions and Financial Aid, The University of Chicago Booth School of Business, 5807 South Woodlawn Avenue, Chicago, Illinois 60637, or phone 773.702.7369.

## The Part-Time MBA Programs

## The Evening MBA Program

The University of Chicago pioneered the concept of part-time MBA study for men and women employed in management and the professions. Even though the school's Evening MBA Program is more than fifty years old, it is still unique in the field of management education because it is identical in every important way to the full-time program. Entrance requirements and degree requirements are the same for both programs, and courses are taught by the same faculty.

While the academic aspects of the full-time and part-time programs are the same, their logistics are quite different. Evening MBA classes meet on weeknights in the school's convenient downtown location at Gleacher Center, 450 North Cityfront Plaza Drive, along the north bank of the Chicago River between Michigan Avenue and Columbus Drive. Approximately 1,600 students from a diverse background of job functions and industries are currently engaged in part-time study in the program. Many of the students come from Chicago area banks and financial institutions; heavy industry, consulting, advertising, and the entrepreneurial and nonprofit sectors also are well represented. Job titles of current students range from new management trainees to senior executive officers.

Classes are available in all four academic quarters. Students completing two courses per quarter will fulfill the program requirements in two-and-one-half
years, although the average graduation time is approximately three years. All MBA candidates are allowed a maximum of five years to complete the degree program.

## THE WEEKEND MBA PROGRAM

Many managers often find it convenient to take their classes on Saturdays due to travel schedules or the location of their offices far from Chicago. To meet the needs of individuals and their companies, Booth provides an additional avenue of continuing education in its Weekend MBA Program. Students take courses on Saturday mornings and Saturday afternoons at the convenient downtown Gleacher Center and thereby can complete the MBA program in as little as two-and-onehalf years. Some students fly in from across the country and around the globe, with over 70 percent of weekend students living outside of Illinois. The Weekend MBA Program follows in the Chicago Booth tradition of offering all MBA candidates the same academic program, same faculty, and same degree as the full-time and evening MBA programs.

## The PhD Program

The PhD Program is an integral part of Chicago Booth. The school began the first PhD program in business in the United States in 1920 and awarded its first PhD degree in 1922. Since then, more than five hundred degrees have been granted.
The program leading to the degree of doctor of philosophy is designed for students of outstanding ability who desire advanced studies in preparation for careers in university teaching and research. The number of students admitted to the program each year is small and, within the framework of the general requirements described below, programs of study are designed to fit individual interests. Students with a variety of backgrounds are admitted to the program; undergraduates with strong academic backgrounds (e.g., economics, mathematics, psychology, sociology) and strong research interests are encouraged to apply. Students without strong academic backgrounds in their area of study may have to take prerequisite courses in economics, mathematics, or statistics.

Information about the program and application materials may be requested from the PhD Program Office, The University of Chicago Booth School of Business, 5807 South Woodlawn Avenue, Chicago, Illinois 60637, and are available online at http:// www.chicagobooth.edu/phd/.

## Joint Degree Programs

Chicago Booth participates in joint degree programs with several other schools and divisions of the University: the Law School; School of Social Service Administration; Pritzker School of Medicine; Irving B. Harris Graduate School of Public Policy; East European/Russian, Middle Eastern, South Asian, and Latin American area study centers; and Committee on International Relations. These programs allow the student to pursue combined programs of study. For more information on the joint MBA/AM programs in international relations or Middle Eastern, East Asian, East European/Russian, Latin American, and South Asian
studies, contact the Committee on Joint MBA/AM Programs, The University of Chicago Booth School of Business, 5807 South Woodlawn Avenue, Chicago, Illinois 60637. For all other joint programs, write to the director of admissions of Chicago Booth and the dean of students of the appropriate school.

## The Executive MBA Program

The Executive MBA Program is a part-time MBA program designed to prepare experienced executives to be more effective general managers.

