

THE UNIVERSITY OF  
**CHICAGO**



GRADUATE PROGRAMS  
*in the* DIVISIONS

ANNOUNCEMENTS 2005-2007

# THE UNIVERSITY *of* CHICAGO

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GRADUATE PROGRAMS *in the*

DIVISIONS

ANNOUNCEMENTS

*2005-2007*



# THE UNIVERSITY OF CHICAGO

James Crown, *Chairman of the Board of Trustees*

Don Michael Randel, *President of the University*

Richard P. Saller, *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.

## Division of the Biological Sciences

924 East 57th Street

Chicago, IL 60637

(773) 834 2105

email: biosci grad affairs@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

1010 East 59th 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: ssd admissions@uchicago.edu  
<http://social sciences.uchicago.edu>

## Graduate School of Business

1101 East 58th Street

Chicago, IL 60637

(773) 702 7369

admissions@gsb.uchicago.edu  
<http://gsb.uchicago.edu>

## Divinity School

1025 35 East 58th Street

Chicago, IL 60637

(773) 702 8217

email: wsulliva@uchicago.edu  
<http://www.divinity.uchicago.edu>

## Law School

1111 East 60th Street

Chicago, IL 60637

(773) 702 9484

email: 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

email: ssa dos@uchicago.edu  
<http://www.ssa.uchicago.edu>

## The University of Chicago central

switchboard: (773) 702 1234.

All of the information in this volume, as well as in the *Announcements* of each of the professional schools, is available in electronic form over the World Wide Web at <http://catalogs.uchicago.edu>. These electronic documents are updated periodically as new information becomes available. Using the World Wide Web you may also be able, depending on your computer and software, to request an application or more detailed information about a program that interests you.

Volume C

September 2003

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

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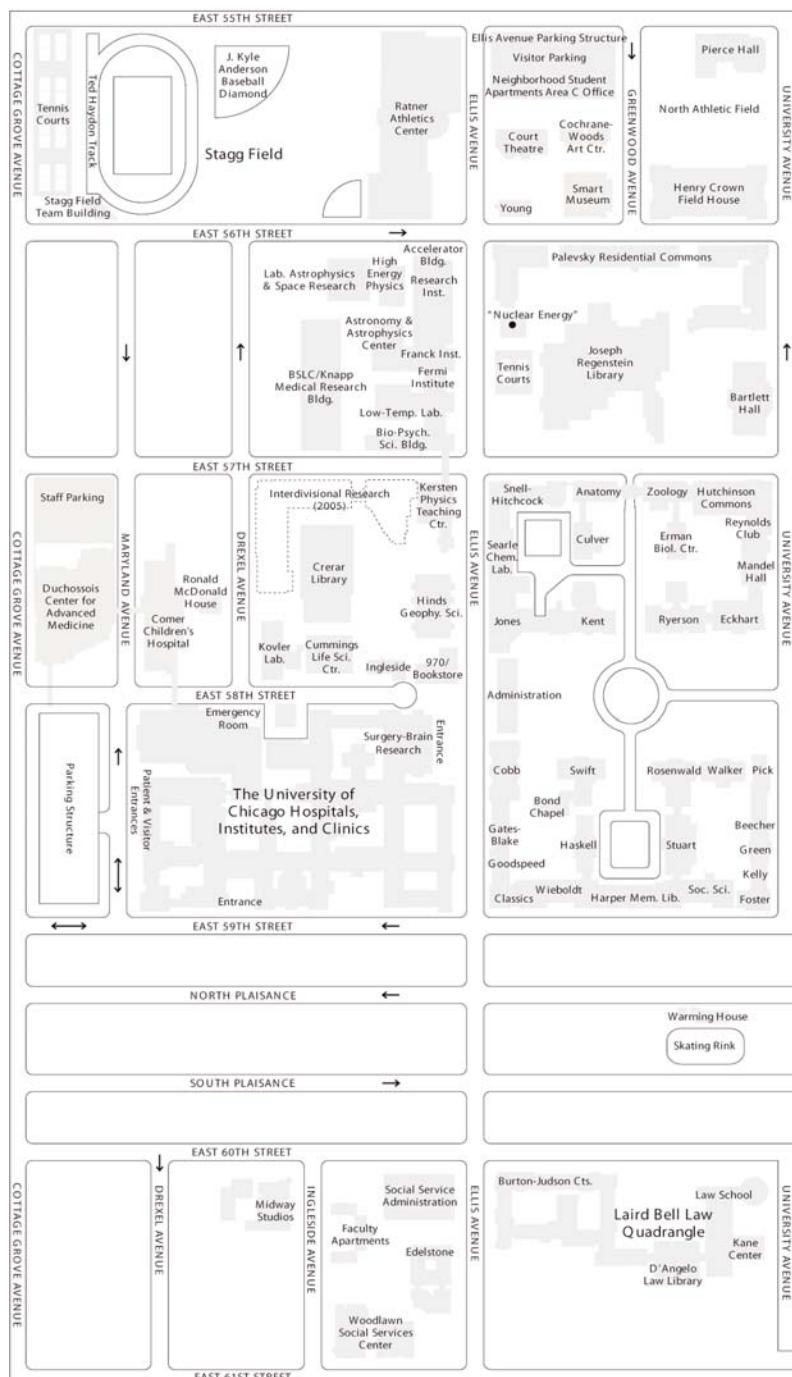
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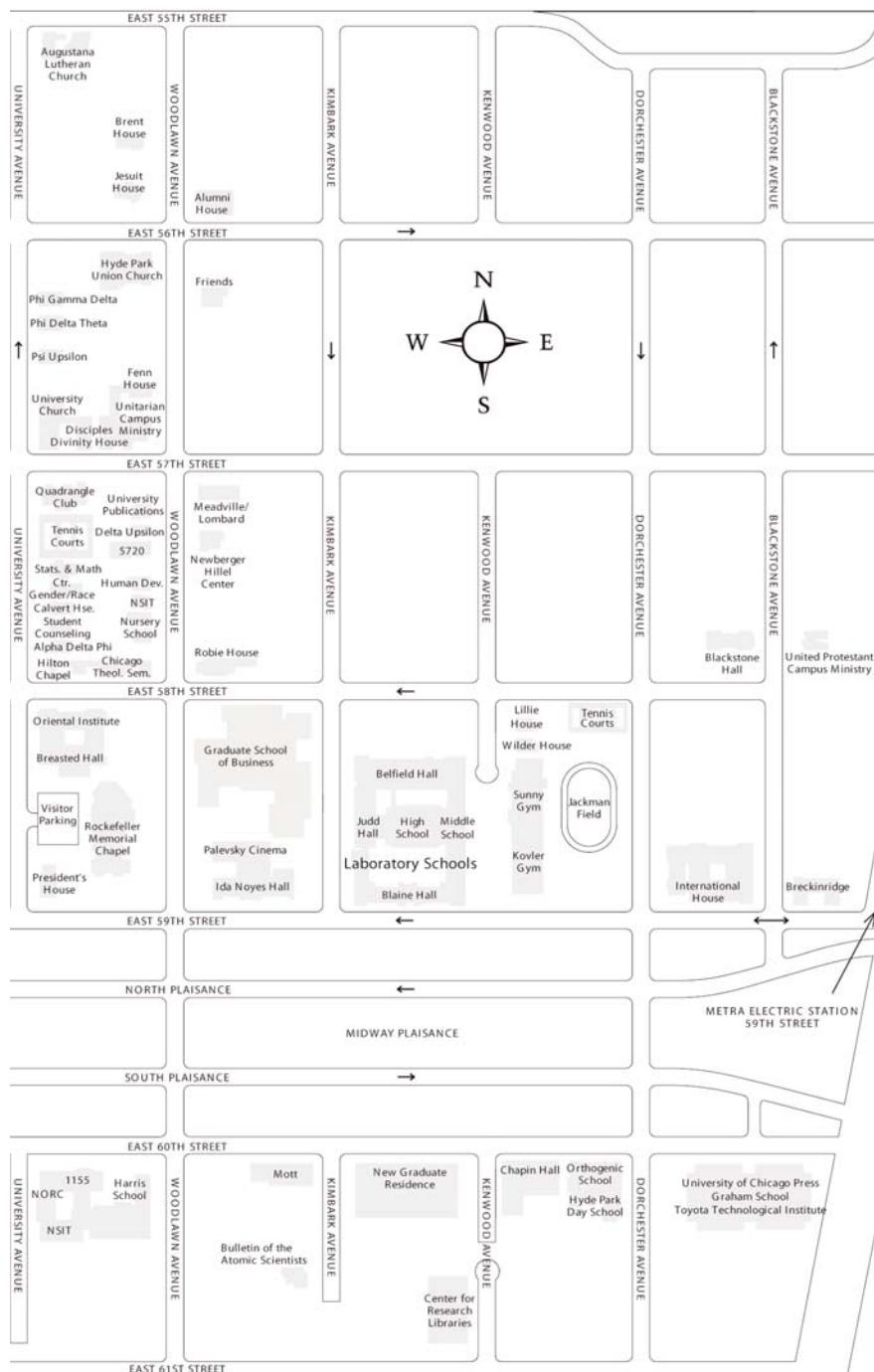
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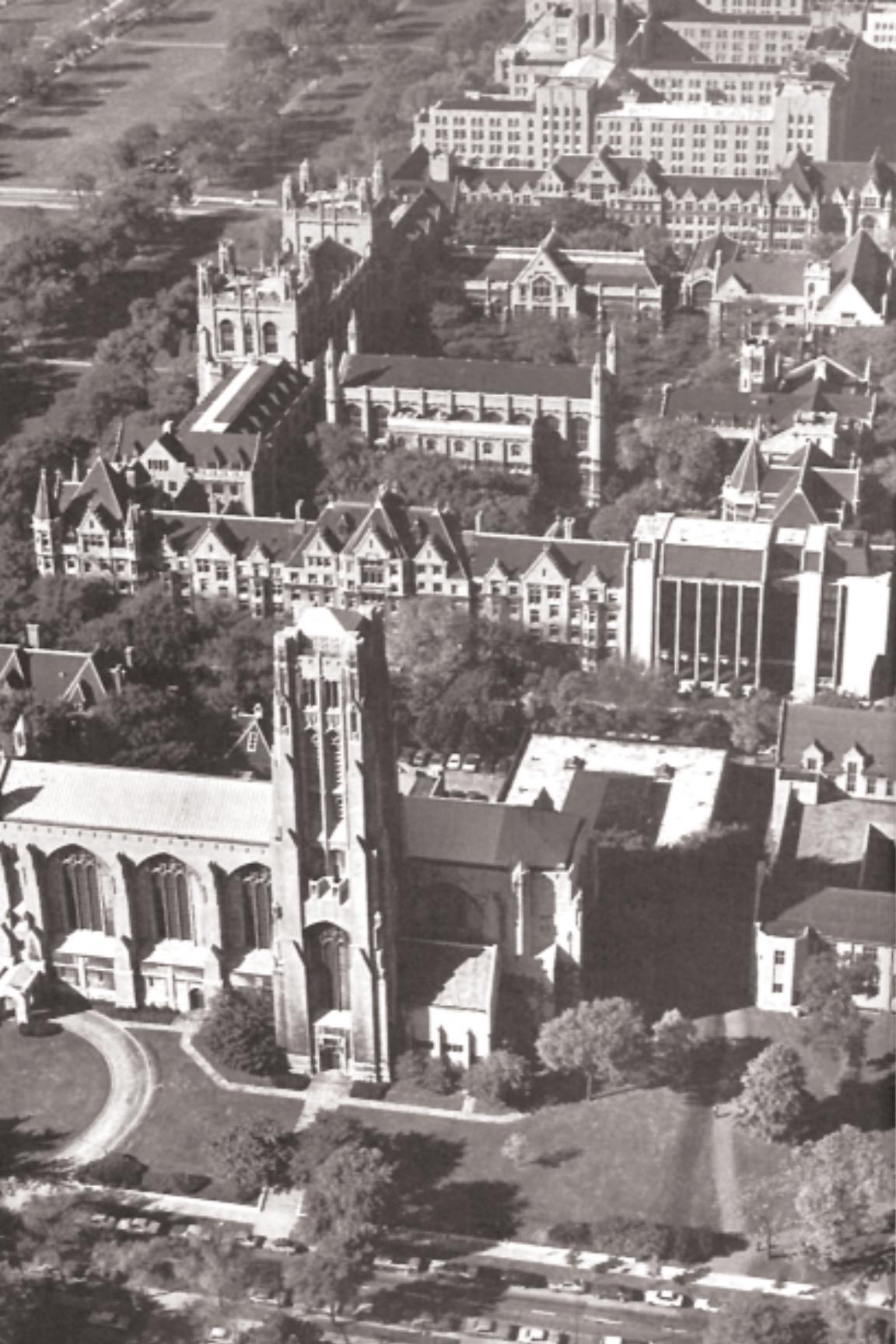
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# GENERAL INFORMATION

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**A**nnouncements: 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. Because the professional schools in the University are closely integrated into the wider University, their programs are briefly described here. However, an individual issue of the *Announcements* is available from each professional school, describing 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 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 and 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 Graduate 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 Graham School of General 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 the years, more than 70 members of the faculty, former students, or individuals who did research at the University have been named Nobel laureates; six 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. Currently, more than 100 University alumni serve as presidents or provosts of colleges and universities throughout the country.

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 MBA/A.M. only)

Latin American and Caribbean Studies

East Asian Studies (as MBA/A.M. only)

Middle Eastern Studies

South Asian Studies (as MBA/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 PROGRAMS IN THE DIVISIONS

Applicants for admission to graduate programs in the divisions at the University of Chicago should address their inquiries, including requests for application forms, to the dean of students of the graduate division to which application is being made.

Generally, applicants submit an admissions application electronically and should consult the appropriate divisional website for information and instructions.

## Associate Dean

BSD Office of Graduate Affairs  
924 East 57th Street, Suite 104  
Chicago, IL 60637 5416  
(773) 834 2105

[biosci\\_grad\\_affairs@uchicago.edu](mailto:biosci_grad_affairs@uchicago.edu)

## Dean of Students

Division of the Humanities  
Walker Hall 111  
1115 East 58<sup>th</sup> Street  
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(773) 702 1552

[org\\_hdos@midway.uchicago.edu](mailto:org_hdos@midway.uchicago.edu)

## Dean of Students

Division of the Physical Sciences  
Jones Hall 116  
5747 South Ellis Avenue  
Chicago, IL 60637  
(773) 702 8789

## Dean of Students

Division of the Social Sciences  
Foster Hall 105  
1130 East 59th Street  
Chicago, IL 60637  
(773) 702 8415

[ssd\\_admissions@uchicago.edu](mailto:ssd_admissions@uchicago.edu)  
<http://social sciences.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. 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 **December 28** 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 mailed 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 with disabilities should contact their divisional dean of students for the coordination of accommodations at the University.

## 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 through the divisional dean of students office.

## 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

As a student at the University of Chicago there are many offices and programs dedicated to your support. You also may avail yourself of the many resources that will enrich your academic and personal experience while studying here. The quickest and easiest manner to find these offices, programs and resources is by going to the web site for graduate and professional students at: <http://students.uchicago.edu/grad/>

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, it is important to keep in mind that a level of responsibility also rests with each individual. 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 on the web at <http://www.uchicago.edu/commonsense/>.

There are also University policies and regulations which you are responsible for knowing. The Residence System for Students in PhD programs is particularly important to doctoral students. However, whether a doctoral student or a student in one of the master's programs, you should review and acquaint yourself with all the policies and regulations. The policies and regulations can be found in the *Student Manual of Policies and Regulations*, which is on the web at <http://www.uchicago.edu/docs/studentmanual>.

Hard copies of the *Student Manual of Policies and Regulations* and *Common Sense* are available upon request from the Office of the Vice President and Dean of Students in the University, 5801 S. Ellis Ave., Chicago, IL 60637, (773) 702 7770.



# INTERDIVISIONAL PROGRAMS

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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* HUMANITIES *and* SOCIAL SCIENCES

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<i>Chair</i>	David Levin, Germanic Studies	Lawrence Zbikowski, Music
John W. Boyer	Danilyn Rutherford, Anthropology	<i>Ex Officio Members</i>
<i>Members</i>	Mario Santana, Romance Languages and Literature	Richard Rosengarten, Dean of the Divinity School
Elizabeth Clemens, Sociology	William Sewell, Political Science	Danielle Allen, Dean of the Division of Humanities
Cathy Cohen, Political Science	Martha Ward, Art History	John Mark Hansen, Dean of the Division of Social Sciences
Constantin Fasolt, History	David Wray, Classics	
Emilio Kouri, History		
James Lastra, English Language and Literature		

## GRADUATE WORKSHOPS IN THE HUMANITIES AND SOCIAL SCIENCES, 2005 2006

Graduate workshops in the humanities and social sciences for 2005 2006 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 sociocultural lives of people of the African continent and its discursively constituted diaspora, 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, literature, political science, religious studies, and the history of culture, and encourages cross disciplinary collaboration and exchange. In addition to regular presentations by students, faculty, and invited guests, the workshop hosts biannual Red Lion Seminars jointly with Northwestern University's Program of African studies. Annual conferences hosted by the workshop in recent years have resulted in published volumes on key questions in African Studies.

#### *American Cultures*

This workshop explores methodological and pedagogical approaches to the study of American cultures, engaging various kinds of interdisciplinary scholarship in such fields as the history of religion, the history of science, gender studies, and post colonial theory. Workshop sessions reflect the research interests of participants and feature presentations by students and faculty from within and outside the University of Chicago. In the past, we have investigated racial, socioeconomic, and gendered perspectives on identity formation and literary authority; sexuality, the body, and legibility; and representations of spirituality and religious encounters in various public and private contexts and have used these themes as focal points for discussions of the multiplicity of American cultures and cultural exchanges within a transatlantic and transnational context. We also investigate thematic, methodological, and pedagogical issues across historical periods in American Studies. Through collaborative discussions and student presentations, we seek to create a forum for interdepartmental interaction and interdisciplinary research projects and to think about the canonical diversity and comparative approaches that have become critical to the field of American literature.

#### *Ancient Greek and Roman Philosophy*

This workshop will discuss a wide range of issues concerned with ancient Greek and Roman philosophy. 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 rapid pace of scholarship comparing empires and imperialisms has prompted the need for a reevaluation of the boundaries of empires and, specifically, the people and institutions that compose those boundaries. It is no longer sufficient to speak in vague terms about cultural influences or borrowings without acknowledging that these interactions took place in a social, cultural, and economic framework and were thus laden with various meanings, contested, and often mutually transformative. The workshop intends to inquire how cultural interchange took place, under what circumstances, and with what repercussions. We hope also to pose the question of the general meaningfulness of the term for the study of ancient societies.

### *Anthropology of Europe*

The workshop explores current research in the anthropology of Europe and treats 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 papers by students on their field of research to lectures by visiting Europeanist anthropologists and discussions of works in progress by Chicago faculty.