Each year, approximately 90 students are admitted to each location of study in this intensive, twenty-month program. Students will participate primarily at one of our three international locations: downtown Chicago (Gleacher Center); London (Woolgate Exchange); or Singapore (The House of Tan Yeok Nee). The Executive MBA Program curriculum emphasizes the value of learning in groups and sharing experiences. International cohorts are composed of an equal mix of students from all three campuses and convene for week-long sessions in London and Singapore.

Although the format is different, the Executive MBA Program, like all of Chicago Booth's MBA programs, is based on the Chicago Approach to business education. This approach emphasizes developing an understanding of the fundamental forces in the economy, in organizations, and in individuals; using this understanding to analyze and produce creative, imaginative solutions to real world problems; and staffing courses with regular full-time members of the faculty. Optional concentrations are optional and available in finance, marketing, and strategy for students interested in specializing or deepening their knowledge in areas of particular relevance to their careers.

For further information about the program, contact:
the director of the Executive MBA Program North America
The University of Chicago Booth School of Business
450 North Cityfront Plaza Drive
Chicago, Illinois 60611
phone: 312.464.8750
email: xp@ChicagoBooth.edu
the director of the Executive MBA Program Europe
The University of Chicago Booth School of Business
Woolgate Exchange
25 Basinghall Street
London EC2V 5HA United Kingdom
phone: 44.(0)20.7643.2210
email: europe.inquiries@ChicagoBooth.edu
the director of the Executive MBA Program Asia
The University of Chicago Booth School of Business
101 Penang Road
Singapore 238466
phone: 011.65.6835.6482
email: asia.inquiries@ChicagoBooth.edu


## THE DIVINITY SCHOOL

## Programs of Study

The Divinity School offers programs of study leading to the degrees of Master of Arts in Divinity (A.M.), Master of Arts in Religious Studies (A.M.R.S.), Doctor of Philosophy (Ph.D.), and Master of Divinity (M.Div.).

The A.M. in Divinity (A.M.) program is the foundational program for students without a graduate degree who wish to pursue the Ph.D. in the Divinity School.

The A.M. in Religious Studies (A.M.R.S.) program serves students who seek a general introduction to the contemporary study of religion. It does not lead to Ph.D. work at the Divinity School.

The Ph.D. program of study prepares students for scholarship, teaching, and research in the study of religion.

The M.Div. program of study is designed to prepare students for traditional, well defined ministerial professions as well as new and emerging forms of ministry.

Students in the A.M.R.S. and M.Div. programs are required to register for and to complete a certain number of courses in order to receive the degree. Students in the A.M. and Ph.D. programs are required to register according to a two stage residence structure. These A.M. and Ph.D. studies are not required to register for a certain number of courses, except for three courses required of A.M. students (DVSC 30100, DVSC 30200, and DVSC 30300) and insofar as particular areas of study specify certain courses for their Ph.D. studies. Students should consult the area guidelines (available in the Dean of Students Office) for their respective areas of study concerning these matters. In addition to attending to any area requirements, students are also advised that normally they should maintain a substantial course load during their A.M. years and their first year of doctoral study in order both to develop their own scholarly capacities and to afford faculty members appropriate opportunities for the assessment of their work.

## LAW SCHOOL

The Law School offers a three-year program of professional instruction leading to the degree of Doctor of Law (J.D.). It is designed to prepare students for the practice of law in any American jurisdiction. A bachelor's degree from an approved college is usually a prerequisite to admission, although highly qualified students with only three years of undergraduate studies may be admitted. All applicants must take the Law School Admission Test. Each entering class is limited to approximately 195 students. A student in good standing at an approved American law school who has completed at least one year of law study or a graduate of an approved foreign law school whose studies have been primarily in the common law may apply for admission with advanced standing.

The school offers advanced studies leading to the degrees of Master of Laws (LL.M.), Doctor of Jurisprudence (J.S.D.), Master of Comparative Law (M.Comp.L.), and Doctor of Comparative Law (D.Comp.L.).

What sets Chicago apart from other law schools is its unabashed enthusiasm for the life of the mind and its conviction that ideas matter and are worth discussing. We value legal education and training, not only as preparation for legal careers, but for their own sakes as well. Legal study at Chicago is a passionate venture that begins in the classroom, where the faculty engage their students in a rigorous Socratic dialogue. Chicago's unique first year required course, Elements of the Law, introduces students to the law as an interdisciplinary field and gives them the tools to continue the interdisciplinary inquiry throughout their legal education.

Chicago remains committed to legal education as an education for generalists, although students with particular interests will find it possible to study topics in depth through advanced and more specialized courses.

Emphasizing the acquisition of broad and basic knowledge of law, an understanding of the functioning of the legal system, and the development of analytic abilities of the highest order, a Chicago legal education prepares students for any professional role they might choose: legal practice or legal education, entrepreneurial ventures, international private or public law practice, corporate practice, government service, alternative dispute resolution including arbitration and mediation, or work with nonprofit organizations. Graduates do many things in their careers, and they all take with them the analytic skills emphasized during their years at the Law School.

In addition to a wide array of courses and seminars, second and third year students may participate in a number of clinical programs, including the Irwin Askow Housing Initiative, the Criminal and Juvenile Justice Project, the Police Accountability Project, the Institute for Justice Clinic on Entrepreneurship, the Exoneration project, and the Appellate Advocacy Clinic. In these programs, students engage in supervised practice, including the representation of clients in court.

A significant portion of the faculty specialize in disciplines other than law, such as economics, history, sociology, and political science. The curriculum devotes substantial attention to relevant aspects of economics, legal history, comparative
law, psychiatry, statistics, and other social science methodology. In addition to the student edited University of Chicago Law Review, Legal Forum, and the Chicago Journal of International Law, the school has three scholarly journals the Supreme Court Review, the Journal of Law and Economics, and the Journal of Legal Studies. The Law School is also home to the Center for Comparative Constitutionalism, the John M. Olin Program in Law and Economics, the Center for Studies in Criminal Justice, and the Legal History Program.

Detailed information on admission, programs, faculty, and facilities is contained in the Announcements of the Law School, obtainable from the Admissions Office, Law School, The University of Chicago, 1111 East 60th Street, Chicago, IL 60637.

# Irving B. Harris Graduate School of Public Policy Studies 

Program of Study

One of six professional schools, the Harris School of Public Policy Studies is part of a world-class intellectual community and continues the University's tradition of scholarship intended to address real-world problems. Established in 1988, the Harris School emerged from the interdisciplinary Committee on Public Policy Studies. Influential founding supporters include educational sociologist James Coleman, urban sociologist William Julius Wilson, and the 2000 Nobel laureate economist James Heckman. From its inception, the Harris School has sought to enhance the University's role in shaping and understanding public life by conducting policyrelevant research and preparing talented individuals to become leaders and agents of social change.

The Harris School offers a Master of Public Policy degree; a one-year Master of Arts degree in public policy studies for students already possessing another professional degree; a Master of Science in Environmental Science and Policy; a combined degree program with the Committee on International Relations; cooperative programs with the University of Chile, Tel Aviv University, and Yonsei University Graduate School of International Studies; and joint degrees with the Divinity School, Graduate School of Business, Law School, and School of Social Service Administration. The Harris School also offers a Doctor of Philosophy for students seeking research-related careers in academia or elsewhere. In addition, the Harris School offers non-degree training opportunities for public policy professionals.

An exciting and challenging place to learn, the Harris School's model of public policy training reflects the University of Chicago's tradition of research and teaching - meticulous scholarship, open inquiry, and cross-disciplinary, critical thinking. Faculty come from diverse academic backgrounds and lend their individual expertise to a collaborative curriculum. Students come ready and willing to work and prepare for leadership in public policy. Alumni around the world apply their Harris School training to a multitude of public policy issues, making an impact in whatever arena they choose to work.
The rigorous curriculum stresses the development of analytical tools, which form the basis of the program's approach to understanding the nature of social problems and the impact of public policy. Harris School students become conscientious consumers of social science research and are able to evaluate information and make informed policy choices.
However, classroom training is only part of the equation. The Harris School provides opportunities for students to apply the critical skills that they learn in the classroom to real-world situations. Through a mentor program, internships, and practica, Harris School students are able to enrich their education, network with
community leaders, and lend their growing public policy expertise to local, national, and international organizations. The School fosters a spirit of cooperation between students, public policy professionals, faculty, and others to address societal concerns and is constantly seeking new partnership opportunities.