### *Anthropology of Latin America and the Caribbean*

This workshop provides a forum for the presentation, discussion, and critical engagement of anthropological research on Mexico, Central America, and the Caribbean. It seeks to complement a traditional anthropological focus on indigenous populations with a broader focus that includes (1) the (dis)integration of indigenous peoples within (neo)colonial and nation state political economies extending from the local to the global; (2) the lifeways of other groups subjected to social stratification etched along historically and culturally specific lines of difference and power; and (3) transnational movements involving laborers, popular cultures, and commodities, as well as projects and institutions such as development, environmentalism, democracy, revolutionary art, nation, national history, militaries, corporations, and social movements. The workshop provides a venue for discussing new research along broad topical, temporal, and spatial lines, constantly exploring the limits of traditional anthropological analysis.

### *Arts and Politics of East Asia*

The Arts and Politics of East Asia Workshop aims to provide a common intellectual forum for students and scholars investigating the interaction of aesthetics with political economies reflected in textual and visual media of East Asia. Taking as our theme the cultural products emerging out of East Asian societies as they experienced modernity, we will discuss and analyze interrelated literary and artistic developments in China, Japan, and Korea as we rethink historical and theoretical issues including gender, class, aesthetics, literary authority, political agency, and the role of the intellectual in society. Through an engagement with arts ranging across varying media, we hope that discussions cutting across current disciplinary boundaries will be fostered.

### *Clinical Ethnography*

These workshop meetings provide the opportunity for the faculty and students involved with the clinical ethnography/clinical psychology program to meet 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 a psychological anthropology and cultural psychology perspective while maintaining a commitment to the clinical reality of these struggles.

### *Cognitive and Social Neuroscience*

Research on cognitive and social neuroscience investigates the neural mechanisms that underlie psychological processes and social behavior. This work can change fundamental ideas and theories in psychology by providing neurophysiological evidence and can inform basic neuroscience research by elucidating psychological functions and behavioral contexts in which neural mechanisms operate. This workshop will provide a forum for discussing recent research and theories in cognitive and social neuroscience and a venue for graduate students, faculty, and visiting speakers to discuss research.

### *Comparative Behavioral Biology*

Jointly sponsored by the Institute for Mind and Biology and the Committee on Human Development, this workshop brings together individuals broadly interested in how biological and social environments influence social behavior and how behaviors and the environment in turn influence genetic change. Speakers 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, and 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 Colonialisms*

By bringing previously discrete areas of research into conversation with each other, the continuities and discontinuities between various locales and historical moments can be fruitfully investigated. This workshop was recently founded to provide an opportunity for sharing research that examines colonialisms from across the disciplines of humanities and social sciences, not limited by region or period. By bringing together scholars working in different traditions and fields to present and discuss new work on colonial themes innovative comparative questions can be addressed: Are all colonial projects comparative in their practices? Does thinking transhistorically or transnationally about colonialism change the kinds of questions we ask of colonial histories and presents? What are the differences between the empirical requirements of various disciplines that might help us rethink our own work? Participants come from a wide range of disciplines including (but certainly not limited to) art history, anthropology, English, comparative literature, history, and political science.

### *Comparative Politics*

Comparative politics is a broad and methodologically eclectic field. The common thread running through the research presented in 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? Under what conditions do clientelism and patronage politics emerge? Why do poor people sometimes migrate to countries that are just as poor as the countries they have left? If economic growth encourages democratization, is this because modern economies are wealthier or because they are more egalitarian? Do democracies affect public policies differently from authoritarian regimes? These are the sorts of questions that have been

raised by papers presented in our workshop by Chicago faculty, faculty from institutions around the country, and students in various social science disciplines. Some have used statistical techniques to compare a large number of countries, others the techniques of oral history and participant observation, and other comparisons of subregional units within a single national territory. All have been theoretically ambitious and empirically rich.

#### *Contemporary European Philosophy*

The Contemporary European Philosophy Workshop aims to foster Continental philosophy in the humanities at the University of Chicago. The workshop constitutes an ongoing forum for presentation by graduate students in philosophy, divinity, comparative literature, social thought and other disciplines who are interested in working on philosophers in the modern European tradition. It also functions as a regular reading group that concentrates on one philosopher or problematic per quarter. Finally, the workshop is a resource for inviting faculty to present on topics proper to European philosophy. Regular reading in 2004 2005 consisted of Maurice Merleau Ponty and Alain Badiou. We plan to read Gilles Deleuze in the fall quarter of 2005.

#### *Contemporary Philosophy*

This workshop is a conduit for advanced graduate students in philosophy and related fields to present work in progress on topics relating to contemporary issues in philosophy. For each session, one student submits a paper and another comments upon the paper and leads off discussion. The fields of interest of the participants include history of philosophy from the early modern period through the twentieth century, contemporary epistemology, metaphysics and philosophy of mind, aesthetics, political philosophy, ethics, philosophy of language, philosophy of science, and feminist philosophy. In addition, the workshop brings in one distinguished philosopher each year for an extended visit to interact with students. Recent visitors have included Barbara Herman, Kristen Gjesdal, Michael Thompson, Elijah Millgram, and David Velleman.

#### *Crime and Punishment*

The study of crime and punishment has always held a prominent place in the social sciences and professional schools at the University of Chicago. This workshop carries on this tradition. It provides an interdisciplinary forum for faculty and graduate students to present current research and to contribute to the development of new understandings of crime and society's response to crime. Sponsored by faculty from the Law School, this workshop hosts a lively and interactive series of presentations covering such topics as incarceration, social disorganization, the geography of crime, street gangs, and state interventions.

#### *Culture, Life Course, and Mental Health*

This workshop builds upon and contributes to 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 her or his mental well being are defined and developed in diverse environmental and sociocultural contexts. Presentations by graduate students, faculty, and occasional outside speakers from anthropology, psychology, and allied fields will focus

on diverse topics in mental health behavior research, including the cultural constitution of disease, the temporal patterning of health related processes within a life span perspective, and optimal experience. They also may address positive psychological processes such as enjoyment, creativity, and wisdom. The workshop encourages participation from faculty and students in all fields.

#### *Early Christian Studies*

The purpose of this 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. Our general theme for the 2005 2006 academic year is biblical exegesis in the early church.

#### *Early Modern*

This interdisciplinary workshop focuses on every aspect of the early modern experience, circa 1400 1830. 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 precirculated papers presented by graduate students, faculty, or invited visitors.

#### *East Asia: Politics, Economy, and Society*

This workshop focuses on current social science research on East Asian societies, particularly the People's Republic of China, Korea, Taiwan, and Japan. 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 at other institutions. Graduate students are especially encouraged to present their thesis and dissertation research.

#### *East Asia: Transregional Histories*

This workshop invites University of Chicago graduate students and faculty, as well as 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 multidisciplinary and/or transregional 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. The workshop invites advanced students, faculty, and outside speakers and visitors from the humanities and social sciences to present papers on the topic of East Asia and its multiple and contending historical definitions.

#### *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 interrogate the tensions between this

diversified production and the unifying narrative of modernity often imposed on this 240 year span. This year we continue to be particularly interested in questions concerning the aesthetic, a field of philosophical, cultural, and historical inquiry first defined as such during the period, which came, in ways still incompletely understand, to reorganize and in some cases to found Western discourses surrounding cultural production. The workshop welcomes participants and presenters from any and all fields. 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, law, and the social sciences.

#### *EthNoise!: The Ethnomusicology Workshop*

The workshop contributes to a growing interdisciplinary discourse on music in its cultural context at the University of Chicago, establishing an 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. As well as presenting specific research, the workshop sponsors a number of roundtable discussions on the challenges faced by the music ethnographer. 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. Its primary purpose is to promote analyses of the ways in which these categories intersect with other practices, constructs, or systems of domination. In bringing together work in queer and gender theory, workshop members will build vocabularies and analytical tools in order to evaluate presentations with informed perspectives on how gender and sexuality theories inform and constitute one another. The workshop will serve as a forum for discussing both graduate student papers and as yet unpublished work from scholars in the field. Graduate student presentations may focus on any area of gender and sexuality studies with gender and sexuality understood as always already embedded in other social practices and categorizations. Workshop participants will share the responsibility for choosing topics and speakers and for evaluating the effectiveness of the workshop's interdisciplinary process.

#### *History, Philosophy, and Sociology of Science*

The History, Philosophy, and Sociology of Science Workshop is a forum devoted to interdisciplinary approaches to the sciences. Its weekly meetings provide a chance to encounter the latest work in science studies presented by outside speakers, University of Chicago faculty, and graduate students. Topics of interest range widely: in recent years the workshop has hosted discussions of, among many other things, Aristotelian logic, the Renaissance astronomer Johannes Kepler, William James's philosophy, modern bioethics, and the sociology of industrial academic collaboration. Similarly, the workshop embraces a diversity of approaches, from intellectual history to anthropology. The common thread is an eagerness to understand science and the knowledge it creates in their intellectual and social contexts. Audiences are drawn to participate in meetings from across the University community. Conventionally, noon meetings tend to focus more on the human sciences, and for these sessions papers are generally pre-circulated; afternoon meetings deal with all aspects of science studies, and do not involve pre-circulation.

### *Human Rights*

As a consequence of the growing relevance of human rights in the contemporary world, this topic has become a vital focus for academic research across disciplines. Responding to a growing need to examine and discuss human rights, the Human Rights Program has organized a graduate workshop that provides a unique space for faculty and students to engage in discussions on relevant contemporary human rights issues of academic significance. The workshop crosscuts all academic disciplines and provides an opportunity for the University of Chicago community to engage in debate over contemporary human rights issues of moral and political significance.

### *Interdisciplinary Approaches to American Political History*

This workshop provides an important avenue to explore one of the more vigorous developments in the social sciences over the past decade: an interdisciplinary revitalization of the study of American politics from historical perspectives. The central aim of the workshop is to explore the roles that politics broadly construed has played in American history, and how understanding these political developments can reveal a richer and more nuanced view of American and related histories more generally. While workshop presentations and discussions will be historically and U.S. focused, they will also address both the connections between past and current events as well as the world beyond the United States.

### *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. In the context of this workshop, University faculty present research in progress, students present dissertation proposals or chapters, and scholars outside the University present their work. Topics will reflect the diversity of the group and include representatives from the fields of history, anthropology, legal history, literature, art history, sociology, and political science. Participants from all disciplines are welcome.

### *Interdisciplinary Archaeology*

The primary objective of the Interdisciplinary Archaeology Workshop is to forge a healthy, informed dialogue on aspects of method and theory that cuts across the field's diverse disciplinary locations. There is a widely perceived need at the University of Chicago for a forum to critically discuss how archaeologists produce knowledge of the past through interpretive frameworks that rest upon the material and, in many cases, textual records. 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 how method and theory can be integrated into statements about the past statements that over the last century have been evaluated according to varying criteria from scientific truth to political relevance. The workshop brings together faculty and students from anthropology and Near Eastern languages and civilizations, as well as members of other departments and committees such as art history, classics, the ancient Mediterranean world, and East Asian, South Asian, and geographical studies.

### *Interdisciplinary Christianities*

This workshop is engaged in a comparative conversation on the study of Christianity in its myriad forms. Christianity is a cross cultural, transhistorical phenomenon; recent statistics suggest that fully one third of the world's people identify themselves as Christians. In academia as well, the description and theorization of Christian groups, practices, and thought have been influential in the continuing development of diverse disciplines, entering into debates on modernity, colonialism, globalization, subjectivity, language practices and ideologies, and the dynamics of contemporary politics and social life. These discussions have implication for larger questions involving the interactions between institutional structures and theological ideals, group identities and universalizing norms, devotional practice and the category of belief, and historical development and claims to universal authority and truth. There is much to be gained through a critical, comparative exploration of how different instances of Christianity figure as objects of analysis. Thus, the workshop is an especially suitable forum for papers that draw attention to the methodological and theoretical issues which arise from the study of Christian groups, practices, and social movements. The workshop has active student and faculty participants in a variety of fields including anthropology, linguistic anthropology, history, human development, English, and religious studies. We welcome new participants from across the University working on Christianity in any of its historical and geographical contexts, in any region, in any period since the beginning of the common era.

### *International Relations (PIPES)*

This workshop's focus is on international cooperation and conflict, with attention to both the politics of the world economy and to international security. Most sessions are devoted to the presentation of research in progress by students, faculty, and outside speakers. Besides participating in these seminar sessions and helping to schedule them, graduate students act as formal discussants for most presentations. In addition, students lead occasional discussions of newly published work in international relations and international political economy. Topics covered include international relations theory, international trade and monetary issues, alliances and the use of force, relations between advanced and developing countries, and the development of international rules and law. This is a yearlong workshop for advanced graduate students engaged in their own research projects in international relations. All students will present their own work, including dissertation proposals or chapters, qualifying papers, or other research. The workshop is part of the Program on International Politics, Economics, and Security (PIPES).

### *Islamic Art and Artifact*

The workshop will explore Islamic culture, history, and identity through archaeological and art historical interpretations. The visual arts and material artifacts provide new analytical methodologies that independently create frameworks with which to examine the impact of Islam on the Middle East and surrounding areas. This is in direct response to the tradition of scholarship in the field of Islamic studies which has heavily concentrated on texts and documentary evidence. Exposure to these two ways of seeing will greatly enhance an interdisciplinary approach to the study of Islam. The workshop will combine lectures and roundtable discussions, often in the same meeting, in order to draw wider participation and lively discussion.

### *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 worlds, 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, geographical, and disciplinary range from early colonial to contemporary times throughout Mexico, Central America, the Caribbean, and South America.

### *Literature and Cultural History in Early Modern East Asia*

This workshop aims to explore the cross disciplinary and transregional understanding of literature and cultural history in early modern East Asia (Ming Qing China, Tokugawa Japan, and Choson Korea). While focusing on the flow of cultural productions and ideas across regional boundaries, we will also discuss theoretical and historical issues such as the reformation of gender and sexuality, performance and popular culture, literati and self representation, book publishing and print culture, and the interaction of literary and visual images.

### *Mass Culture*

The Mass Culture 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*

This workshop focuses on the history and culture of the European Middle Ages (c.500-1500), although it also welcomes participants interested in areas other than Europe. Its purpose is to foster conversation across and between the disparate disciplines that make up medieval studies, including history, art history, musicology, classical and vernacular languages and literatures, theology, philosophy, linguistics, philology and law. The workshop welcomes the participation of medievalists from the Newberry Library and other institutions in the Chicago area. Each quarter it features one outside speaker, one faculty speaker from the University of Chicago, and three student speakers.

### *Middle East History and Theory*

The Middle East History and Theory Workshop serves as a forum for University students and faculty in the humanities and social sciences to discuss a wide array of academic questions related to the history, societies, culture, and politics of the Middle East. Being an area studies workshop, we accept papers dealing with this broad range of subjects throughout the geography of the Middle East, North Africa, or Central Asia, and in a time span extending from the advent of Islam to the present. Participants discuss methodological and theoretical issues involved in current research presented by students, faculty, and invited guests. Graduate student presentations usually include dissertation chapters or proposals, work in progress, and discussions of research conducted abroad. Papers are precirculated to encourage attendance and informed academic discussion.

### *Minor Slavic Cultures*

This workshop seeks to remedy the American academy's tendency to relegate minor Slavic cultural outputs to secondary status by providing a forum in which these outputs are the foci of primary engagement. Its format echoes a mode of inquiry typical of Eastern European culture, i.e. the active, productive dialogue: papers in progress are presented within a prearranged (not prewritten!) conversation between two workshop members before other members join in. The workshop's goal is to create an atmosphere of mutual support and intellectual camaraderie where the energy of dialogue pushes its participants past intellectual boundaries and sows the seeds of new trajectories. The Minor Slavic Cultures Workshop invites all scholars and students with related interests, from any field, whose work would benefit from such treatment to participate.

### *Modern European History*

The Modern European Workshop is a forum for presenting graduate student work from all areas and specializations in modern and contemporary European history. Its main purpose is to facilitate discussion on issues related to research and teaching in modern and contemporary European history, broadly understood. We welcome participants from other disciplines with a historical interest. Presentations reflect the research interests of the students and faculty organized in the workshop. The main constituency consists of PhD students in the Department of History specializing in late nineteenth and twentieth century Russian/Soviet, Central and Eastern European, and French history, but the workshop is open to all students.

### *Money, Markets, and Consumption*

The Money, Markets and Consumption Workshop will emphasize the role of ethnographic fieldwork and historical findings 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 specificity.

### *New Media*

Over the course of more than fifty years, though particularly in the past two decades, the development of digital technologies and their introduction into the everyday world have altered our personal and collective lives in innumerable ways. The so called information revolution has affected culture in every sphere of life, including social, political, legal, medical, economic, historical, aesthetic, and personal domains. The workshop will provide a forum for students and faculty from divergent disciplines in the humanities and social sciences whose work touches on or involves any aspect of the information revolution and the topic of media (including so called old media) as it has been rejuvenated by the advent of new (digital) media.

### *Paris Center*

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 the participants will assure the interdisciplinary character of the workshop.

### *Philosophy of Mind*

The aim of this workshop is to serve as a focal point at the University for research and discussion in the philosophy of mind and the philosophy of psychology. We will pursue this aim in three ways: (1) by providing a forum in which graduate students present and receive feedback on their own work; (2) by discussing important recent texts by such authors as Andy Clark, Gareth Evans, John McDowell, Jerry Fodor, and Hilary Putnam; and (3) by hosting a series of presentations by prominent philosophers of mind, psychologists, and specialists in related fields. Likely topics of conversation include: the relation between concepts and perceptual experience, self knowledge, mental causation, and naturalism.

### *Poetry and Poetics*

This workshop is a site of collaboration for all those studying poetry at the University graduate students, scholars, and poets. We are primarily interested in investigating questions of poetics from a variety of different disciplinary perspectives and in poetry from a wide range of periods and languages. We encourage students who work in all historical periods and in languages other than English to attend, as well as those who are involved in comparative projects. We wish to foster an interdisciplinary approach to the study of poetics that extends across the humanities and social sciences, thereby opening up the methodological range of our workshop. Graduate students from all fields who are interested in poetics are encouraged to present works in progress.

### *Politics, Communication and Society*

The themes of language and communication animate scholarly debates in the social sciences and humanities. The goal of the workshop is to take advantage of this interest to study the political and social aspects of communication. Among the topics to be explored are the representational and generative dimensions of political rhetoric and symbols, the mediation and dissemination of ideas through mass media channels, the part language plays in processes of reality construction, the relationship between sociohistorical processes and systems of signification, the textual and contextual emergence of cultural concepts, and the discursive practices of everyday life.