## Program Overview

All students are required to fulfill core course requirements to acquire technical and analytical skills for their professional growth and distribution requirements to gain a broad background in policy analysis. However, the flexibility of the program allows students to tailor their course of study to fit their interests through:

- Concentration areas (optional), which expose students to the content and complexity of at least one policy domain
- Electives, which offer students an opportunity to acquire training both in the theoretical and applied analysis of public policy issues, and to develop the skills necessary for a professional position in policy analysis

The integration of research and practical training and a multi-disciplinary approach to problem solving underlie all aspects of the program.

## Research Opportunities

Faculty and student research at the Harris School is guided not only by theoretical interests, but also by a strong commitment to solving enduring public policy problems.

Students are frequently involved in faculty research through research assistantships, coursework, independent studies, and research centers housed at the School and throughout campus. The Harris School is home to three research centers -the Center for Human Potential and Public Policy, the Cultural Policy Center, and the Program on Political Institutions - as well as the Pritzker Consortium on Early Childhood Development. The Center for Human Potential and Public Policy supports innovative social science research and encourages transdisciplinary research approaches on a broad range of issues, including health and well-being; science, technology, and inequality; and poverty and education. The Cultural Policy Center provides research and informs policy that affects the arts, humanities, and cultural heritage. It serves as an incubator for new ways of understanding what the arts and culture are, what they do, and how they can be affected by a range of policies in the public and private sectors. The Program on Political Institutions focuses on the domestic and international institutions that create and implement public policy. Through the support of workshops, conferences, student training, and scholarship, it establishes an intellectual hub at the University for faculty and graduate students who are interested in the political economy of institutions. The Harris School is also home to Pritzker Consortium on Early Childhood Development, which brings together the world's leading experts to identify when and how child intervention programs can be most influential.

The interdisciplinary nature of the centers allows for broad participation by students and faculty. The School works closely with other research centers and programs throughout the University, including:

- Alfred P. Sloan Center on Parents, Children, and Work
- Center for Early Childhood Research
- Center for Health Administration Studies
- Center for Health and the Social Sciences
- Center for Social Program Evaluation
- Center for the Study of Race, Politics, and Culture
- Center on Aging, Health and Society
- Center on Demographics and Economics of Aging
- Chapin Hall Center for Children
- Economic Research Center
- NORC (formerly the National Opinion Research Center)
- Ogburn/Stouffer Center for the Study of Social Organizations
- Program on International Politics, Economics and Security (PIPES)
- Program on International Security Policy (PISP)
- Population Research Center


## Student Body

The Harris School is strongly committed to supporting a student body that includes diverse cultural and ethnic backgrounds, educational and work experiences, and professional training. The current student body is comprised of students who received undergraduate degrees in such fields as American studies, economics, education, engineering, English, environmental studies, international relations, philosophy, physics, political science, psychology, and sociology. The incoming class is 55 percent female and 22 percent international students, representing 20 countries. The age of current students ranges from 21 to 52 with approximately 250 master's students and $45 \mathrm{Ph} . \mathrm{D}$. students enrolled.

Academic life is enriched by a variety of extracurricular activities and organizations. The Public Policy Student Association (PPSA), the Harris School student government, provides a voice for students and works with administrators at the Harris School on many issues and opportunities. Students may also participate in the Chicago Policy Review, the School's student-run academic journal; Chicago Environmental Policy Group (CEPA); the Minorities in Public Policy Studies (MIPPS); Community and Economic Development Organization (CEDO); Women in Public Policy (WIPP); Out in Public Policy (OIPP); the Committee on International Affairs and Public Policy (CIAPP); Latin America(n) Matters (LAM); Education Interest Coalition (EPIC); IBH Consulting; and other groups organized by Harris School students. In addition, Harris School students are able to take part in many University-sponsored activities, including intramural sports, University Theater,

Chicago Maroon (the student-run newspaper), Chicago Debate Society, Minority Graduate Student Association, and Student Government.

## Application and Admission

We seek candidates with the academic preparation, intellectual ability, experience, and motivation to undertake a rigorous program in public policy studies, and who have the potential for academic and professional success. While no specific background or major is required or recommended, students with a strong liberal arts background and sound quantitative and analytical skills will be best prepared for the program. The Committee on Admission and Aid evaluates all official transcripts of academic work, personal essays, letters of recommendation, extracurricular activities and community service, performance on standardized tests, and special factors brought to its attention. The Committee considers each application on the basis of all materials submitted and does not eliminate applications based solely on grade point averages or test scores.
To be considered for admission, applicants must submit the following materials:

- Application for admission
- Transcripts of all prior academic work at institutions of higher education
- Three letters of recommendation
- \$50 non-refundable application fee
- TOEFL scores (international applicants only use institution code 1849) or IETLS scores
- Official GRE or GMAT scores, or LSAT scores (if a joint M.P.P./J.D. applicant). If submitting GRE scores, use code 1849; if submitting GMAT scores, use code 1849.

The Committee on Admission and Aid will not review your application until all required materials are received. We highly recommend that you apply online and submit any supplement materials in one package to avoid delays in processing your application.

The Harris School currently accepts only electronic applications. Contact the Office of Admission at 773-702-8401 or HarrisSchool@uchicago.edu for more information.

# THE School of Social SERVICE ADMINISTRATION 

Programs of Study

The School of Social Service Administration, chartered in 1908 as the Chicago School of Civics and Philanthropy, became a part of the University of Chicago in 1920. The School offers a graduate program leading to the A.M. in Social Work and a program of advanced study leading to the Ph.D.

The A.M. degree can be completed in two years of full time study. An Extended Evening Program is offered to permit full time workers the opportunity to complete degree requirements part time in the evenings during three years of continuous enrollment. A part time day program allows students to work toward a master's degree as a part time student taking day classes. The A.M. is a graduate social work degree accredited by the Council on Social Work Education. Joint degree programs leading to the A.M./M.B.A., A.M./M. Div., and A.M./M.P.P. degrees are also available. The A.M. program is organized into (a) a core curriculum focusing on the fundamentals of social welfare policy and practice, (b) an elective concentration in either clinical practice or social administration, and (c) field internships in government, schools, hospitals, and nonprofit social welfare organizations coordinated and integrated with course work during the two years of study.
The School provides students opportunities to prepare for a variety of professional roles. Students in the clinical concentration pursue careers in direct service to individuals, families, and groups. Such service includes helping individuals and families cope with social and psychological problems; organizing care for children whose families are unable to provide for them through foster care and adoption; working in communities and social institutions like schools, health care settings, and workplaces to promote positive social development; working in family support programs, antipoverty agencies, mental health programs, and settlement houses.

Social policy formulation, planning, community organization, and the management of social service organizations and systems is the focus of students in the social administration concentration. Graduates hold positions in agencies concerned with comprehensive health and mental health planning and policy development, race relations, planning for the aged, neighborhood organizations, community councils, and funding agencies. Others hold staff and administrative positions in federal, state, and local child welfare, mental health, or health care agencies, in international social welfare organizations, and in offices of members of Congress and public officials.

The Ph.D. degree provides advanced training for careers in research, teaching, and administration in the field of social welfare and the profession of social work. Requirements include course work in SSA and other University departments in methodological, theoretical and substantive areas, a qualifying exam, and a
dissertation. The program is typically completed within three to five years for students entering with the A.M. degree.