### *Political Economy*

The Political Economy Workshop is organized around rational choice and game theoretic approaches to the study of politics and economies, broadly construed. Workshop topics include positive analysis of political, economic and social behavior, as well as normative models of public choice, experimental tests and philosophical critiques. We also expect some of the work presented to focus on empirical and policy applications of political economy models. Thus the workshop is inherently interdisciplinary combining economic methodology with political science questions, and building political considerations into economic analysis. Workshop sessions will apply these combinations to a broad range of social science issues and substantive topics.

### *Political Psychology*

The Political Psychology Workshop aims to facilitate scholarship at the intersection of psychology and political science. The workshop brings together investigators interested in the complex interplay of psychological and political factors in determining human thought, feelings, and behavior in the political context. More specifically, we are interested in how psychological processes give rise to political outcomes and how political conditions shape and constrain psychological processes that is, how the structure and function of the mind informs us about the political world, and how political institutions, symbols, events, and actors facilitate, constrain, and in other way regulate the workings of the mind.

### *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. (Titles of recent presentations may be found on our website.) 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 students projects and professional skills.

### *Politics and Social Change*

This workshop brings together graduate students and faculty with interests in politics and social change. These issues have long been central to political sociology and political science, but they have gained new urgency in an era of sweeping regime changes, the political reorganization of postsocialist states, and ongoing efforts at institutional transformation at almost every level of government. To better understand these processes, the workshop presents research on a wide range of phenomena including social movements, state building and reform, and policy adoption and implementation.

### *Qualitative Research Methods: Fieldwork and Ethnographic Frameworks*

This workshop focuses on the methodological and theoretical applications available for scholars conducting fieldwork and the implications of using particular approaches. Invited speakers and students presenting in the workshop will address projects in the humanities and social sciences that center on the collection, preservation, and analysis of primary source data. This will include applied topics concerning sound and video production and editing, database creating and archiving, obtaining institutional review board approval and securing funding for fieldwork projects. In addition, the implications of using such approaches will be examined, both for the researcher and the participating individuals and communities, with presentations focusing on issues of intellectual property rights, relationships with tribal governments or polities, how choices regarding technology influence the ways in which texts are used and transmitted, and issues involving subjectivity and the role of the researcher.

### *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 commitment to the exploration of religion among racialized peoples and a commitment to engaging with and clarifying the impact of religion in racialized communities.

### *Renaissance*

The emphasis in our Renaissance Workshop will be on cross disciplinary studies in various aspects literary, political, theological of English and Continental culture during the Renaissance: political rhetoric, early modern drama, humanist pedagogy, theological controversy, developments in book publishing, the literature of overseas exploration, and much more. Student presentations in the form of essays, dissertation proposals, dissertation chapters, and practice job interview presentations, practice campus visit talks are given priority. We will also have a chance to meet with visitors from other institutions and to hear from our own faculty.

### *Reproduction of Race and Racial Ideologies*

This interdisciplinary workshop addresses the different processes of racialization experienced 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.

#### *Rethinking Traditional China*

Rethinking Traditional China is a workshop devoted to exploration of diverse issues in the cultural, social, and intellectual history of China from earliest times through the Tang Dynasty (618-907 CE). The workshop seeks to integrate textual sources with archaeological evidence to form an interdisciplinary approach to early Chinese history in the period before the widespread use of printing. Workshop meetings consist of presentations by University faculty, graduate students, or invited outside speakers.

#### *Rhetoric and Poetics*

The Rhetoric and Poetics Workshop is concerned with the literature and poetry of classical Greece and Rome, considered either on their own terms or in relation to the literature and poetry of other cultures. It invites presentation of critical arguments completed or in progress, and from the broadest possible range of perspectives.

#### *Russian Studies*

The Russian Studies Workshop focuses on Russia and the former Soviet Union, with particular emphasis on Soviet history and developments in post Soviet Russia and Eastern Europe.

#### *Science, Technology, Society, and the State*

In the past 10 years, science and technology studies have emerged as a significant and provocative new academic discipline that has expanded the scope of the sociology, anthropology, and history of knowledge by interrogating how scientific knowledge is constituted both in and out of the laboratory setting, with foreseen and unforeseen consequences. As the name suggests, this workshop aims to rethink science and technology studies by exploring the matrices of power relations that link systems of scientific knowledge to the contemporary nation state, processes of globalization, and public and private engineering projects.

#### *Semiotics: Culture in Context*

This workshop seeks to advance research based on a semiotic framework. Presentations will come from a variety of fields including but not limited to linguistics, psychology, sociology, political science, literary theory, history, and anthropology. The workshop 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*

The Social History Workshop provides an academic forum for the discussion and development of work which takes seriously social history methodology often described as either history from the bottom up or the history of everyday life. The workshop often engages work which studies people who have been excluded from out dominant historical narratives. While the workshop focuses primarily on the United States, it also seeks to examine issues and themes that transcend North American borders. These issues and themes include but are not limited to race, class, gender, and sexuality. Participants include graduate students and faculty in social, cultural, and intellectual history and other related disciplines. Presentations by visitors are interspersed with student presentations and include dissertation proposals, chapters in progress, and overviews of dissertations in progress. An occasional session may be devoted to focused discussion on methodological and theoretical issues in historical research. In past years, the Social History Workshop collaborated with a number of other workshops and campus groups on individual presentations and conferences. These cosponsorships fostered productive dialogue across disciplines and enabled workshop participants to interact with faculty and students with diverse academic interests.

### *Social Structures and Processes in Urban Space*

The social organization of urban space has always held a prominent place in the social sciences and at the University of Chicago in particular. This workshop carries on this tradition. Providing an interdisciplinary forum for faculty and graduate students to present current research, it allows participants to contribute to the development of new understandings of the city and of social structures and processes within the city. Sponsored by faculty from the Sociology Department and the Committees on Human Development and Geographical Studies, this workshop hosts a lively and interactive series of presentations covering such topics as culture, the political economy of place, crime, social organization, globalization, poverty, school leadership, health care, gentrification, and art in urban settings.

### *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; the relations between modernist and postmodernist forms of social theory; and conceptual issues posed by globalization.

### *Sociology and Cultures of Globalization*

The Sociology and Cultures of Globalization Workshop, through its meetings, conferences and social gatherings, will continue to build a strong, multi disciplinary, and international network of graduate students and faculty who are committed to elaborating the theoretical and empirical elements embedded in processes of globalization. The workshop provides an open and welcoming environment for students to present their ideas and receive feedback from students and faculty grappling with the territorial, institutional and imaginary dimensions of global social processes.

*Theory and Practice in South Asia*

The workshop is designed to keep faculty and graduate students of social science and humanistic disciplines concerned with South Asia in touch with new directions in the field by providing interdisciplinary models of methodological and substantive approaches. The workshop makes a special point of crossing the boundary between the humanities and social sciences. It collaborates with the South Asia Seminar, one dedicated to graduate student presentations, the other to presentations by resident or visiting scholars and faculty. The South Asia Seminar and the Theory and Practice in South Asia Workshop not only bring together scholars from various disciplines, but also make a special point of attracting scholars from South Asia. Their visits are designed to promote continuing exchanges with recent work on the sub continent and to introduce graduate students to future colleagues in South Asia.

*Visual and Material Perspectives on East Asia*

This workshop is focused on the study of material or visual objects from East Asia (defined broadly to include China, Central Asia, Tibet, Korea, and Japan, and other regions, depending on student interest). It explores the possible uses of recent theories of art, history, and material and visual culture in the study of East Asia. Presentations of studies of objects and visual materials from a variety of historical periods and geographical locations within East Asia serve as case studies for the exploration of such methodological concerns. The workshop consists of roughly two thirds student presentations and one third outside speakers.

Please note that the above describes only workshops in the humanities and social sciences sponsored by the Council on Advanced Studies in the Humanities and Social Sciences. It does not, therefore, constitute a complete list of established workshops at the University of Chicago. In particular, this announcement does not include a substantial number of workshops organized on a long standing basis in the Department of Economics and in the Graduate School of Business.



## INTERDISCIPLINARY OPPORTUNITIES

COMMITTEE *on AFRICAN and  
AFRICAN AMERICAN STUDIES**Directors*

Ralph A. Austen

Kenneth Warren

*Faculty*

Ralph A. Austen, History.

Co Chair.

Kenneth Warren, English.

Co Chair.

Lauren Berlant, English

Dain Borges, History

James E. Bowman,  
Pathology and Medicine

Shelly Clark, Public Policy

Cathy Cohen, Political  
ScienceJennifer Cole, Human  
DevelopmentJean Comaroff,  
Anthropology.John L. Comaroff,  
Anthropology and  
Sociology

Shannon Dawdy, History

Michael Dawson, Political  
Science

Edgar G. Epps, Education.

James W. Fernandez,  
Anthropology

Kesha D. Fikes,

Anthropology

Jacqueline D. Goldsby,

English

John A. Goldsmith,

Linguistics.

Gene B. Gragg, Near Eastern

Languages and

Civilization and

Linguistics.

Melissa V. Harris Lacewell,  
Political Science.

Thomas Holt, History.

Dennis Hutchinson, College  
and Law School.Loren Kruger, Comparative  
Literature and English

Donald N. Levine,

Sociology.

Omar M. McRoberts,

Sociology

Salikoko Mufwene,

Linguistics.

Dolores G. Norton, Social

Service Administration.

Stephan D. Palmie,

Anthropology

Julie Saville, History

Raymond T. Smith,

Anthropology.

Jacqueline Stewart, English

Michel Ralph Trouillot,

Anthropology

Robert von Hallberg,

English.

The Committee on African and African American Studies is an inter departmental and inter divisional 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 (773 702 8063, [csrcpc@uchicago.edu](mailto:csrcpc@uchicago.edu), <http://socialsciences.uchicago.edu/csrcpc>).

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 Ralph A. Austen; Committee on African and African American Studies; The University of Chicago; 5828 S. University; Chicago IL 60637; telephone: 773 702 8344; fax: 773 702 2587; e mail: [wwb3@midway.uchicago.edu](mailto:wwb3@midway.uchicago.edu). Web page (via Social Sciences Division): <http://www.uchicago.edu/uofc/acadunits/SSD.html>



## ARCHAEOLOGICAL STUDIES

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<b>Director</b>	Mark Lycett, Anthropology	Donald S. Whitcomb, Oriental Institute
David Schloen	Kathleen Morrison, Anthropology	Karen L. Wilson, Oriental Institute
<b>Faculty</b>	Richard Theodore Neer, Art History	Hung Wu, Art History
Michael Dietler, Anthropology	David Schloen, Oriental Institute	Aslihan Yener, Oriental Institute
McGuire Gibson, Oriental Institute	Edward Shaughnessy, East Asian Languages & Civilizations	
Jonathan M. Hall, History	T. Smith, Anthropology	
Stephen Harvey		
Alan Kolata, Anthropology		
Kouchoukos, Anthropology	Gil J. Stein	

**T**he Committee on Archaeological Studies has been set up to promote and coordinate the study of archaeology in all its varieties. Broadly conceived, archaeology is the study of culture through analysis of the material record, including artifacts, architecture, art, texts, and other aspects of the human landscape. Archaeology can be studied in terms of a region (e.g., the Near East, the Classical World, the Andean Highlands) or as an investigation of comparative developments in several cultures. The approach of a particular archaeologist may be based in anthropology, art history, architecture, ecology, history, materials science, or a combination of these and other fields. Common methodology, shared research questions, theoretical interests and a desire to reach broad ranging syntheses create a need for cooperation and coordination among practitioners in these fields. The mission of this committee is to promote and facilitate such cooperation among faculty, students, and research staff at this University.

The archaeology of any given geographical area or period is inseparable from the study of the other aspects of the area or period and may be, therefore, the concern of a particular department or committee of the University. The study of Roman architecture or Greek vase painting, for instance, are taught in the Departments of Art History and of Classical Languages and Literatures and in the Committee on the Ancient Mediterranean World. Chinese art and archaeology are taught in Art History and in East Asian Languages and Civilizations. The civilizations of the Near East (Egypt, Mesopotamia, Syria, Israel/Palestine, Anatolia, Iran, the Arabian Peninsula, and neighboring areas) are the primary focus of the Oriental Institute; the closely related Department of Near Eastern Languages and Civilizations stresses ancient language training and artifact immersion as well as problem ori

ented research in the preparation of an archaeologist. Anthropological archaeology has a global scope, and faculty and students in the Anthropology Department deal with theoretical issues in both prehistoric and historic periods. For instance, investigations of specific research questions, such as the transition to dependence on domesticated plants and animals, or the comparative study of political and social complexity, can be carried out in any area of the world and are normally pursued in Anthropology, although such topics are also covered in one or more of the other departments with regional specialties. During the past twenty years, the geographically centered fields (e.g., Near East, Classical World) have incorporated much of the theory and method pioneered in anthropology, while anthropology has become more involved in history. Thus, the need for coordination, cooperation, and information exchange has increased, and the Committee on Archaeological Studies functions to meet those needs. Part of its function is to encourage faculty to offer joint courses and to aid students in choosing the appropriate program of study, especially by taking courses outside their own departments.

At the University of Chicago, the study of archaeology is available in both the Divisions of the Humanities and of the Social Sciences and is distributed according to regions and disciplines as follows:

Greek, Roman, and Aegean archaeology: Department of Art History, Department of Classical Languages and Literatures, and Committee on the Ancient Mediterranean World.

Near Eastern archaeology, including all periods from prehistory through Islamic: Department of Near Eastern Languages and Civilizations. Most archaeological faculty of this department are also faculty of the Oriental Institute, which is a research institute that does not grant degrees but does invite participation by students in excavations and laboratory research. Research Associates of the Oriental Institute occasionally offer courses and serve on doctoral committees.

General Old World and New World archaeology, with coverage from the Paleolithic to recent historic periods: Department of Anthropology. Archaeological theory and method are offered in Anthropology and Near Eastern Languages and Civilizations. Art historical theory is covered in Art History. Landscape archaeology, including geomorphology, is available in Near Eastern Languages and Civilizations. Ancient settlement patterns and demography are covered in that department as well as Anthropology.

Analytical techniques (for ceramics, archeobotany, sedimentology) are available in Anthropology, while metals analysis and other material science approaches are directed by faculty and staff of the Oriental Institute. GIS, remote sensing, and other computer related facilities exist in both Anthropology and the Oriental Institute. Making the existence of such facilities known and available to archaeological faculty and students at the University is another way in which Archaeological Studies can act as a coordinator of effort.

The Committee on Archaeological Studies organizes graduate workshops that investigate specific topics of interest to all archaeologists and has initiated a one day session each year in which faculty, staff, and students make informal presentations of their current research. More formal symposia on general topics will also be organized from time to time.

The committee does not accept applications for admission and does not grant any degrees; applications for admission should be submitted to the department in which the student's chief interest falls.



# CENTER for GENDER STUDIES

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<b>Director</b>	Language & Literature	Wendy R. Olmsted, College
Deborah Nelson	Melissa Harris Lacewell, Political Science	Cybele Raver, Public Policy
<b>Faculty</b>	Elizabeth Helsinger, English	Valerie Ritter, South Asia
Danielle Allen, Classical Languages & Literatures	Language & Literature	Languages & Civilizations
Leora Auslander, History	Julia Henly, Social Services	Melissa Roderick, Social
Lauren G. Berlant, English Language & Literature	Administration	Service Administration
David Bevington, English Language & Literature	Judy Hoffman, Visual Arts	Martha Roth, Near Eastern
Carol Breckenridge, Humanities Division	Amy Hollywood, Divinity	Languages & Civilizations
Catherine Brekus, Divinity	Daniela Hristova, Slavic	Lisa C. R Ruddick, English
Bill Brown, English Language & Literature	Languages & Literatures	Language & Literature
Margot Browning, Humanities Division	Samuel Jaffe, Germanic	Alison Ruttan, Visual Arts
E. Summerson Carr, Social Services Administration	Studies	Saskia Sassen, Sociology
Mary Anne Case, Law	Janet H. Johnson, Oriental	Julie Saville, History
Jessica Cattelino, Anthropology	Institute	Reynolds Barton Schultz, Humanities Division
George Chauncey, History	Waldo Johnson, Social	Linda Seidel, Art History
Kyeong Hee Choi, East Asian Languages & Civilizations	Services Administration	Michael Silverstein, Anthropology
Elisabeth Clemens, Sociology	Robert L. Kendrick, Music	William Sites, Social Service
Cathy Cohen, Political Science	Janice Knight, English	Administration
Bertram J. Cohler, Human Development	Language & Literature	Amy Dru Stanley, History
Jean Comaroff, Anthropology	Laura Letinsky, Visual Arts	Jacqueline M. Stewart, English Language & Literature
Wendy Doniger, Divinity	David Levin, Germanic	Richard Allen Strier, English
Elizabeth Emens, Law	Studies	Language & Literature
Darby English, Art History	Agnes Lugo Ortiz, Romance	Leigh VanValen, Ecology & Evolution
Martha Feldman, Music	Languages & Literatures	William R. Veeder, English
Norma Field, East Asian Languages & Civilizations	Sandra MacPherson, English	Language & Literature
Sheila Fitzpatrick, History	Language & Literature	Candace A. Vogler, Philosophy
Rachel Fulton, History	Armando Maggi, Romance	Froma Walsh, Social
Susan Gal, Anthropology	Languages & Literature	Services Administration
Jan Ellen Goldstein, History	Stuart Michaels, Gender	Martha Ward, Art History
Ron Gregg, Cinema & Media Studies	Studies	Elissa Weaver, Romance
Elaine Hadley, English Language & Literature	Diane Miliotes, Art History	Languages & Literatures
Miriam Hansen, English	J. Mark Miller, English	Lisa Wedeen, Political
	Language & Literature	Science
	Kathleen Morrison, Anthropology	Rebecca West, Romance
	Janel M. Mueller, English	Languages & Literatures
	Language & Literature	Alison Winter, History
	Deborah Lynn Nelson, English Language &	Wu Hung, Art History
	Literature	Iris M. Young, Political
	Larry Norman, Romance	Science
	Languages & Literatures	Judith Zeitlin, East Asian
	Martha C. Nussbaum, Law	Languages & Civilizations
		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; forms 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. The CGS also assists faculty and graduate research, through various grant monies, usually available through an application in the spring quarter. Each year, the Center offers a dissertation writing fellowship as well as an office space competition at the Center. Problems in Gender Studies I and II (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 web site at <http://humanities.uchicago.edu/orgs/cgs/index.html>.