## Research Centers

## Chapin Hall Center for Children

The Chapin Hall Center for Children at the University of Chicago engages in policy research in child welfare and children's services. Its primary functions include collecting and reporting data on the condition of children, conducting research and demonstration projects in areas of special interest for children, families and communities, and providing information and stimulating discussion about children's issues. Chapin Hall also works directly with policy makers to understand and create policies to improve the well-being of children. A number of faculty members from the School of Social Service Administration are associates of the Center and direct research under its auspices. SSA doctoral and master's-level students form an integral part of many Chapin Hall research teams, and are active participants in seminars and discussions. Please see the Chapin Hall website for more information about the organization's research, publications, and conferences: http://www.chapinhall.org/.

## Center for Health Administration Studies

The Center for Health Administration Studies (CHAS) supports multidisciplinary research on health policy and politics through a seed-grant program. The iniative is available to University of Chicago faculty and health researchers, as well as those interested in pursuing a health-related project for the first time.. The supported projects are oriented towards health care policy for poor and vulnerable populations including projects focused specifically on Medicaid policy, behavioral health service in community-based settings, and school-based health care research. The Center also supports the Michael M. Davis seminar series on "Health and Vulnerable Populations," drawing on speakers across a wide spectrum of health-related fields. The Davis Seminars are held weekly, during the Autumn and Spring academic quarters. Please see the CHAS website for details on these and other health-related events across the university: http://www.ssa.uchicago.edu/chas/home.shtml.

## Center for Family Health

The Center for Family Health at the University of Chicago was established to provide an interdisciplinary center for research, advanced academic studies, clinical training, and social policy directed to the promotion of healthy family development, functioning, and adaptation to biologically-based and psychosocial life challenges. The Center, co-directed by Froma Walsh, Ph.D. and John Rolland, M.D., is based in the School of Social Service Administration and the Department of Psychiatry, with involvement of faculty and students in Medicine, Psychology, Human Development and other related disciplines.

## Center for Social Work Practice Research

The Center for Social Work Practice Research, directed by Elsie M. Pinkston, Ph.D., provides leadership in the development and evaluation of social work intervention. The Center's aims are fourfold; to develop effective social work practice research, to collaborate with community agencies on research about clinical practices, to provide clinical practice consultation services; and to foster graduate education in clinical practice and research methodology.

## INFORMATION AND APPLICATION

For further information and application materials, contact the Office of Admissions, The School of Social Service Administration, The University of Chicago, 969 East 60th Street, Chicago, IL 60637; telephone: (773) 702-1492 or by visiting the SSA website at http://www.ssa.uchicago.edu.

## The William B. and Catherine V. Graham School of CONTINUING LibERAL AND Professional Studies

The William B. and Catherine V. Graham School of Continuing Liberal and Professional Studies has a tradition of excellence in graduate education and outreach. It houses three master degree programs and two graduate level non degree educational opportunities.

## The Master of Liberal Arts Program

The Master of Liberal Arts program offers an interdisciplinary course of study designed to teach students the principles, perspectives, and methodologies of the major academic disciplines, and to encourage students to assess these principles and approaches critically as they are applied to contemporary issues. The program achieves these objectives through a three tiered structure consisting of core courses in the humanities, social sciences, and natural sciences; five electives; independent research; and the completion of either a thesis paper or a special project. The program was created especially for adults who wish to broaden their personal and academic horizons through a structured program of part time evening or Saturday study leading to the Master of Liberal Arts degree.

## Master of Science in Threat and Response Management

The Master of Science in Threat and Response Management is an applied degree program that addresses issues of concern to public health practitioners and administrators, medical and nursing professionals, homeland security and emergency response personnel, and policy makers who are responsible for preserving and protecting the nation's health. All students take a public health core, including epidemiology, biostatistics, and environmental health. Then, students may choose from two curricular tracks, one examining the scientific aspects of public health preparedness, focusing on infectious disease and preventive health care, the other addressing issues of administration and leadership, concentrating on health planning, policy, and decision making. The program is connected to the Great Lakes Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research, which is housed at the University of Chicago's affiliate, Argonne National Laboratory, and is designed to help promote the lessons learned from this research project to practitioners and policy makers. Additional instruction is provided by professors of the Pritzker School of Medicine and the Irving Harris School of Public

Policy Research. Students may elect to pursue a one year full time or two year part time degree program.

## MASTER OF ARTS IN TEACHING (MAT)

The University of Chicago's Urban Teacher Education program (UTEP) offers a Master of Arts in Teaching degree and an Illinois Teaching Certificate in grades K-9, with endorsements available in all middle school subjects, or an Illinois Teaching Certificate in grades 6-12 in Math or Biology. UTEP has many features that distinguish it from traditional teacher education programs. Its rigorous curriculum and in-depth clinical experiences not only equips students with the knowledge, skills and ability to teach, but also prepares them to become successful and reflective teachers who are attuned to the social, cultural and economic circumstances of their students. Over eight quarters, students receive instruction which includes exploring aspects of the teaching profession that contribute to social injustice. Through guided field visits to Chicago Public Schools, UTEP students learn how to observe students, collect data about schools, and reflect and document their experiences. Students continue to develop their teaching practice through one-on-one paid tutoring sessions at the University's charter schools. The clinical experience of the program affords students two 18 -week classroom rotations where they are paired with experienced teachers to further develop a teaching practice. Alumni receive support with job placement, in-classroom coaching, planning and professional development for two years, free of charge.

## THE Returning Scholar (RS) Program

The Returning Scholar program is designed for adults who would like to take courses at the University but prefer not to receive grades and credit. Students choose from the extensive list of graduate and undergraduate courses offered by the University's degree granting departments. A grade of R (registered audit) is entered on the student's record for each course completed. Courses cannot be used to complete degree requirements at the university, nor can they be used as transfer credit toward a degree at another institution.

## The Graduate Student at Large (GSAL) Program

The Graduate Student at Large program enables adults who would like to return to school to work toward a master's or doctoral degree but who are uncertain of which field is best. The program also serves people who have no immediate degree plans but for whom a quality grade and credit study is appropriate. Academic credit is given and copies of transcripts may be requested. Courses offered are the same as those from which Returning Scholars select. Those who later apply and are accepted into a degree program at the University, or elsewhere, may be able to transfer up to three of the courses taken in the GSAL program towards their degree. Acceptance into the GSAL program does not guarantee subsequent admission to a degree program.

Students from institutions not having formal exchange or traveling scholar programs with the University should apply as a Graduate Student at Large if they wish to study at the University for a specific period of time and have the work transferred for credit to the home school.

For further information about these programs contact:
The University of Chicago
Graham School of Continuing Liberal and Professional Studies
1427 E. 60th Street, Press Building, Suite 2
Chicago, IL 60637
(773) 702-1722