## MEDIEVAL STUDIES

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<b>Director</b>	Richard Hellie, History	Justin Steinberg, Romance Languages & Civilizations
Christina von Nolcken	Dick Helmholz, Law School	
<b>Faculty</b>	Daniela Hristova, Slavic Languages & Literatures	
Michael Allen, Classical Languages & Literatures	Norman W. Ingham, Slavic Languages & Literatures	Josef J. Stern, Philosophy
Robert Bird, Department of Slavic Languages and Literatures	Wadad Kadi, Near Eastern Languages & Civilizations	Noel M. Swerdlow, Astronomy & Astrophysics
Robert Dankoff, Near Eastern Languages & Civilizations	Walter E. Kaegi, History	Christina von Nolcken, English Language & Literature
Arnold Ira Davidson, Philosophy	Robert L. Kendrick, Music	Elissa Weaver, Romance Languages & Literatures
Daisy Delogu, Romance Languages & Civilizations	John Mark Miller, English Language & Literature	Donald S. Whitcomb, Near Eastern Languages & Civilizations
Fred Donner, Near Eastern Languages & Civilizations	Michael J. Murrin, English Language & Literature	John E. Woods, Near Eastern Languages & Civilizations
Constantin Fasolt, History	Lucy Pick, Divinity School	
Rachel Fulton, History	Thara Qutbuddin, Near Eastern Languages and Civilizations.	
Norman Golb, Near Eastern Languages & Civilizations	Anne Walters Robertson, Music	
	James Robinson, Divinity School	
	Jay Schleusener, English Language & Literature	

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**T**he faculty in Medieval Studies advises departments and interdepartmental degree granting committees and students in the planning of courses of study essential to medieval specialization in any field. Students specializing in a medieval field will 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.



## AREA STUDIES CENTERS

CENTER *for* INTERNATIONAL STUDIES

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*Director*

Kathleen Morrison

The Center for International Studies, which coordinates and supervises 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, when the first Committee on International Relations ever created in the United States was established at the University of Chicago. In the 1950s and 1960s, University faculty responded to international upheavals resulting from the World Wars by launching area studies centers. These centers provided an innovative approach to the study of other cultures that became the model for universities throughout the United States. Today, the University of Chicago is home to four federally funded area studies centers the Center for East Asian 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 between the four area studies centers through organizing educational outreach efforts, scholarly conferences, and through collaborative projects such as the Committee on Central Eurasian Studies. At the same time, the Center for International Studies is at the heart of a multidisciplinary and interregional discussion about the nature of area studies and the need for new tools to analyze international situations.

## PROGRAMS OF STUDY

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.

## INTERDISCIPLINARY INITIATIVES

The Center for International Studies houses the University's Human Rights Program, founded in 1997, and currently directed by 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>

The Transnationalism Project, directed by Saskia Sassen, is another interdisciplinary unit of CIS. The project seeks to develop new theoretical and methodological approaches to study various aspects of globalization: the ways in which flows of capital, people, information and images are transforming localities; the creation of new modes of global governance; and the creation of new forms of identity, subjectivity, and citizenship.

International Studies is also the home of the Joint Threat Anticipation Center, organized jointly with Argonne National Laboratory. This Center brings together social scientists, computational modelers and threat anticipation practitioners in an effort to understand and anticipate threats to national security through the study of social, cultural and psychological processes. The Joint Threat Anticipation Center provides an integrative, cross disciplinary and model based approach to advance efficacy in practical policy making.

## 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

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<b>Director</b>	James Hevia, International Relations	Edward Louis Shaughnessy, East Asian Languages & Civilizations
James E. Ketelaar	Christopher Hsee, GSB & Behavioral Science	Bernard S. Silberman, Political Science
<b>Associate Director</b>	Matthew Kapstein, South Asian Languages & Civilizations	Laura A Skosey, East Asian Languages & Civilizations
Theodore N. Foss	Anil K. Kashyap, Business	Hans Thomsen, Art History
<b>Faculty</b>	Meiko Kawai, East Asian Languages & Civilizations	Ruey Tsay, Business
Guy S. Alitto, History	James E. Ketelaar, History	Grace Tsiang, Economics
Susan Burns, History	Hi Sun Kim, East Asian Languages & Civilizations	Youqin Wang, East Asian Languages & Civilizations
Fangpei Cai, East Asian Languages & Civilizations	Jung Hyuck Lee, East Asian Languages & Civilizations	Hung Wu, Art History
Kyeong Hee Choi, East Asian Languages & Civilizations	Misa Miyachi, East Asian Languages & Civilizations	Kazuo Yamaguchi, Sociology
Bruce Cumings, History	Mae Ngai, History	Dali Yang, Political Science
Prasenjit Duara, History	Hiroyoshi Noto, East Asian Languages & Civilizations	Jun Yang, East Asian Languages & Civilizations
Judith Farquhar, Anthropology	William L. Parish, Sociology	Alwyn Young, Business
Norma Field, East Asian Languages & Civilizations	Michael Raines, East Asian Languages & Civilizations	Alan Yu, Divinity
Susan Goldin Meadow, Psychology		Anthony C. Yu, Divinity
Gregory Golley, East Asian Languages & Civilizations		Judith Zeitlin, East Asian Languages & Civilizations
Donald Harper, East Asian Languages & Civilizations		Dingxin Zhao, Sociology

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, coordinating a joint master's degree program with the Graduate School of Business through the Division of the Social Sciences, 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, 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 600,000 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

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<b>Director</b>	Fleischer, Near Eastern Languages & Civilizations	John J. Mearsheimer, Political Science
Richard Hellie		Heshmat Moayyad, Near Eastern Languages & Civilizations
<b>Faculty</b>	Victor Friedman, Slavic Languages & Literatures	Robert Shell Nelson, Art History
Kagan Arik, Near Eastern Languages & Civilizations	Paul Friedrich, Anthropology (Emeritus)	Samuel Sandler, Slavic Languages & Literatures (Emeritus)
Howard I. Aronson, Slavic Languages & Literatures	Susan Gal, Anthropology	Adam Smith, Anthropology
John W. Boyer, History	Eric P. Hamp, Linguistics (Emeritus)	Ronald Suny, Political Science
Richard L. Chambers, Near Eastern Languages & Civilizations (Emeritus)	Chauncy D. Harris, Geographical Studies (Emeritus)	Frantisek Svejkovsky, Slavic Languages & Literatures (Emeritus)
Terry N. Clark, Sociology	Richard Hellie, History	Robert Ward Vishny, Business
Anna Lisa Crone, Slavic Languages & Literatures	Halil Inalcik, History (Emeritus)	Edward Wasiolek, Slavic Languages & Literatures (Emeritus)
Robert Dankoff, Near Eastern Languages & Civilizations	Norman W. Ingham, Slavic Languages & Literatures	Diane P. Wood, Law
Bill J. Darden, Slavic Languages & Literatures	Walter E. Kaegi, History	John E. Woods, History
Milton H. Ehre, Slavic Languages & Literatures	Kostas Kazazis, Linguistics (Emeritus)	Issa Zauber, Slavic Languages & Literatures (Emerita)
Sheila Fitzpatrick, History	Leszek Kolakowski, Social Thought (Emeritus)	
	William H. McNeill, History (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. There are four internal committees: the Committees on Balkan Studies, Studies of Caucasia, Russian Studies, and Central Asian Studies, the latter being a joint committee with the Center for Middle Eastern Studies.

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 Graduate School of Business. An interdisciplinary A.M. in this area is available under the Master of Arts Program in the Social Sciences with concentration in language and area studies. The center also cooperates with the Committee on International Relations in providing a master's program in international relations with specialization in Russia and Eastern Europe. (See listings for these programs in other sections of this book.) CEERES administers Title VI fellowships for East European, Russian, and Eurasian studies when funding is available.

For courses offered in the center's area, see listings in these *Announcements* under the relevant departments and committees.



## CENTER FOR LATIN AMERICAN STUDIES

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<b>Director</b>	Shannon Dawdy, Anthropology	Marcos Rangel, Public Policy
Dain Borges	Keisha Fikes, Anthropology	Mario Santana, Romance Languages & Literatures
<b>Faculty</b>	Friedrich, Anthropology (Emeritus)	Saskia Sassen, Sociology
Robert Z. Aliber, Business	Susan R. Gzesch, Human Rights	Julie Saville, History
Fernando Alvarez, Economics	James Heckman, Economics	Paul Sereno, Organismal Biology & Anatomy
Kelly Austin, Romance Languages and Literatures	Thomas Holt, History	Alberto Simpser, Political Science
Dain Borges, History	Kristine Jones, Latin American Studies	Larry A. Sjaastad, Economics
Pastora S. Cafferty, Social Service Administration (Emerita)	Friedrich Katz, History (Emeritus)	Robert M. Townsend, Economics
Manuela Carneiro da Cunha, Anthropology	Robert L. Kendrick, Music	David W. Tracy, Divinity
Anne Carr, Divinity	Alan Kolata, Anthropology	Michel Ralph Trouillot, Anthropology
Raúl Coronado, English	Emilio H. Kouri, History	Lisa B. Voigt, Romance Languages & Literatures
Frederick A. de Armas, Romance Languages & Literatures	Hedibert Lopes, Business	
René de Costa, Romance Languages & Literatures	John A. Lucy, Human Development	
	Agnes Lugo Ortiz, Romance Languages & Literatures	
	Stephan Palmié, Anthropology	

**E**stablished 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. Graduate workshops in Latin American History, the Anthropology of Latin America, Caribbean Studies, and Colonial Latin America provide forums for scholarly feedback on works in progress. The Monday Brown Bag Colloquium provides a forum for informal discussions on preliminary results from student and faculty research.

Distinguished faculty at the University of Chicago have earned recognition for bringing particular thematic programs of study to prominence. The study of Mexico has a venerable history at the University of Chicago, with particular emphasis on

the Mexican Revolution; the history and sociology of the public sphere; the social study of migration and transnationalism; land tenure and the political economy of agriculture; and democratic consolidation. Faculty strengths in Andean studies focus on economic development and the environment; political economy and democratization; colonial literature; and Andean pre history. The study of Afro Caribbean cultures emphasizes Afro Cuban religious formations and the uneven integration of Afro Caribbean populations into the world economy. Collaboration between the Center for Latin American Studies and the Human Rights Program sustains research into the relationships between development, migration, and human rights in Latin America, particularly in Mexico and Central America.

The Edward Larocque Tinker Professorships complement the traditional strengths of University of Chicago faculty. The Tinker Visiting Professorship annually brings three prominent professors, practitioners, activists, and/or journalists from Latin America and Iberia to campus to teach a course in their area of expertise and deliver a public lecture.

CLAS supports preliminary field research for site assessment, data collection, archival research, and to establish professional and institutional contacts through the Tinker Summer Field Research Grant. The study of Amerindian languages facilitates human subject and archaeological/archival research. Aymara is offered biennially through a summer intensive institute. Year long intensive courses in Yucatec Maya, Náhuatl, and K'iche' Maya are offered on an alternating three year cycle.

The Center for Latin American Studies administers a Joint A.M./M.B.A. degree through the Division of Social Sciences and the Graduate School of Business. Students take an integrated program of fourteen courses in the business school and nine to fourteen in Latin American studies, depending on the student's level of language proficiency. Applicants submit a single application to the joint program through the Graduate 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 Center also 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.



# CENTER for MIDDLE EASTERN STUDIES

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<i>Director</i>	<i>Associate Director</i>	<i>Assistant Director</i>	<i>Project Assistant</i>
Martin Stokes	Holly Shissler	Rusty Rook	Traci Lombré
<hr/>			
<i>Near Eastern Languages &amp; Civilizations</i>	Heshmat Moayyad	Joel Kraemer (Emeritus)	
Kagan Arik	Farouk Mustafa	Bruce Lincoln	
Orit Bashkin	Hakan Ozoglu	Michael Sells	
Menachem Brinker (Emeritus)	Dennis G. Pardee	Malika Zeghal	
Richard L. Chambers (Emeritus)	John R. Perry		<i>Geographical Studies</i>
Robert Dankoff	Tahera Qtubuddin	Marvin W. Mikesell	
Fred M. Donner	Montserrat Rabadan		
Peter Dorman	Carrascosa		<i>History</i>
Ariela Finkelstein	Jaroslav Stetkevych	Ralph A. Austen	
Cornell Fleischer	(Emeritus)	Walter E. Kaegi	
Noha Aboulmagd Forster	Matthew W. Stolper	John E. Woods	
Saeed Ghahremani	William Sumner (Emeritus)	Bernard Wasserstein	
McGuire Gibson	Aslihan K. Yener		<i>Law</i>
Norman Golb		Gidon A.G. Gottlieb	
Gene B. Gragg	<i>Anthropology</i>		
Hripsime Haroutunian	Kathleen Morrison		<i>Linguistics</i>
Kay Heikkinen		Eric P. Hamp	
Halil Inalcik (Emeritus)	<i>Art History</i>		<i>Music</i>
Janet H. Johnson	Persis Berlekamp	Philip Bohlman	
Wadad Afif Kadi			<i>Political Science</i>
Carolyn G. Killeen (Emerita)	<i>Business</i>	Ronald Suny	
Franklin Lewis	Marvin Zonis (Emeritus)	Lisa Wedeen	
	<i>Divinity</i>		
	Michael Fishbane		

**S**ince 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. CMES also administers one of the finest summer intensive Arabic language programs in the nation. 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 Middle East History and Theory Workshop and Conference both student organized and administered and the Middle East in the Middle West for educators at other institutions in the region.

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, Graduate 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 A.M. 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 is introducing satellite technology and the Internet to provide 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 like minded 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.



# COMMITTEE on SOUTHERN ASIAN STUDIES/SOUTH ASIA LANGUAGE & AREA CENTER

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<i>Committee Chair</i>	Ngawang Jorden, South Asian Languages & Civilizations	Lloyd I. Rudolph, Political Science (Emeritus)
Tanya Luhrmann	Matthew Kapstein, South Asian Languages & Civilizations	Susanne Hoeber Rudolph, Political Science (Emerita)
<i>Center Director</i>	John D. Kelly, Anthropology	Danilyn Rutherford, Anthropology
James H. Nye	Tanya Luhrmann, Human Development	Andrew Sartori, College
<i>Members: Faculty and Emeritus Faculty</i>	Rochona Majumdar, South Asia Languages & Civilizations	Clinton B. Seely, South Asian Languages & Civilizations
Muzaffar Alam, South Asian Languages and Civilizations	McKim Marriott, Anthropology (Emeritus)	Richard Shweder, Human Development
Daniel Arnold, Divinity	Colin P. Masica, South Asian Languages & Civilizations (Emeritus)	Ulrike Stark, South Asian Language & Civilizations
Kali Charan Bahl, South Asian Languages & Civilizations (Emeritus)	William Mazzarella, Anthropology	Richard P. Taub, College
Elena Bashir, South Asian Languages & Civilizations	Atif Mian, Graduate School of Business	Norman H. Zide, South Asian Languages & Civilizations (Emeritus)
Philip V. Bohlman, Music	Kathleen Morrison, Anthropology	<i>Affiliates: Faculty and Emeritus Faculty</i>
Yigal Bronner, South Asian Languages & Civilizations	Choudhri M. Naim, South Asian Languages & Civilizations (Emeritus)	Paul Friedrich, Anthropology (Emeritus)
Dipesh Chakrabarty, South Asian Languages & Civilizations	Ralph W. Nicholas, Anthropology (Emeritus)	Mark Lycett, Anthropology
Shelley Dawn Clark, Harris School of Public Policy	James H. Nye, Library	Heshmat Moayyad, Near Eastern Languages & Civilizations
Steven Collins, South Asian Languages & Civilizations	Steven Poulos, South Asia Language Resource Center	Martha Nussbaum, Law
Wendy Doniger, Divinity	Frank E. Reynolds, Divinity (Emeritus)	John Perry, Near Eastern Languages & Civilizations
Sascha Ebeling, South Asian Languages & Civilizations	Valerie Ritter, South Asian Languages & Civilizations	Robert M. Townsend, Economics
Ronald B. Inden, History (Emeritus)		John E. Woods, History

**T**he Committee on Southern Asian Studies is an interdepartmental 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 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 Literature, Economics, History, Linguistics, Music, Political Science, Psychology, Sociology, and South Asian Languages & Civilizations; the Committees on History of Culture, Human Development, 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 Graduate School of Business and the Division of the Social Sciences. Advanced degree programs with specialization in Bengali, Hindi, Pali, Sanskrit, Tamil, 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 Director, 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 sub continent 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.

#### *Courses*

For faculty course offerings see departmental course listings in these *Announcements*, as well as in the *Announcements: The Divinity School*.





# THE DIVISION *of the* HUMANITIES

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DANIELLE ALLEN  
*Dean*

MARIO SANTANA  
*Associate Dean*

THOMAS THUERER  
*Dean of Students*

**S**tudents 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 conceptual and historical studies 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 exist to guide and support the students investigations and are correspondingly varied. Degrees are granted both by departments, which largely represent the established fields of humanistic inquiry, and by committees, which offer special opportunities for study not easily accommodated within departments. These programs of study are described in detail in this section of the Announcements. The University also provides additional settings for cross disciplinary work by students already registered in a department or committee. Noteworthy among these settings are numerous Graduate Workshops, established under the auspices of the Council on Advanced Study in the Humanities and Social Sciences, which regularly bring together faculty and advanced graduate students from diverse fields to discuss their current work on topics of common interest. The Division of the Humanities further collaborates with the Division of the Social Sciences in supporting Interdisciplinary Opportunities, which comprise groups of faculty and students investigating such areas as archeological studies and gender studies, and Area Studies centers, devoted to distinct cultural, political, and geographical systems such as Latin America and South Asia. The interdisciplinary and area studies units are described more fully in another section of these *Announcements* (see p. 23).

The Franke Institute for the Humanities was established to provide further support for humanistic inquiry at the University. It serves as a gathering place and center of research for scholars, both from other institutions and from the division's faculty and advanced students, whose shared discussions fruitfully bring together diverse interests and methods. Many of its occasions, including lectures and special symposia, are open to the entire University community.

Students must fulfill divisional degree requirements as well as the requirements of their department or committee. They should become familiar with the requirements listed below and should consult their departmental advisers or committee chairs in planning their programs.

## ADMISSION TO THE DIVISION

Students from other colleges or universities should apply for admission to the division through the Office of the Dean of Students, Division of the Humanities.

A student with a bachelor's degree or with a master's degree will, in general, be considered for admission on the basis of his or her academic record and on the recommendation of the department or committee under whose guidance the student wishes to study.

All students in the division are expected to acquire foreign language competence sufficient for advanced study in their degree programs; for further information on these requirements, please see the statements of the departments and committees.

### ADMISSION AS STUDENT AT LARGE

A person who is qualified for independent study, but who is not seeking a degree, may be admitted to the division as a student at large. Admission is considered upon the basis of a formal application, transcripts of former academic work, and a statement of purpose. U.S. citizens and permanent residents should apply for admission through the University's Graham School of General Studies. International students should apply directly through the Office of the Dean of Students, Division of the Humanities.

## DEGREES

Degrees are awarded upon the demonstration of competence in a field or fields of study, not solely upon the satisfactory completion of University residence requirements (see page 5). Each department, committee, or program sets its specific requirements, but in general students demonstrate this competence by passing comprehensive examinations and by writing a thesis or its equivalent. Courses are intended to assist students in preparing for the examinations and the writing of the research paper or dissertation.

The bachelor's degree is a prerequisite for the master's degree, unless the department, committee, or program in which the student is registered waives this requirement in writing.

### MASTER OF ARTS

For students who have taken a bachelor's degree, the divisional requirements for the master's degree are as follows:

1. The completion of three quarters of full time residence; during this period the student will normally complete with satisfactory grades a program of courses, arranged in consultation with the student's counselor, to meet the requirements concerning work in the field as set up in the individual departments and committees.
2. In certain departments and committees, presentation of an acceptable master's research paper or thesis.
3. In certain departments and committees, satisfactory performance on a final comprehensive examination.

For the special requirements of the Master of Arts Program in the Humanities please see the descriptions of that program.

## MASTER OF FINE ARTS

This degree is awarded to students who complete the requirements described under the entry for the Committee on Visual Arts.

## DOCTOR OF PHILOSOPHY

The divisional requirements for the degree of Doctor of Philosophy are as follows:

1. The completion with satisfactory grades of a program of courses arranged in consultation with a counselor to meet the requirements concerning work in the field of concentration as set up in the individual departments and committees.
2. The demonstration of reading competence in a foreign language sufficient for advanced study in the division. This requirement is normally met by receiving a grade of high pass on a University language reading examination. For information on the choice of language and additional requirements of reading facility in a second or third language, see the statements of the departments and committees.
3. Admission to candidacy at least eight months before the date the degree is to be conferred. Students are admitted to candidacy by the dean of students in the division upon recommendation of the departments and committees. Prerequisite to admission to candidacy are the fulfilling of the language requirement, the passing of an examination in the field of concentration, and formal approval of the dissertation proposal.
4. The completion of an acceptable dissertation involving an original contribution to the advancement of knowledge.
5. The passing of the final oral examination.



# MASTER of ARTS PROGRAM *in the* HUMANITIES

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### *Co Directors*

Candace Vogler, Philosophy  
Jay Schleusener, English

**T**he Master of Arts Program in the Humanities (MAPH) is a one year program leading to the A.M. degree. It 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.

Some MAPH students are recent college graduates. Others are professionals at mid career, 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 non academic fields, including independent filmmaking, industrial design, politics, science, foundation work, and business.

Approximately half the students in MAPH plan to continue their studies at the Ph.D. level in preparation for a career in university teaching and research. They find that 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:

1. The colloquium. Before the start of regular classes in the fall, MAPH students come to campus for an intensive two week colloquium. Through a combination of plenary sessions and small groups, the colloquium introduces central issues in contemporary humanistic study and in academic research and writing. Those issues are more fully developed in the theoretical readings of the MAPH core course.

2. The fall quarter core course, Foundations of Interpretive Theory, which covers seminal works by thinkers such as Hegel, Marx, Freud, Heidegger, Lacan, and Althusser. Core is taught jointly by the MAPH Co directors and includes several guest lectures by distinguished faculty members from different disciplines. It gives MAPH students a shared base for their further study.

3. Seven elective courses chosen from the Division of the Humanities, Social Sciences, or other divisions or professional schools. The choice of these courses is left largely to the student, although a program of study must be approved by a faculty adviser or a preceptor. Some students restrict their courses to one field of study; others take a wide ranging variety of courses in as many as five disciplines. Most programs of study fall somewhere in between these two extremes.

MAPH Program Options, developed in consultation with Humanities Division departments and committees, provide guidance in selecting electives for interested students. MAPH administers programs of study designed by Classics, Cinema and Media Studies, the non English Languages and Literatures departments, and the University of Chicago Writing Committee (the MAPH Creative Writing Option is the University of Chicago's alternative to a traditional MFA).

4 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 the writing of the thesis students take a thesis work shop, which involves small group meetings focused on the development of thesis topics and the writing of the theses. 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 12-14 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 writing colloquium and core course and leads the thesis workshops. Preceptors also offer courses specially designed for MAPH in the winter quarter.

## ADMISSION

Applicants to MAPH must meet the divisional requirements for admission. 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://humanities.uchicago.edu/maph> or email [ma.humanities@uchicago.edu](mailto:ma.humanities@uchicago.edu) or phone (773) 834-1201.

To apply, go to <https://grad.application.uchicago.edu/>.



## MASTER of ARTS in LATIN AMERICAN STUDIES

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*Director*  
Dain Borges

*Associate Director*  
Kristine Jones

*Program Manager*  
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 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/degree/undergrad.html>).

The master's program attracts students who 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 multi disciplinary perspective. Others strengthen their training in a single discipline as it relates to Latin American Studies, or explore new fields.

Through the MA 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. Led by the Associate Director of Latin American Studies, the Proseminar meets 1/2 time during the Fall and Winter quarters (for a total of one course credit).

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 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://gradapplication.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 58<sup>th</sup> 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). 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 PhD 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, equivalent to five quarters of study at the University of Chicago. This requirement normally will be met in Spanish or Portuguese. However, substitution of an Amerindian language (such as Aymara, Yucatec Maya or Nahuatl) or a language spoken in the Caribbean, such as French, 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. Placement examinations will be administered to allow entering students to register at the appropriate level of language instruction. Students may meet all or part of the language requirement through the placement examination (as often occurs in Spanish or Portuguese).

## COURSE REQUIREMENTS

The standard course requirement is fourteen quarter courses, to be met as follows: the MA Proseminar in Latin American Studies; five courses in Latin American and Caribbean Studies, three disciplinary elective courses, and five language courses. Most students fulfill the language requirement through placement 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 five academic quarters or fewer. Students who place out of the language requirement may complete the remaining course requirements for the degree in three academic quarters, as most students do.

## 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 *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 and through the Rio Branco Visiting Professorship of Brazilian Studies. 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/degree/ctbo.html>.

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

<i>Director</i> Martin Stokes	<i>Assistant Director</i> Rusty Rook
<i>Associate Director</i> Holly Shissler	<i>Project Assistant</i> Traci Lombré

Please see entry for Center for Middle Eastern Studies for the list of Middle Eastern Studies faculty, also available at <http://www.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.

To apply, go to <https://grad-application.uchicago.edu/>.

## PROGRAM REQUIREMENTS

Only courses taken for a quality grade 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 such as Introduction to Judaic Civilization, or History of the Islamic Middle East, 600 to the Present;

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 Graduate School of Business. A student may earn the M.P.P. in Public Policy or the M.B.A. along with the A.M in Middle Eastern Studies in an integrated joint program normally requiring a total of three years of study.

### LANGUAGE

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.

### MIDDLE EASTERN STUDIES

All students in the A.M. program are required to take the core colloquium Approaches to the Study of Middle East (History 58000; Near Eastern History and Civilization 30631). Students must enroll in one of the two following three quarter sequences: Introduction to Judaic Civilization (Jewish Studies 31000, 31100, 31200) or History of the Islamic Middle East (History 35700, 35800, 35900; Near Eastern History and Civilization 30621, 30622, 30623). Those with previous work in Islamic studies will be advised to substitute, where appropriate, more advanced and specialized courses in the field.

### 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; or computer training. 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 Graduate 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 these *Announcements* and 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

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<i>Chair</i>	Yuri Tsivian, Slavic Languages & Literatures	<i>Mellon Fellow</i>
Richard Neer	Wu Hung	Jessica Levin
<i>Professors</i>		<i>Director of Visual Resources</i>
Charles Cohen, Committee on Visual Arts	Richard Neer	Gretchen Tuchel
Tom Gunning	Katherine Taylor	<i>Visiting Professor</i>
Neil Harris, History	Martha Ward (on leave, 2005 2006)	Jás Elsner
Reinhold A. Heller (on leave, 2005 2006)		<i>Emeritus Faculty</i>
Elizabeth Helsinger, English Language & Literature	Persis Berlekamp	Robert S. Nelson
William J. T. Mitchell, English Language & Literature	Darby English	Earl E. Rosenthal
Joel M. Snyder	Matthew Jackson, Committee on Visual Arts	Linda Seidel
Barbara M. Stafford (on leave, 2005 2006)	Hans Thomsen	Harrie Vanderstappen
	Rebecca Zorach	

**T**he Department of Art History provides diverse programs for the study of the history and theory of art, leading to the degrees of Master of Arts or 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. For admission to the Ph.D. program, the A.M. degree in art history is normally required. The department grants A.M. degrees but does not have an independent A.M. 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://grad applications.uchicago.edu/intro/humanities/intro1.cfm>

Questions about admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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

## THE DEGREE OF MASTER OF ARTS IN ART HISTORY

The A.M. degree is ordinarily the preliminary degree leading to a Ph.D. Requirements include: demonstrated competence in French, German, or Italian, a Master's paper; the writing of two substantive research papers treating two different fields in the history of art. The research papers most commonly are written for departmental seminars; alternatively, they may develop from lecture courses or independent research projects. One of them, typically, is further developed into the master's paper. For further information about exact requirements, inquire at the department or see the departmental website at <http://humanities.uchicago.edu/depts/art/>.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

Students entering the Ph.D. program have ordinarily completed an A.M. degree in art history at the University of Chicago or elsewhere. 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 additional work in foreign languages and another eleven courses distributed between major and minor fields. These courses are taken during a two year period. They center on seminars, including one in the historiography of art. Lecture courses and independent research work in the student's area of interest complete the program and provide the opportunity for the development of a dissertation proposal.

Successful completion of preliminary examinations and formal approval of the dissertation proposal establishes the eligibility of 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.

### Courses

The following is a sampling of graduate courses regularly offered.

<u>Art History Lecture Courses</u>		
30100. Art of Ancestral Worship: Chinese Art from Prehistorical to the Third Century	30200. The Greek Revolution Revisited: Rethinking Naturalism <i>Neer</i>	32700. High Renaissance Painting in Florence and Rome <i>Cohen</i>
<i>Wu</i>	30400. Athenian Vase-Painting: Depiction and Ideology <i>Neer</i>	32800. The Renaissance in Venice <i>Cohen</i>

35000. European Romanticism <i>Stafford</i>	37304. Photography, Modernism, Esthetics <i>Snyder</i>	40300. The Treasury-Buildings at Delphi and Olympia <i>Neer</i>
35400. Ideas of the City in the Early 20th Century <i>Taylor</i>	37500. Eisenstein and Soviet Aesthetic Theory <i>Tsivian</i>	40404. The 'Imegines' of Philostratus <i>Elsner</i>
35600. Ancients and Moderns <i>Stafford</i>	37904. Philosophy and Film <i>Snyder, Conant</i>	40600. What is Style? <i>Neer</i>
35800. Visual Culture <i>Mitchell</i>	38004. Russian Modernism, Films, Art, Books <i>Tsivian</i>	41004. Classical Arts and its Histories <i>Neer</i>
35900. 19th Century American Landscapes <i>Harris</i>	38104. The Detective and Crime Film <i>Gunning</i>	41404. Japanese Woodblock Prints: Issues and Problems <i>Thomsen</i>
36000. Art and Film in the Weimar Republic <i>Heller</i>	38300. Chinese Scroll Painting: Medium and Representation <i>Wu</i>	41904. Mapping Africa <i>Levin</i>
36100. French Art and Its Reception, 1848–1914 <i>Ward</i>	38500. History of International Cinema I: Silent Era <i>Tsivian</i>	42004. Rethinking Tombs <i>Wu</i>
36200. Cinema and Magic <i>Gunning</i>	38600. History of International Cinema II: Sound Era to 1960 <i>Gunning</i>	42300. North Italian Painters: Lotto and Pordenone <i>Cohen</i>
36300. 20th Century American Landscapes <i>Harris</i>	38704. Styles of Performance: Expression from Stage to Screen <i>Tsivian</i>	43000. Giorgione: Connoisseurship and Meaning <i>Cohen</i>
36400. History of Photography 1839–1969 <i>Snyder</i>	38900. Charlie Chaplin: The Man, The Artist, The Cultural Hero <i>Tsivian</i>	43300. Roman Mannerism: Art and Historiography <i>Cohen</i>
36500. The Sites of Twentieth Century Art <i>Ward</i>	39504. Art, Community, and Activism <i>Zorach</i>	44004. Anachronism <i>Zorach</i>
36700. Manifestations of Modernism: The Year 1913 <i>Heller</i>	39700. Historiography of Modern Architecture <i>Taylor</i>	44100. Text and Image in Victorian Britain <i>Helsingher</i>
36800. Modern Dwelling <i>Taylor</i>	39704. Objects of Japanese History <i>Thomsen</i>	45500. Neuronal Aesthetics <i>Stafford</i>
36900. Perspectives on Imaging <i>Stafford</i>	39900. Methods and Issues in Cinema Studies <i>Gunning</i>	44900. Picturing Natural History <i>Stafford</i>
37000. "As the Century Turns": German and Scandinavian Art and Culture around 1900 <i>Heller</i>	<b>Seminars</b>	45000. Art and Medicine: From the Enlightenment to Postmodernism <i>Stafford</i>
37104. American Graphic Design and Commercial Culture, 1870 to 1960 <i>Harris</i>	40100. Art Historical Methodology <i>Neer</i>	45200. 19th Century Cinema <i>Gunning</i>
37200. Theories of the Photographic Image and Film <i>Snyder</i>		45400. Landscapes <i>Mitchell</i>
		46100. Expressionism in the Visual Arts, Literature and Film <i>Heller, Tsivian</i>

46200. Der Blaue Reiter <i>Heller</i>	47000. The Skyscraper <i>Taylor</i>	48300. Film and Melodrama <i>Gunning</i>
46400. A Voyage to Abyssinia: Mixed Media of Travel <i>Stafford</i>	47200. The Ends of American Photography <i>Mitchell, Snyder</i>	49300. Symbolism and Film <i>Tsivian</i>
46500. Cultural History of Architecture at the University of Chicago Campus <i>Taylor</i>	47400. Rethinking Chinese Tombs <i>Wu</i>	48504. Alternative Approaches to the Visual <i>English</i>
46504. Art Museum Display <i>Ward</i>	47500. Materiality of Chinese Painting and Calligraphy <i>Wu</i>	48704. The Films of Josef von Sternberg <i>Gunning</i>
46600. Pop Art and Popular Culture of the 1950's and 60's <i>Heller</i>	47700. Female Images and Feminine Space in Chinese Art <i>Wu</i>	48904. Film and Art Movement <i>Tsivian, Heller</i>
46604. Whose Paris? <i>Taylor</i>	48200. Dunhuang Sutra Painting <i>Wu</i>	49600. Museum Cultures <i>Harris</i>
46800. The Museum: Collecting <i>Ward</i>		49900. Historiography <i>English</i>



## COMMITTEE on CINEMA and MEDIA STUDIES

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<b>Chair</b> Tom Gunning, Art History	Rebecca West, Romance Languages & Literatures	<b>Assistant Professor</b> Michael Raine, East Asian Languages & Civilizations
<b>Professors</b> James Chandler, English Language & Literature	<b>Associate Professors</b> James Lastra, English Language & Literature	<b>Lecturer</b> Ron Gregg, Cinema and Media Studies Programming Director
Miriam Hansen, English Language & Literature	Laura Letinsky, Visual Arts	
Joel Snyder, Art History	David J. Levin, Germanic Studies	
Yuri Tsivian, Slavic Languages & Literatures	Jacqueline Stewart, English Language & Literature	<b>Visiting Lecturer</b> Judy Hoffman, Visual Arts

**Resource Faculty:** Leora Auslander, History; Lauren Berlant, English Language and Literature; Robert Bird, Slavic Languages & Literatures; Bill Brown, English Language and Literature; Dipesh Chakrabarty, South Asian Languages and Civilizations; George Chauncey, History; Jean Comaroff, Anthropology; Martha Feldman, Music; Jacqueline Goldsby, English Language and Literature; Neil Harris, History; Reinhold Heller, Art History; Berthold Hoeckner, Music; Thomas Holt, History; Loren Kruger, English Language and Literature; William T.S. Mazarella, Anthropology; W.J.T. Mitchell, English Language and Literature; Eric Santner, Germanic Studies; Bozena Shallcross, Slavic Languages and Literatures; Barbara Stafford, Art History; Malynne Sternstein, Slavic Languages and Literatures; Martin Stokes, Music; Katherine Taylor, Art History; William Veeder, English Language and Literature; Martha Ward, Art History

The Committee on Cinema & 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.

For more information on the Film Studies Center visit  
<http://filmstudiescenter.uchicago.edu>.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

The requirements for the Doctor of Philosophy in Cinema & Media Studies are as follows:

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 Committee on Cinema & Media Studies. These cinema and media studies courses will include:

1. Three required courses originating in the committee:

(a) 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) 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 Committee on Cinema & Media Studies.

A sample program for students entering the committee without previous graduate study in cinema and media studies would consist in the following:

*First year:* A total of seven courses: the three required courses; a minimum of two elective courses in the Committee on Cinema & Media Studies; two further elective courses.

*Second year:* A total of six courses: a minimum of four elective courses in the Committee on Cinema & Media Studies; two further elective courses. Of these six courses, three must be designated as advanced courses.

*Third year:* A total of three courses; at least one Ph.D. research seminar in the Committee on Cinema & Media Studies; 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 a master's degree may be encouraged to take the examination earlier.

*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 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 end of the autumn quarter of the student's second year. The second language will be chosen in consultation with the graduate adviser, and proficiency must be demonstrated before the student will be permitted to take the fields examination.

*Teaching:* Students are eligible for course assistantships after their fields examination (but may apply for them as soon as a date for the exam is scheduled). Once students have served as course assistants, they may apply for teaching a free standing course (normally during their fourth and/or fifth year).

*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 & Media Studies, please see <http://humanities.uchicago.edu/cmtes/cms> or contact the Program Coordinator at (773) 834 1077 or via e mail at [cine.media@uchicago.edu](mailto: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://gradapplication.uchicago.edu/intro/humanities/intro1.cfm>

Questions about admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 58<sup>th</sup> Street  
Chicago, IL 60637

### 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 committee's website at <http://humanities.uchicago.edu/cmtes/cms/academics/gradcourses.html>.