## INDEX

A
Academic Calendar ..... 7
C
Center for East Asian Studies ..... 39
Center for East European and Russian/Eurasian Studies ..... 42
Center for Gender Studies ..... 31
Center for International Studies ..... 37
Center for Jewish Studies ..... 48
Center for Latin American Studies ..... 54
Center for Middle Eastern Studies ..... 59
Clinical Departments in the Biological Sciences ..... 405
Committee on African and African-American Studies ..... 29
Committee on Cancer Biology ..... 322
Committee on Cellular and Molecular Physiology ..... 327
Committee on Computational Neuroscience ..... 331
Committee on Conceptual and Historical Studies of Science ..... 255
Committee on Developmental Biology ..... 335
Committee on Evolutionary Biology ..... 345
Committee on Genetics, Genomics \& Systems Biology ..... 355
Committee on Geographical Studies ..... 306
Committee on Immunology ..... 369
Committee on International Relations ..... 271
Committee on Medical Physics ..... 375
Committee on Microbiology ..... 379
Committee on Molecular Metabolism and Nutrition ..... 388
Committee on Neurobiology ..... 392
Committee on Southern Asian Studies/South Asia Language \& Area Center ..... 65
D
Department of Anthropology ..... 240
Department of Art History ..... 80
Department of Astronomy and Astrophysics ..... 422
Department of Biochemistry and Molecular Biology ..... 318
Department of Chemistry ..... 431
Department of Cinema and Media Studies ..... 84
Department of Classics ..... 95
Department of Comparative Human Development ..... 248
Department of Comparative Literature ..... 104
Department of Computer Science ..... 441
Department of East Asian Languages and Civilizations ..... 111
Department of Ecology and Evolution ..... 340
Department of Economics ..... 258
Department of English Language and Literature ..... 130
Department of Germanic Studies ..... 138
Department of Health Studies ..... 360
Department of History ..... 264
Department of Human Genetics ..... 366
Department of Linguistics ..... 156
Department of Mathematics ..... 454
Department of Music ..... 161
Department of Near Eastern Languages and Civilizations ..... 171
Department of Organismal Biology and Anatomy ..... 397
Department of Pathology ..... 401
Department of Philosophy ..... 176
Department of Physics ..... 466
Department of Political Science ..... 275
Department of Psychology ..... 281
Department of Romance Languages and Literatures ..... 194
Department of Slavic Languages and Literatures ..... 203
Department of Sociology ..... 300
Department of South Asian Languages and Civilizations ..... 210
Department of Statistics ..... 474
Department of the Geophysical Sciences ..... 447
Department of the Visual Arts ..... 228
Divisional Master's Program in the Physical Sciences ..... 420
G
General Information ..... 8
Graduate Program in Biophysical Sciences ..... 428
H
Human Rights Program ..... 36
I
Institute for Biophysical Dynamics ..... 484
Interdisciplinary Opportunities ..... 29
Interdivisional Programs ..... 14
M
Master of Arts in Latin American Studies ..... 73
Master of Arts in Middle Eastern Studies ..... 77
Master of Arts Program in the Humanities ..... 71
Master of Arts Program in the Social Sciences ..... 235
Medieval Studies ..... 57
N
NORC ..... 63
P
Program in Cell and Molecular Biology ..... 382
Programs of Graduate Study in the Basic Biological Sciencess ..... 315
R
Research Centers ..... 501
T
The Divinity School ..... 492
The Division of the Biological Sciences and the Pritzker School of Medicine ..... 312
The Division of the Humanities ..... 69
The Division of the Physical Sciences ..... 417
The Division of the Social Sciences ..... 232
The Enrico Fermi Institute ..... 479
The Interdisciplinary Scientist Training Program ..... 373
The Irving B. Harris Graduate School of Public Policy Studies ..... 495
The James Franck Institute ..... 482
The John U. Nef Committee on Social Thought ..... 293
The Law School ..... 493
The Morris Fishbein Center for the History of Science and Medicine ..... 46
The Pritzker School of Medicine ..... 411
The Professional Schools ..... 486
The School of Social Service Administration ..... 499
The University of Chicago ..... 5
The University of Chicago Booth School of Business ..... 486
The William B. and Catherine V. Graham School of Continuing Liberal and Professional Studies503


[^0]:    CMST 48500. History of International Cinema I: Silent Era. 100 Units. Edit Course Data - default
    This course introduces what was singular about the art and craft of silent film. Its general outline is chronological. We also discuss main national schools and international trends of filmmaking.
    Instructor(s): J. Lastra Terms Offered: Autumn
    Prerequisite(s): Prior or concurrent enrollment in CMST 10100. Required of students majoring in Cinema and Media Studies.
    Note(s): This is the first part of a two-quarter course.
    Equivalent Course(s): CMST 28500,ARTH 28500,ARTH 38500,ARTV
    26500,ARTV 36500,CMLT 22400,CMLT 32400,ENGL 29300,ENGL 48700,MAPH 36000

[^1]:    CHIN 41100. Fourth-Year Modern Chinese I. 100 Units. Edit Course Data default
    Terms Offered: Autumn
    Prerequisite(s): CHIN 30300 or placement
    Equivalent Course(s): CHIN 20501
    CHIN 41200. Fourth-Year Modern Chinese II. 100 Units. Edit Course Data default
    Terms Offered: Winter
    Prerequisite(s): CHIN 30300 or placement
    Equivalent Course(s): CHIN 20502