2000. The Intimate Public Sphere <i>Berlant</i>	33600. Mastroianni and Keitel: Comparative Masculinities and Ethnicities <i>West</i>	34902. Cinema in Japan: Postwar/Postclassical/Postmodern <i>Raine</i>
32100. Art and Film in Weimar Germany <i>Heller</i>	33900. African American Migration Narratives <i>Stewart</i>	35000. Eisenstein and Soviet Aesthetic Theory <i>Tsivian</i>
32300. Staging Femininity: Gender as Spectacle in Opera and Film <i>Levin</i>	34000. Capra and Hollywood <i>Chandler</i>	35100. East/Central European Avant Garde <i>Sternstein</i>
33200. Italian Americana: Literature and Cinema <i>West</i>	34901. Cinema in Japan: From Classical Cinema to the Golden Age <i>Raine</i>	35600. Magic and the Cinema <i>Gunning</i>

36300. Ernst Lubitsch and Hollywood  
*Gregg*

36400. Charlie Chaplin: The Man, the Artist, the Cultural Hero  
*Tsivian*

36500. The Cinema of Max Ophüls  
*Hansen*

37000. Classical Film Theory  
*Staff*

37200. Theories of the Photographic Image and Film  
*Snyder*

37200. Slavic Critical Theory from Jakobson to Zizek  
*Sternstein*

37300. Perspectives on Imaging  
*Stafford and Beck*

37600. Beginning Photography  
*Letinsky*

37700. Advanced Photography  
*Letinsky*

37800. Radical Interpretation on Stage and Screen  
*Levin*

37800. Visual Culture  
*Mitchell*

38100. Issues in Film Music  
*Hoeckner*

38200. Styles of Performance  
*Tsivian*

38201. Political Documentary Film  
*Hoffman*

38300. Film Noir  
*Staff*

38700. Cinematic Visions of Twentieth Century Italian and Italian American Culture  
*West*

38800. The Films of Fritz Lang  
*Gunning*

39000. Left Wing Art and Soviet Film Culture of the 1920s  
*Tsivian*

39800. Cinema and French Popular Culture  
*Staff*

40000. Methods and Issues in Cinema Studies  
*Gunning, Hansen, or Lastra*

47000. The Ends of American Photography  
*Snyder and Mitchell*

47400. Modernity and the Sense of Things  
*Hansen and Brown*

48100. Genre and Authorship in Postclassical Cinema  
*Hansen*

48400. Technology and Representation in Film History and Film Theory  
*Lastra*

48500. History of International Cinema, Part I, Silent Era  
*Tsivian*

48600. History of International Cinema, Part II, Sound Cinema to 1960  
*Gunning*

48700. Performance Theory  
*Levin and Rutherford*

49100. Interactivity and the Cultural Analysis of Film  
*Tsivian*

49200. Film Exhibition  
*Gunning*

58600. Film and the Avant Garde (Experimental Film)  
*Lastra*

**Seminars**

61000. Sound Theory/Sound Practice  
*Lastra*

61600. The Sentimental  
*Chandler*

62000. New Deal Culture: Stage, Screen, and the Public Sphere  
*Kruger*

62200. Drama, Theatre, Image, Performance  
*Kruger*

64000. 19th Century Cinema  
*Gunning*

64100. Film and Melodrama  
*Gunning*

64500. A Separate Cinema: Race Films in Context  
*Stewart*

64600. South African Literature in English: Colonial, Postcolonial, and Other Canonizations and Contestations  
*Kruger*

64900. Political Modernism and Japanese Cinema  
*Raine*

65200. Animate and Inanimate: Cinema's Uncanny relation to the Illusion of Life  
*Gunning*

65300. Symbolism and Film  
*Tsivian*

66200. The Persistence of Surrealism: Buñuel and Beyond  
*Lastra*

67200. Expressionism  
*Tsivian and Heller*

67300. Classical Cinema as Vernacular Modernism  
*Hansen*

67500. Frankfurt School on Cinema, Modernity, and Mass Culture  
*Hansen*

68500. The Concept of Spectatorship in Film Theory and Film History  
*Hansen*

68800. A Voyage to Abyssinia: The Mixed Media of Travel  
*Stafford*

69200. Space, Place, and Landscape  
*Mitchell*

# DEPARTMENT of CLASSICAL LANGUAGES and LITERATURES

<b>Chair</b> Jonathan M. Hall	<b>Mellon Postdoctoral Fellow</b> Allen Romano	Dennis Pardee, Near Eastern Languages and Civilizations
<b>Professors</b> Danielle Allen Elizabeth Asmis Shadi Bartsch Christopher Faraone Jonathan M. Hall James M. Redfield D. Nicholas Rudall Richard P. Saller Peter White	<b>Emeritus Faculty</b> Nancy Pearce Helmbold Walter R. Johnson	Gabriel Richardson, Philosophy Seth Richardson, Near Eastern Languages and Civilizations 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
<b>Associate Professors</b> Michael Allen Helma J. Dik David G. Martinez David L. Wray	<b>Affiliated Faculty</b> Jonathan Beere, Philosophy Lee Behnke Michael Dietler, Anthropology Jas Elsner, Art History Elizabeth Gebhard, Director of Excavations, Isthmia Janet Johnson, Near Eastern Languages and Civilizations Walter Kaegi, History Bruce Lincoln, Divinity School Glenn Most, Committee on Social Thought Richard Neer, Art History Martha Nussbaum, Philosophy and Law Wendy Olmsted, Humanities	
<b>Assistant Professors</b> Emanuel Mayer Mark Payne		
<b>Lecturer</b> Antonia Syson		

**T**he 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 Committee on Social Thought, and the Departments of History, Linguistics, Near Eastern Languages & Civilizations, and New Testament & Early Christian Literature 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

A wide variety of fellowship aid is available, from tuition scholarships to grants that also 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 four or 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

Undergraduates constitute only about fifty percent of the students at the University, a fact that has a marked impact on the kinds of teaching graduate students are recruited to do. 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 can include remission of tuition.

## PROGRAMS OF STUDY

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

### 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 year long sequence devoted in alternative 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.

### LANGUAGE PREPARATION

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 DEGREE OF MASTER OF ARTS

Two degrees are offered: classics, and Greek or Latin. Students often complete study for the A.M. degree in a single year, but they may take longer. For classics and Greek or Latin, one year long survey course in Greek or Latin, two quarters of seminar work, and two advanced courses in areas appropriate to the student's interest are required; the remaining two courses can be used to develop a special interest. Students must also demonstrate competence in reading French or German.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

The Ph.D. Program in Classical Languages and Literatures is designed for five or 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 year or two to the dissertation.

In the first year of the Classical Languages and Literatures program, students regularly take one of the survey courses, two seminars, at least two courses in the minor language, and other courses (often in other departments such as Art, 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 (waived if a student has received a grade for the first quarter of the relevant Graduate Seminar in Greek or Roman History) and also 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.

## 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.

## LANGUAGE PREPARATION

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.

*For students commencing Autumn Quarter 2006 or later:*

A new curriculum is being devised for students who enter the Program in the Ancient Mediterranean World from Autumn Quarter 2006. Further information can be found on the Department of Classics website:

<http://humanities.uchicago.edu/depts/classics/index.htm>

*For students commencing Autumn Quarter 2005 or earlier:*

### THE DEGREE OF MASTER OF ARTS

Students often complete the A.M. in the Ancient Mediterranean World in a single year, though they may take longer. Nine courses are required: of these, four must be distributed in each of the four disciplinary fields (literature; history; philosophy/religion; art/archaeology); two must be in an ancient language other than Greek; one must be a graduate seminar; and one must be in Greek language at the level of 20300. No more than three courses may be in Intermediate Greek or Latin. Students must also demonstrate competence in French or German.

### THE DEGREE OF DOCTOR OF PHILOSOPHY

The Ph.D. Program in the Ancient Mediterranean World is designed for five or six years, the first two being devoted to a full load of nine courses, the third and fourth to completing language and history examinations, and the final year or two to the dissertation. All students must first complete the requirements for the A.M. in the Ancient Mediterranean World.

The second year course requirements are the same as for the Master of Arts degree. In the spring students are required to pass the Greek competency qualifying examination. Before the end of their fourth year, students are required to have passed a second competency examination in an ancient language other than Greek, the University examination in a second modern language (French or German, except by approval of the chair), and two three hour, written history examinations based upon reading lists arrived at in consultation with the examining faculty. One of these examinations must be in the field of Greek History and Culture. After completion of these requirements, the candidate must, with the guidance of his or her advisory committee, submit for approval a detailed proposal to proceed to the dissertation. The proposal is to be submitted no more than two quarters after the completion of all required examinations. The Ph.D. will be awarded after approval of the dissertation by the advisory committee and a final oral defense of the completed dissertation.

### 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://grad.applications.uchicago.edu/intro/humanities/intro1.cfm>

Questions about admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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

### Courses

The courses listed below are regularly offered. In addition, new courses are frequently introduced, especially seminars and classics courses, and these cannot be predicted very far in advance. In 2004 2005, for example, these included seminars on Problems in Greek and Near Eastern History, Classical Art and its Histories, Poetic Translation, Oracles, Divination, and Prophecy in the Ancient Mediterranean World, The Presocratics, Euripides and the Performance of Athenian Myth, Aeschylus *Choephoroi*, Topics in Greek Linguistics, Topics in Latin Linguistics, and Ovid's *Ars Amatoria*.

<u>Greek</u>	31100. Greek Elegy	32100. Menander
30700. Homer	<i>Staff</i>	<i>Staff</i>
<i>Staff</i>	31200. Plato	32200. Herodotus
30800. Hesiod	<i>Staff</i>	<i>Staff</i>
<i>Staff</i>	31300. Aeschylus	32300. Sophocles
30900. Greek Hymns	<i>Staff</i>	<i>Staff</i>
<i>Staff</i>	32000. Aristophanes	32400. Euripides
31000. Greek Lyric Poetry	<i>Staff</i>	<i>Staff</i>
<i>Staff</i>		

32700. Survey of Greek Literature I  
*Staff*

32800. Survey of Greek Literature II  
*Staff*

32900. Survey of Greek Literature III  
*Staff*

33100. Lyric and Epinician Poetry  
*Staff*

33200. Aristotle  
*Staff*

33300. Thucydides  
*Staff*

34400. Greek Prose Composition  
*Staff*

33400. Theocritus  
*Staff*

33500. Hellenistic Poetry  
*Staff*

36000. Greek Linguistics  
*Staff*

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### Latin

31000. Livy  
*Staff*

31100. Roman Elegy  
*Staff*

31200. Roman Novel  
*Staff*

31300. Vergil  
*Staff*

31600. Augustine  
*Staff*

32100. Lucretius  
*Staff*

32200. Roman Satire  
*Staff*

32300. Roman Oratory  
*Staff*

32700. Survey of Latin

Literature I

*Staff*

32800. Survey of Latin  
Literature II  
*Staff*

32900. Survey of Latin  
Literature III  
*Staff*

33100. Ovid  
*Staff*

33200. Sallust and Tacitus  
*Staff*

33300. Horace  
*Staff*

33400. Roman Comedy  
*Staff*

33600. Silver Latin Epic  
*Staff*

34400. Latin Prose  
Composition  
*Staff*

33500. Political Philosophy  
*Staff*

36000. Latin Paleography  
*Staff*

36400. Medieval Literature  
*Staff*

38600. Letters: Cicero and  
Seneca  
*Staff*

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### Classics

30100. Athenian Democracy  
and Its Critics

*Staff*

30300. Ancient Political  
Thought  
*Staff*

31700. Archaeology for  
Ancient Historians  
*Staff*

30300. Archaic Greece  
*Staff*

30400. Ethnicity in the  
Classical World  
*Staff*

31200. History of Theater  
*Staff*

32500. Economy of Ancient  
Rome  
*Staff*

33700. Problems in Roman  
Religion  
*Staff*

33400. Life and Death in the  
Ancient World  
*Staff*

35400. Greek Historiography  
*Staff*

35500. Near Eastern and  
Egyptian Art  
*Staff*

35600. Athenian Vase  
Painting  
*Staff*



# DEPARTMENT of COMPARATIVE LITERATURE

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<i>Chair</i>	Thomas Pavel, Romance Languages & Literatures	<i>Visiting Assistant Professor</i>
Joshua Scodel	Joshua Scodel, English	Neta Stahl
<i>Professors</i>	Yuri Tsivian, Slavic Languages & Literatures	<i>Emeritus Faculty</i>
Arnold Davidson, Philosophy	Robert von Hallberg, English Language & Literature	David Bevington, English Language & Literature
Frederick de Armas, Romance Language and Literatures	David Wellbery, Germanic Studies	Walter R. Johnson, Classical Languages & Literatures
Loren A. Kruger, English Language & Literature	Associate Professors	Kenneth J. Northcott, Germanic Studies
Françoise Meltzer, Romance Languages & Literatures	Lawrence Rothfield, English Language & Literature	Frantisek Svejkovsky, Slavic Languages & Literatures
Glenn W. Most, Social Thought	David Wray, Classical Languages & Literatures	Edward Wasiolek, Slavic Languages & Literatures
Michael J. Murrin, English Language & Literature		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 A.M. 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 30100 and 30200; 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 A.M. 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 MA 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 MA 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 require

ment 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 your 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://humanities.uchicago.edu/depts/complit/> 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:

<https://grad.application.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 58<sup>th</sup> Street  
Chicago, IL 60637



# DEPARTMENT OF EAST ASIAN LANGUAGES *and* CIVILIZATIONS

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<b>Chair</b> Judith Zeitlin	<b>Assistant Professors</b> Gregory Golley Yuming He Michael Raine	Hi Sun Kim Laura A. Skosey
<b>Professors</b> Prasenjit Duara, History Norma Field Donald Harper James Ketelaar, History Edward Louis Shaughnessy Hung Wu, Art History	<b>Senior Lecturers</b> Fangpei Cai, College Harumi Lory Hiroyoshi Noto Youqin Wang, College Jun Yang	<b>Emeritus Faculty</b> George Chih Chao Chao Ping Ti Ho, History Tetsuo Najita, History David T. Roy William F. Sibley Tsuen Hsuin Tsien Harrie Vanderstappen, Art History
<b>Associate Professors</b> Guy S. Alitto, History Susan Burns, History Kyeong Hee Choi Xiaobing Tang	<b>Lecturers</b> Misa Miyachi Jung Hyuck Lee Mieko Kawai	Anthony C. Yu, Divinity

**T**he 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 Division of the Social Sciences and the Humanities Division.

## 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, dead lines, and department specific information is available online at:

<https://grad.application.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 58<sup>th</sup> 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 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.

*Course requirement:* All full time students, regardless of whether they are entering the program with an M.A. or a B.A., must take 18 courses (9 per year) during their first two years of scholastic residence, 1 of which must be EALC 650 (Directed Translation); no more than 3 courses may be taken for an R or a P grade. 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, regardless of whether they are entering the program with an M.A. or a B.A., 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 may choose to fulfill this requirement by enrolling in EALC 65000 (Directed Translation), and earning a grade of B or better.

*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. Students may choose to use two papers that had previously been submitted for course work, but 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. Alternatively, a 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 2 Thesis Research (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 Department will 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 stated in the Course requirement section (above) continues to apply.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

The requirements for the Ph.D. degree are:

An annual spring quarter review of students will continue until completion of degree. The provision for redeeming incompletes stated in #2 of the Master's Degree Requirements above continues to apply.

*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. In addition, 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.

*Civilization courses:* Students must take at least two courses in an East Asian civilization other than that in which they are specializing.

*The Ph.D. qualifying examination:* After consulting the faculty adviser, and clearing all incompletes, 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 appoint 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 three 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 exami-

nation 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 ten 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:* Admission to candidacy is recommended to the Division of the Humanities by the Department upon completion of the above requirements.

*The dissertation:* The dissertation is expected to make an original contribution to knowledge. The student is advised to make early contact with the University Dissertation Secretary and to satisfy the requirements of the University in all matters of style, typing and binding etc. In addition to the official dissertation copy to be submitted by the EALC Secretary to the Dissertation Secretary and then sent to the University Library, the Department requires an identical bound copy to be presented to EALC, to be kept in the Departmental library. Since revisions may be suggested at the oral defense, the student should not undertake to have a final dissertation copy bound before the oral defense but rather, should provide a check to the departmental secretary sufficient for binding charges at the time final copies are submitted.

*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 secretary 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.

### Courses

The following is a list of courses offered in the department in 2003-04.

#### Chinese

10100 10200 10300.	40800 40900 41000. Readings in Literary Chinese I, II, III
Elementary Modern Chinese I, II, III	<i>Harper, Staff</i>
<i>Cai, Yang</i>	41100 41200 41300. Fourth Year Modern Chinese I, II, III
18500. Art of Asia: Monuments	<i>Wang</i>
<i>Purtle</i>	41900. Early Chinese Texts and Sociological Research
20100 20200 20300.	<i>Harper</i>
Intermediate Modern Chinese I, II, III	42605. Colloq: Theories of Art As Literature in Modern China
<i>Wang</i>	<i>Tang</i>
20800 20900 21000.	43405. Chinese Literature and Society of the 1990 s
Elementary Literary Chinese I, II, III	<i>Feng</i>
<i>Sena, Skosey</i>	44500 44501. Colloq: Modern China I, II
22200. Narratives Images, and Modern China	<i>Alitto</i>
<i>Tang</i>	45400. Western Zhou Bronze Inscriptions
24500 34500. Reading Qing Documents	<i>Shaughnessy</i>
<i>Alitto</i>	45800. Song Lyrics
27700 37700. The Art of Confrontation: Chinese Visual Culture in the 20th Century	<i>Yu</i>
<i>Purtle</i>	48905. Chinoiserie: The Arts of China in the European Imaginary
28105 38105. History and Literature in 20th Century China	<i>Purtle</i>
<i>Duara, Tang</i>	49005. Painting and The Imperial Cultural Economy in Ming China
28605. Buddhism in Contemporary China: Religion, Politics and Culture	<i>Purtle</i>
<i>Borchert</i>	54105. Colloq: Arts and Politics of Revolutionary Fiction
28900. Classical Confucianism	<i>Feng</i>
<i>Shaughnessy</i>	
30100 30200 30300.	<hr/>
Advanced Modern Chinese I, II, III	10800 10900 11000. Introduction to the Civilizations of East Asia I, II, III
<i>Yang</i>	<i>Alitto, Field, Choi</i>
31800. Introduction to Pre Modern Chinese Poetry	18500. Art of Asia: Monuments
<i>Yu</i>	<i>Purtle</i>
32805. What is Sinology?	
<i>Shaughnessy</i>	

#### 40800 40900 41000. Readings in Literary Chinese I, II, III

*Harper, Staff*

#### 41100 41200 41300. Fourth Year Modern Chinese I, II, III

*Wang*

#### 41900. Early Chinese Texts and Sociological Research

*Harper*

#### 42605. Colloq: Theories of Art As Literature in Modern China

*Tang*

#### 43405. Chinese Literature and Society of the 1990 s

*Feng*

#### 44500 44501. Colloq: Modern China I, II

*Alitto*

#### 45400. Western Zhou Bronze Inscriptions

*Shaughnessy*

#### 45800. Song Lyrics

*Yu*

#### 48905. Chinoiserie: The Arts of China in the European Imaginary

*Purtle*

#### 49005. Painting and The Imperial Cultural Economy in Ming China

*Purtle*

#### 54105. Colloq: Arts and Politics of Revolutionary Fiction

*Feng*

#### 10800 10900 11000. Introduction to the Civilizations of East Asia I, II, III

*Alitto, Field, Choi*

#### 18500. Art of Asia: Monuments

*Purtle*

#### 25005 35005. Asian Wars in the 20th Century

*Cumings*

#### 27105. Issues in East Asian Civilizations

*Harper*

#### 27905. Asian American History

*Ngai*

#### 29500 29600 29700. Senior Thesis Tutorial I, II, III

*Staff*

#### 52005 52105. Seminar: East Asian Modern in the 20th Century I, II

*Duara*

#### Japanese

#### 10100 10200 10300.

#### Elementary Modern Japanese I, II, III

*Lory, Uchida, Dossier*

#### 14405. Japan & the West: 19th Century Encounters

*Burns*

#### 20100 20200 20300.

#### Intermediate Modern Japanese I, II, III

*Noto, Lory, Dossier*

#### 21200 21300. Intermediate Modern Japanese through Japanimation II, III

*Noto, Dossier*

#### 24000 34000. Love and Eros in Japanese History

*Ketelaar*

#### 24800. Science and Culture in 20th Century Japan

*Golley*

#### 25505. Labor and Desire in Modern Japanese Literature

*Bowenstruyk*

#### 27705. Politics and Culture in Early Modern Japan

*Burns*

#### 29605. History Colloquium: Early Modern Modern Japan

*Najita*

#### EALC

30100 30200 30300. Advanced Modern Japanese I, II, III <i>Uchida</i>	43805 43905. Graduate Seminar: Modernist and Proletarian Literature in Japan I, II <i>Field</i>	24305 34305. Autobiographical Writings, Gender and Modern Korea <i>Choi</i>
32905. Canonical Japanese Literature: A Critical Survey <i>Field</i>	52300 52301. Seminar: Modern Japanese History, I II <i>Ketelaar</i>	30100 30200 30300. Advanced Korean I, II, III <i>Pyun</i>
34900 34901 34902. Pre modern Japanese: Kindai Bungo <i>Noto</i>	<b>Korean</b>	40100 40200 40300. Readings in Korean Culture, Politics and Society I, II, III <i>Lee</i>
40500 40600 40700. Fourth Year Modern Japanese I, II, III <i>Lory, Noto</i>	10100 10200 10300. Introduction to the Korean Language I, II, III <i>Lee</i>	52505 52605. Graduate Seminar: The Formation of Modern Korean Literature, I, II <i>Choi</i>
	20100 20200 20300. Intermediate Korean I, II, III <i>Pyun</i>	



# DEPARTMENT of ENGLISH LANGUAGE and LITERATURE

---

***Chair***

Bill Brown

***Professors***

Lauren G. Berlant

Bill Brown

James K. Chandler

Mark Hansen

Miriam Hansen

Elizabeth Helsinger

Loren A. Kruger

William J. T. Mitchell

Michael J. Murrin

Joshua Keith Scodel

Richard Allen Strier

William R. Veeder

Robert von Hallberg

Mark Slouka

Kenneth W. Warren

***Associate Professors***

Jacqueline D. Goldsby

Elaine Hadley

Janice Knight

James Lastra

John Mark Miller

Deborah Lynn Nelson

Lawrence Rothfield

Lisa C. Ruddick

Jay Schleusener

Jacqueline M. Stewart

Christina von Nolcken

***Assistant Professors***

Bradin Cormack

Raúl Coronado

Oren J. Izenberg

Sandra MacPherson

Carla Mazzio

Srikanth Reddy

Jennifer Scappettone

Eric Slatner

Robin Valenza

***Emeritus Faculty***

David Bevington

Wayne C. Booth

Albert M. Hayes

George Hillocks, Jr.

J. Paul Hunter

Gwin J. Kolb

James E. Miller, Jr.

Janel Mueller

Edward W. Rosenheim

Richard G. Stern

Stuart M. Tave

Edward Wasiolek, Slavic

Languages &amp; Literatures

Joseph M. Williams

Anthony C. Yu, Divinity

***Visiting Professors***

Jeffrey Masten (Winter 2006)

Jim Powell (Autumn 2005)

Slavoj Zizek (Spring 2006)

**G**raduate 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 at attaining 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 as well to anthropology, sociology, history, art history, linguistics, philosophy and 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 after the A.B. 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 two to three seminars the first year and at least 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 one year of coursework (6 courses, including at least 3 seminars), 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 quarter 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. Other opportunities for teaching are available 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 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 of 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 English Department's website at <http://english.uchicago.edu> or call the Administrative Assistant, Alma Farias, 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://gradapplication.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdso@uchicago.edu](mailto:org_hdso@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 Humanities  
 Walker Hall, Suite 111  
 1115 East 58th 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). (Current minimum scores, etc., are provided with the application.) For more information, please see the Office of International Affairs website at <http://internationalaffairs.uchicago.edu>, or call them at (773) 702 7752.

### *Courses*

The listing below represents the range and variety of the curriculum, not the course offerings in any given year. Applicants may write to the department for information about current course offerings. Undergraduate courses are listed in the College's *Courses and Programs of Study*. 50000 and 60000 level courses are open only to Ph.D. students.

30200. Gender Studies <i>Field</i>	32300. Marxism and Modern Culture <i>Kruger</i>	34100 (MAPH 30100). Foundations of Interpretive Theory <i>Vogler</i>
30201. Theories of Sex and Gender <i>Berlant</i>	32600. Visual Culture <i>Mitchell</i>	34600. Dialect Voices in Literature <i>Mutwene</i>
31000, 31100. History and Theory of Drama I, II <i>Bevington</i>	32800. Theories of Media <i>Mitchell</i>	34800. Medieval Dream Poetry <i>von Nolden</i>
31500. Topics in Critical Theory <i>Schleusener</i>	32815. Stein and Wittgenstein <i>Reddy</i>	34900. Old English: Beginning Course <i>von Nolden</i>
31600. History of Criticism <i>Murfin</i>	32850. Caribbean Literature: Corporality, Eroticism, and Identity <i>Staff</i>	35000. Old English Poetry <i>von Nolden</i>
31901. Psychoanalytic Interpretation <i>Ruddick</i>	33000. Academic and Professional Writing (The Little Red Schoolhouse) <i>McEnerney</i>	35200. Beowulf <i>von Nolden</i>
32000. The Intimate Public Sphere <i>Berlant</i>		35400. The Middle Ages <i>von Nolden</i>

35410. Body and Soul  
*Miller*

35500. Chaucer: The Canterbury Tales  
*Schleusener*

35501. Tough Broads  
*Nelson*

35700. Politics of Literacy in Pre Modern England  
*wi Nolken*

35800. Medieval Epic  
*wi Nolken*

36100. Renaissance Lyric  
*Strier*

36180. Travellers on the Silk Road  
*Murrin*

36300. Renaissance Epic  
*Murrin*

36302. Renaissance Romance  
*Murrin*

36400. Renaissance Love  
*Sadé*

36600. The Mourners Bench: Writing, Grief & African American Literature  
*Goldsby*

36601. Society and Politics in Shakespeare's Plays  
*Strier*

36800. Culture, Society, and Politics in Seventeenth Century England  
*Strier*

37000. Seventeenth Century Poetry  
*Sadé*

37001. Shakespeare's Sonnets  
*Cormack*

37100. Women Poets of the Seventeenth Century  
*Strier*

37500. Milton  
*Mueller, Murrin, Sadé, Strier*

37700. Seventeenth Century Neoclassicism  
*Sadé*

38000. Visual Culture in the English Enlightenment  
*Macpherson*

38101. The Films of Max Ophuls  
*Hansen*

38601. The Eighteenth Century Public Sphere  
*Valenza*

38603. Early English Novel 1688-1796  
*Macpherson*

38800. Dr. Johnson and His Circle  
*Chandler*

39500. The Lyric and History  
*Chandler*

40000. Victorian Wives, Mothers & Daughters  
*Hadley*

41000. The Nineteenth Century Realist Novel  
*Rothfield*

41001. The Victorian Period  
*Rothfield*

41100. Victorian Childhood  
*Hadley*

41300. Medieval Allegory  
*Murrin*

41400. Virginia Woolf  
*Ruddick*

41500. Professionalism and Its Discontents  
*Rothfield*

41900. Pauperism and Poverty in Nineteenth Century  
*Hadley*

42000. Victorian Poetry  
*Helsinger*

42100. Text and Image in Victorian Britain  
*Helsinger*

42300. Victorian Women Writers  
*Helsinger*

42301. Middlemarch  
*Rothfield*

42400, 42500. Pre Raphaelite Poetry and Painting I, II  
*Helsinger*

42800. Chicago  
*Knight*

42803. 19 C US Latino/a Lit to Mod.  
*Coronado*

42902. Radical Poetics  
*Izenberg*

43000. Ulysses  
*Ruddick*

43700. Recent American Poetry  
*Strand, von Hallberg*

43710. Yeats  
*Izenberg*

43900. Women, Writing, Spirituality: England and America, 1546-1725  
*Knight*

43902. Redeemer Nation: Rhetorics of Religious Nationalism in Colonial America  
*Knight*

44200. Colonization/Canonization: Making of South African Literature  
*Kruger*

44400. Redeemer Nation: America 1585-1750  
*Knight*

44500. Brechtian Representations: Theatre, Theory, Cinema  
*Kruger*

44900. The Contemporary Historical Novel  
*Væder*

45000. Post Modern Autobiography  
*Nelson*

45100. American Gothic  
*Væder*

45101. Amer Women Writing/Mid Cent.  
*Nelson*

45400. African American Migration Narratives <i>Stewart</i>	48300. Close Analysis: Methods in Film Study <i>Tsvián</i>	52600. Intellectual Backgrounds of the Renaissance in Europe <i>Strier</i>
45500. After Great Pain: From Sentimentality to Trauma in the U.S. Liberal Tradition <i>Berlant</i>	48600. Capra and Hollywood <i>Chandler</i>	52601. Religion/English Renaissance <i>Strier</i>
45600. Typologies of Gender in Puritan America <i>Knight</i>	48601. Cinema in Africa <i>Kruger</i>	52800. The Invention of Britain in Early Modern Literature <i>Cormack</i>
45900. Urban Fictions and American Space, 1880-1900 <i>Braun</i>	48700. Making Up the Past: History, Memory, Media <i>Chandler</i>	53000. Radcliffe, Scott & Dickens <i>Chandler</i>
46000. Nineteenth century American Gothic <i>Vexler</i>	48800. The Films of Josef von Sternberg <i>Gunning</i>	53400. British Literary Culture 1750-1850 <i>Chandler</i>
46100. American Enlightenment <i>Slafter</i>	49900. Fiction & Fiction <i>Vexler</i>	53401. Narrative Point of View: Theory/Practice, Fiction/Cinema <i>Chandler</i>
46500. Metaphysical Poetry <i>Strier</i>	<b>Seminars</b>	53700. Thinking and Acting in the Long Eighteenth Century <i>Macpherson</i>
46501. American Fiction in the Nineteenth Century <i>Vexler</i>	50000. Reading Course <i>Staff</i>	54300. Victorian Liberalism: Institutions, Ideas, Literatures <i>Hadley</i>
46600. African American Poetry <i>von Hallberg</i>	50100. Graduate Teaching Colloquium <i>Staff</i>	54500. Poetry and the Arts: Britain, 1850-1880 <i>Helsingør</i>
47100. African American Literature on Film <i>Stewart</i>	50300. Principles of Teaching Writing <i>McEnerney, Williams</i>	54800. Sensibility, Sensation, Sexuality <i>Rothfield</i>
47200. Elements of Poetry and Poetics <i>von Hallberg</i>	50400. The Teaching of English <i>Hadley</i>	55002. AfAm Lit on the Frontier <i>Stewart</i>
47300. Slavery and the Literary Imagination <i>Goldsby</i>	51000, 51100. Ph.D. Colloquium <i>Staff</i>	55100. Colonial Encounters <i>Knight</i>
47800. American Poetry Since 1945 <i>von Hallberg</i>	51200. Medieval Dream Poetry <i>von Norden</i>	55200. America after Columbus <i>Knight</i>
47900. Confessional Writing in the Cold War <i>Nelson</i>	51500. Perfection and Utopia in Late Medieval England <i>Miller</i>	55400. Objects & Artifacts <i>Brown</i>
48000. Methods and Issues in Cinema Studies <i>Lastra</i>	51700. Ethics and Psychology in Late Medieval England <i>Schleusener</i>	55401. Henry James: The Great Novellas <i>Vexler</i>
48100. Genre and Authorship in Post Classical Cinema <i>Hansen</i>	51701. Shakespeare: Anatomy, Analysis and the Archive <i>Mazzio</i>	55401. Am Lit/Law: Age of Doug/Mel <i>Slafter</i>
48101. The Films of Max Ophuls <i>Hansen</i>	52000. The Matter of Law in Early Modern English Literature <i>Cormack</i>	55500. Kitsch, Camp, and the Politics of Culture <i>Brown</i>
	52400. The Politics of Taste <i>Rothfield</i>	
	52501. Lit/Div of Intellectual Labor <i>Valenza</i>	

55800. Postmodernism: Seminar in Art and Literature  
*won Hallberg*

56000. Ezra Pound and Paul Celan  
*won Hallberg*

56600. Birth of the Cool  
*Goldsby*

56601. Harlem Ren. Reconsidered  
*Goldsby*

57101. Cultural Markets  
*Rothfield*

57200. Elements of Poetry and Poetics  
*won Hallberg*

57500. Philosophical Literature  
*Schleusener, Volger and Miller*

58500. Technology and Representation  
*Lasta*

58600. Film and the Avant Garde (Experimental Film)  
*Lasta*

58700. Seminar: Classical Cinema as Vernacular Modernism  
*Hansen*

58900. A Separate Cinema: Race Films in Context  
*Stewart*

59300. Drama, Theatre, Spectacle, Performance  
*Kruger*

59400. Realism, Modernism, Socialism: The Politics of Literary Form  
*Kruger*

59700. Nationality, Sexuality, and Gender: Practicum in Feminist Theory and Pedagogy  
*Berlant*

59900. Intensive Reading Research  
*Staff*

60301. Space, Place, and Landscape  
*Mitchell*

60400. Cavell and Criticism  
*Strier*

61500. Politics of Literacy in Pre Modern England  
*won Nolken*

63200. The Language of Rights in Eighteenth Century America  
*Slaughter*

63800. On Beauty and Being Just in the Long Eighteenth Century  
*Macpherson*

63801. Wordsworth and Scott  
*Chandler*

64000. Romanticism and Political Economy  
*Chandler*

64200. The Historical Novel  
*Chandler*

64400. British and German Modernism: A Comparative Approach  
*won Hallberg*

64500. Nationalism and Cultural History: Representing 19th Century Britain  
*Helsinger*

64800. Nineteenth Century History and Fiction  
*Helsinger*

65201. The US Historical Novel  
*Berlant*

65202. From Sentiment to Trauma  
*Berlant*

65500. Romantic Fetishism in America  
*Braun*

65600. Whitman and the Logics of America  
*Braun*

65800. Early American Modernism  
*won Hallberg*

65801. American Lit 1930 1950  
*Warren*

661. Irishness and Modernity  
*Ruddick*

66200. Modernity and the Reinvention of the Folk  
*Ruddick*

66400. Culture of Cold War  
*Nelson*

66500. John Donne in History and Theory  
*Strier*

66600. Representation & Violence  
*Mitchell*

66800. New Deal Culture: Stage, Screen, and the Public Sphere in 1930s America  
*Kruger*

66900. Nationalism and Authority  
*Ruddick*

67200. Governing Belief  
*Knight*

67700. Topics in Sex and Theory: Bodies in Space  
*Berlant*

68400. The Concept of Classical Cinema  
*Hansen*

68500. International Cinema and the Emergence of Film  
*Tsvián*

68600. Victorian Virtue and Vice  
*Rothfield*

68700. PhD Sem: Frankfurt School  
*Hansen*

68700. The Persistence of Surrealism  
*Lasta*

68800. Cinema and the Artistic Tradition  
*Tsvián*

68900. Film Exhibition  
*Gunning*

69600. Poetry and Socio Linguistics  
*won Hallberg*

69700. Totemism, Fetishism, and Idolatry  
*Mitchell*

69900. Research Seminar  
*Staff*

## COMMITTEE ON INTERDISCIPLINARY STUDIES *in the HUMANITIES*

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***Chair***

David Bevington

***Faculty committee***

Ralph Austen

Ted Cohen

Bert Cohler

John Comaroff

Christopher Faraone

Thomas Gunning

Miriam Hansen

Samuel Jaffe

Jean Krupnick

Larry Norman

D. Nicholas Rudall

Danilyn Rutherford

Joshua Schedel

Mark Siegler

Michael Silverstein

Herman Sinaiko

Joel Snyder

Martin Stokes

William Veeder

Candance Vogler

Kenneth Warren

***Theater and Performance******Studies faculty committee***

David Bevington

Heidi Coleman

Jean Comaroff

Tom Gunning

David Levin

Larry Norman

Nicholas Rudall

Danilyn Rutherford

Martin Stokes

**T**here is, at the present time, no graduate program in either General Studies in the Humanities or Theater and Performance Studies, prospective students interested in pursuing graduate studies in the range of fields encompassed by these programs should consider applying to the Master's Program in the Humanities (MAPH).



# DEPARTMENT of GERMANIC STUDIES

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<i>Chair</i>	<i>Assistant Professors</i>	<i>Emeritus Faculty</i>
Eric L. Santner	Robert Buch Christiane Frey Chenxi Tang	James C. Bruce Robert D. Hummel Samuel Jaffe Peter K. Jansen
<i>Professors</i>		Kenneth J. Northcott Hildegund Ratcliffe
Reinhold Heller David Wellbery	<i>Senior Lecturers</i> Catherine Baumann	
<i>Associate Professor</i>	Kimberly Kenny	
David Levin		

#### *Affiliated Faculty:*

Howard I. Aronson, (Slavic Languages, Linguistics) Yiddish language and culture; Philip V. Bohlman, (Music) German Jewish and German American ethnomusicology; theory and history of folksong; John W. Boyer, (History) German and Austrian history, 18th century to the present; religion and politics in modern European history; European urban history; Daniel Brudney, (Philosophy) Marx, German philosophy, Frankfurt School, Kathleen Conzen, (History) German American history and the history of international migration; Constantin Fasolt, (History) early modern German history; Michael Geyer, (History) German history of the 19th and 20th centuries with special interest in contemporary German and European affairs; Andreas Glaeser, (Sociology) 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, (English, Cinema and Media Studies) Frankfurt School, film theory, German cinema, contemporary German intellectual life, Alexander Kluge; Gary Herrigel, (Political Science) 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, (Music) 19th century Austro German music; Lyrik und Lied; Romantische Musikästhetik; Wagner; Adorno and music; Loren Kruger, (English, Comparative Literature) German literature 18th century to present (esp. drama); GDR and contemporary Germany; Brecht, Heiner Müller, Marxism; the Cold War; Frankfurt School; Das andere Deutschland ; Bernard McGinn, (Divinity School, Medieval Studies, General Studies in the Humanities) History of medieval Catholic theology, scholasticism, mysticism and monasticism; Francoise Meltzer, (Romance Languages, Comparative Literature) German romanticism, philosophy; Glenn W. Most, (Social Thought) German literature and philosophy since the 18th century; Robert B. Pippin, (Social Thought, Philosophy) Kant; German Idealism; Nietzsche; Heidegger; Modernity Theory; Moishe Postone, (History) 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); Jarrold Sadock, (Linguistics) Germanic languages (Scandinavian, Yiddish); Saskia Sassen, (Sociology) Globalization, Cities, Immigration; Malynne Sternstein, (Slavic Languages and Literatures); and David Tracy, (Divinity School, Social Thought, Ideas and Methods) 19th century German philosophy and theology.

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 Middle High German.

## 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. A small number of highly qualified students will be offered a five year package of financial aid which includes three years of teaching. The department's own 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. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available at:

<https://gradapplication.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 11  
1115 East 58th Street  
Chicago, IL 60637

## 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.

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/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

**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 graduate advisor 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, Modern Urban Short Prose, or The Elegy. Periods can be variously conceived: E.g., 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.

A crucial aspect of the M.A. examination is planning and advising. Students must submit their lists for approval at the end of the fourth week of Winter Quarter. They should design the lists with a view to the seminars they plan to attend throughout the year. In addition, they should consult frequently with their assigned faculty advisor (for purposes of the exam) both during the initial phase of designing the list and throughout its preparation. Of course, students are encouraged to discuss their project with other faculty members, both inside and outside the Department of Germanic Studies.

The M.A. examination itself has two components:

- 1) a take home written examination, and
- 2) 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 will hand in their completed essays by 5:00 p.m. the following Monday. The oral examination is devoted to a critical discussion of the student's 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.

*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 or affiliated faculty during the year. The remaining course could be one course containing little or no Germanic material and taken primarily for methodological, theoretical, or historical interest. All courses must be taken for a letter grade. Students are expected 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.

## 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 (GER 49100). 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 also have the opportunity to teach in the beginning and intermediate German language program. 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.

The range of courses which graduate students have the opportunity to teach is considerable and includes:

- German 10100 10200 10300 Elementary German for beginners
- German 20100 20200 20300 Second year content based sequence
  - 20100 Deutsche Märchen
  - 20200 Deutsch Amerikanische Themen
  - 20300 Kurzprose aus dem 20. Jahrhundert
- German 21100 21200 21300 Third year sequence
  - 21000 Fokus: Zeitrum
  - 21200 Fokus: Gattung
  - 21300 Fokus: Schriftsteller

There are also Language Across the Curriculum (LxC) courses in a variety of disciplines. The Humanities Division is currently the recipient of a generous five year grant from the Bosch Foundation that enables three young scholars from Germany to visit the University of Chicago each year, one per quarter. The scholars, who represent a wide range of fields related to Germanic Studies, offer a graduate level course in their field and a LxC section for an undergraduate course. The LxC sections may be taught entirely in German or may involve discussion sessions in German. Graduate students may work with the Bosch Scholars in administering the LxC sections and gain experience in a curricular model which is gaining attention at institutions across the country.

Graduate students also have the opportunity to work as on site coordinators and/or instructors in study abroad programs in Vienna and Freiburg. 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 often held in conjunction with other language departments in the College 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.

Pedagogical development is not limited to the language curriculum. As part of their qualifying exams, Ph.D students must prepare two annotated course syllabi on various topics and at different levels. Cooperation with faculty on these syllabi is essential. The task enables students to develop and apply their knowledge of pedagogy to the teaching of literature and cultural studies. (For more detailed information on this requirement, students may want to consult <http://humanities.uchicago.edu/german/graduate/index.html>).

## 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 two pedagogy courses in their first year ( Acquisition and Teaching of Foreign Languages and Teaching Practicum in German ). One or both courses of this

requirement may be waived by the department if a student can prove that equivalent work was successfully completed at another institution. Completion of the courses (or departmental waivers), 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.

*Language examination:* All students are required to pass one university foreign language reading examination (usually in French, Latin, Russian 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. These courses should be on topics other than the major field, although they may intersect with it. 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 (usually drawn from 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 four hour, open book, written exam, will be taken no later than the 7th week of the 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 which 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.

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, and indicate a rough timetable for the research and writing of the dissertation. 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 coordinator.

*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.

### Courses

#### German (GRMN)

##### *First Year Sequence*

10100 10200 10300.

*PQ: for GRMN 10200: placement or consent of language coordinator. PQ for 10300: 10200 or 10201 or placement or consent of language coordinator. No auditors permitted. Must be taken for quality grades.* The goal of this sequence is to develop proficiency in reading, writing, listening, and speaking for use in everyday communication. Knowledge and awareness of the different cultures of the German speaking countries is also a goal. *Autumn, Winter, Spring.*

10201. Elementary German.

*PQ: Placement or consent of language coordinator. No auditors permitted. Must be taken for a quality grade.* This is an accelerated version of the GRMN 10100 10200 sequence for students with previous knowledge of the language. *Autumn, Winter.*

13100. Reading German.

*Prior knowledge of German not required. No auditors permitted. This course does not prepare students for the competency exam. Must be taken for a quality grade.* This course prepares students to read a variety of German texts. By the end of the quarter, students should have a fundamental knowledge of German grammar and a basic vocabulary. While the course does not teach conversational German, the basic elements of pronunciation are taught so that students can understand a limited amount of spoken German. *Spring.*

##### *Second Year Sequence*

20100. Deutsche Märchen.

*PQ: GRMN 10300 or placement. No auditors permitted. Must be taken for a quality grade.* This course is a comprehensive look at German fairy tales, including structure and role in German nineteenth century literature, adaptation as children's books in German and English, and film interpretations. This

course also includes a review and expansion of German grammar, with an emphasis on the verb. *Autumn, Winter, Spring.*

20200. Deutsch Amerikanische Themen.

*PQ: GRMN 20100 or placement. No auditors permitted. Must be taken for a quality grade.* Issues may range from print or other media, to social topics such as family roles or social class, to literacy genres such as exile or immigrant literature. Review and expansion of German grammar continues, with an emphasis on case. *Autumn, Winter, Spring.*

20300. Kurzprosa aus dem 20. Jahrhundert.

*PQ: GRMN 20200 or placement. No auditors permitted. Must be taken for a quality grade.* This course is a study of descriptive and narrative prose through short fiction and other texts, as well as media from the twentieth century. Focus is on grammatical issues designed to push toward more cohesive and idiomatic use of languages. *Autumn, Winter, Spring.*

##### *Third Year Sequence*

21101 21201 21301. *Fokus.*

*May be taken in sequence or individually, but all three are required for the major.* These three courses serve as preparation for seminar style classes. Students prepare texts for class discussion but will learn to present a Referat: a student led discussion of material, including the issues raised and the student's position on those issues. These Referate will also be a major focus.

21101. *Fokus: Zeitraum.*

*PQ: GRMN 20300 or placement. No auditors permitted.* Advanced German through the study of one era, such as Weimar, Romantic, Post War, or Wende. *Autumn.*

21201. *Fokus: Gattung.*

*PQ: GRMN 20300 or placement. No auditors permitted.* Advanced German through the study of one genre, such as the short story, novella, poetry, or drama. *Winter.*

21301. Fokus: Schriftsteller.

PQ: GRMN 20300 or placement. No auditors permitted. Advanced German through the study of the work of an individual, such as Brecht, or a group, such as feminists or writers in exile. Spring.

### Literature Courses

22000 22099.

Literature courses are taught in German on topics that vary. See Time Schedules for listings.

### Languages Across Chicago (LxC)

LxC courses have two possible formats: (1) an additional course meeting during which students read and discuss authentic source material and primary texts in German, or (2) a course in another discipline (such as history) that is taught entirely in German. Prerequisite German language skills depend on the course format and content. LxC courses maintain or improve students German language skills while giving them a unique and broadened perspective into the regular course content.

24300. Rilke's Modernity. (=FNDL 25201)

This seminar primarily focuses on Rainer Maria Rilke's novel, *The Notebooks of Malte Laurids Brigge*, surely one of the greatest of all urban novels of the twentieth century, in the context of other literary and philosophical reflections on modernity and urban space. Of special interest is Rilke's juxtaposition of the shocks of modern life with reflections on political theology and the possibility of human and divine love. E. Santner. Fall, 2005.

24700. Scandinavian Women's Literature. (=NORW 24700, SCAN 24700).

For course description, see Scandinavian. K. Kenny, Fall, 2005.

26700. Literature of the Nazi Occupation of Norway. (=NORW 26700, SCAN 26700).

For course description, see Norwegian. K. Kenny, Winter, 2006.

27000. Contemporary Norwegian Novel. (=NORW 27000, SCAN 27000)

For course description, see Norwegian. K. Kenny, Spring, 2006.

29600/39600. Kafka in Prague. (=CZEC

27700/37700, ISHU 27900/37900)

For course description, see Slavic Languages and Literatures (Czech). M. Sternstein. Winter, 2006.

29700. Reading and Research Course in German.

PQ: Consent of instructor and director of undergraduate studies. Students must consult with an instructor by the eighth week of the preceding quarter to determine the subject of the course and the work to be done. Students are required to submit the College Reading and Research Course Form. Autumn, Winter, Spring.

29900. B.A. Paper.

PQ: Fourth year standing. Consent of instructor and director of undergraduate studies. Students are required to submit the College Reading and Research Course Form. Autumn, Winter, Spring.

31900. Heinrich von Kleist: Stories and Plays. (=FNDL 21811).

This course will introduce students to the stories and plays of Heinrich von Kleist, one of the greatest and yet most enigmatic writers in the history of German literature. Kleist was deeply admired by writers as diverse as Kafka and Thomas Mann. His play *The Broken Jug* is perhaps the only comedy in the German language to achieve Shakespearean greatness. His stories are notable for their dramatic compression, their violence and their stylistic perfection. A special section will be arranged for students taking this course for Germanic Studies credit. D. Wellbery, Fall, 2005.

32800. Parables of Modernity.

At the center of this class is a type of text whose generic unity is difficult to determine. The short literary and philosophical prose which we will examine draws upon and combines a variety of genres and subgenres such as the parable, the anecdote, the literary vignette, the moral tale, the maxim and the aphorism. In close readings of texts ranging from Ernst Bloch's *Spuren*, Bertolt Brecht's *Geschichten vom Herrn Keuner*, Robert Musil's *Nachlaß zu Lebzeiten*, to Adorno's *Minima Moralia* and Hans Blumenberg's *Die Sorge geht über den Fluß*, we will explore the logic of this form. Readings will also include three precursors of this tradition, namely Johann

Peter Hebel (*Kalendergeschichten*); Lichtenberg, and Nietzsche. Readings in German, discussion in English. Open to advanced undergraduates. *R. Bud*, Winter, 2006.

33000. Rainer Maria Rilke: Poetry and Prose. This seminar addresses Rilke's major works, focusing on the *New Poems*, *The Notebooks of Malte Laurids Brigge*, the *Duino Elegies*, and the *Sonnets to Orpheus*. We consult critical essays on the conditions of literary production in modernity by Benjamin, Simmel, Kracauer, and others. *E. Santner*. Autumn, 2005.

33200. Hegel's Phenomenology. (=PHIL 28201/33001, SCTR 38001)

The goal of this course is to give a general introduction to what is arguably Hegel's most exciting work. We begin by spending some time discussing the overall project of the work, especially as articulated in the preface and introduction. We then examine some of the most important sections of the work (e.g., Sense certainty and Lordship and Bondage) in more detail. *M. Forster*. Spring, 2006.

33900. Alexander von Humboldt. [Description Pending] Autumn, 2005.

34600. Georg Büchner.

It has often been observed that modernity entered German literature some fifty years ahead of its time in the work of Georg Büchner (1813-37). This seminar focuses not only on this untimely modernness but also on the rootedness of Büchner's texts in the eighteenth century. We adopt a double approach, both analyzing the aesthetic innovations of Büchner's texts and situating them in the context of discourse history (e.g., Büchner's figurations of the body, the pathological, and violence). Readings include the entirety of Büchner's (quite small) literary oeuvre, concentrating on *Dantons Tod* and *Lenz*; excerpts from his letters and from his medical dissertation; and other medical texts of his time and earlier. Readings in German. *C. Frey*. Spring, 2006.

34900. Old English (=ENGL 14900/34900) This course is designed to prepare students for further study in Old English language and literature. As such, our focus will be the acquisition of those linguistic skills needed to encounter such Old English poems as *Beowulf*, *The Battle of Maldon*, and *The Wanderer* in their original language. In addi-

tion to these texts, we may also translate the prose *Life of Saint Edmund*, *King and Martyr* and such shorter poetic texts as the Exeter Book riddles. We will also survey Anglo Saxon history and culture, taking into account the historical record, archeology, manuscript construction and illumination, and the growth of Anglo Saxon studies as an academic discipline. This course serves as a prerequisite both for further Old English study at the University of Chicago and for participation in the Newberry Library's Winter Quarter Anglo Saxon seminar. *C. von Nolcken*. Autumn, 2005.

38100. Paradigms of Cultural Theory (=HUDV 38800)

In view of the so called cultural turn in the humanities and social sciences, some basic knowledge of cultural theories becomes a prerequisite for research. This course will follow the development of German cultural theories from Herder to Kittler. Topics include the semantic transformation of culture around 1800, ethnographical and technological conceptions of culture in the nineteenth century, *Kulturphilosophie* around 1900, and finally main positions in contemporary German *Kulturwissenschaft*. *C. Tang*. Winter, 2006.

38800. Neighbor Love. (=HJJD 38800)

In both Judaism and Christianity, the commandment to love your neighbor as your self functions as the central law or moral principle *par excellence*, the ethical essence of true religion, in tandem with the commandment to love God. For skeptical readers, the commandment to love the neighbor has seemed far from rational, and has, in fact, appeared deeply enigmatic. The seminar will follow the tracks of this enigma into the space of European modernity where it becomes a crucial site for the rethinking of subjectivity, responsibility, and community. Open to advanced undergraduates. *E. Santner, P. Mendes Flohr*. Winter, 2006.

44900. Robert Musil: Science, Philosophy, Fiction. (=CMPL 41400, SCTR 44900)

This course will examine the entirety of Musil's work, with particular attention to *Der Mann ohne Eigenschaften*, often considered to be one of the great narrative achievements of modernism. The seminar will also examine Musil's scientific and philosophical interests, his early novel *Die Verwirrungen des Zögling Törleß*, and his experimental novellas collected as *Vereinigungen* and *Drei Frauen*.

Comparisons with the major modernist novelists (e.g., Joyce, Proust, Mann) will help profile the specificity of Musil's writing. *D. Wellbery*, *Winter, 2006*.

47000. German Romanticism: Science, Philosophy, and Literature. (=CHSS 42400, HIPS 26801, HIST 25401/35401, PHIL 20701/30701)

This lecture/discussion course investigates the formation of the idea of Romantic literature, philosophy, and science during the age of Goethe. We discuss the works of Kant (especially second part of third Critique), Fichte (*Wissenschaftslehre*), Schelling (philosophy of nature), the Schlegel brothers (fragments and aesthetics), Novalis (*Hymns to the Night*), Schleiermacher (*Speeches on Religion*), Schiller (*On Naïve and Sentimental Poetry*), and Goethe (*Werther*, poetry, and biology). *R. Richards*. *Winter, 2006*

47800. German Romanticism 1. (=SCTH 44910)

This seminar will examine the philosophical, critical, and literary achievement of Early German Romanticism (Frühromantik).

Writers to be considered in depth are: Fr. and A.W. Schlegel, Novalis, Ludwig Tieck, Fichte, Schelling, Dorothea Schlegel, and Clemens Brentano. Selections from works by Goethe, Schiller, and Hölderlin will also be considered where relevant. The seminar will be devoted to an exploration of the central concepts introduced by the early romantics (e.g., wit, irony, fragment, transcendental poetry), the various literary forms they employed (e.g., lyric, novel, dialogue, essay), and the historical and political conceptions they advanced. Major works of secondary literature (e.g., Benjamin, Menninghaus, Frank, Beiser) will also be considered. *D. Wellbery*, *Fall, 2005*.

### **Norwegian (NORW)**

10100 10200 10300. First Year Norwegian I, II, III.

The aim of this sequence is to provide students with minimal proficiency in the four language skills: speaking, reading, writing, and listening with a special emphasis on speaking. To achieve these goals, we undertake an overview of all major grammar topics and work to acquire a substantial vocabulary. *K. Kenny*. *Autumn, Winter, Spring*.

10400. Intermediate Norwegian.

PQ: NORW 10300 or consent of instructor. This course combines intensive review of all basic grammar with acquisition of more advanced grammar concepts. Students undertake readings pertaining to culture and contemporary Norwegian life, and read a contemporary novel. Classes conducted in Norwegian. *K. Kenny*. *Spring, 2006*.

24700. Scandinavian Women's Literature. (=GRMN 24700, NORW 24700)

For course description, see Scandinavian. *K. Kenny*. *Fall, 2005*.

26700. Literature of the Nazi Occupation of Norway. (=GRMN 26700, SCAN 26700)

The German Occupation of Norway, which lasted from April 9, 1940, to May 7, 1945, is indisputably the most significant event in modern Norwegian history. The aim of this course is to use literature of and about this period to characterize the Occupation experience in Norway. While our texts come primarily from Norwegians, one novel is German and two others, American. Given the context for these works, we will consider them not only as fiction, but also as history and even propaganda. *K. Kenny*. *Winter, 2006*.

27000. Contemporary Norwegian Novel. (=GRMN 27000, SCAN 27000)

In this course, we undertake the reading of eight contemporary Norwegian novels (actually, six novels and two novellas), from 1972 to the present. What does this body of texts suggest about the state of Norwegian literature – its quality, preoccupations, style, etc. If postmodern is defined as incredulity toward meta narratives (Lyotard), how postmodern are our texts? *K. Kenny*. *Spring, 2006*.

**Scandinavian (SCAN)**

24700. Scandinavian Women's Literature.  
(=GRMN 24700, NORW 24700)

This is a survey course of literature by Scandinavian women writers. Students will read and analyze works from Norway, Denmark, and Sweden, beginning with a novel from the 1850's, when women were struggling to make their voices heard in an overwhelmingly patriarchal society, to the near present, when women hold substantial political power in Scandinavia. The course will examine how feminist issues and themes in the texts of these Scandinavian women reflect the changes of the past 150 years. Texts include: Isak Dinesen's *Babette's Feast* and *Other Anecdotes of Destiny*, Gerd

Brantenberg's *Egalia's Daughters: A Satire of the Sexes*, Camilla Collett's *The District Governor's Daughters*, Kerstin Ekman's *Blackwater*, Selma Lagerlöf's *Gösta Berling's Saga*, Moa Martinson's *Women and Apple Trees*, and Sigrid Undset's *Kristin Lavransdatter I: The Wreath*. All readings in English. K. Kenny. Fall, 2005.

26700. Literature of the Nazi Occupation of Norway. (=GRMN 26700, NORW 26700)  
For course description, see Norwegian. K. Kenny. Winter, 2006.

27000. Contemporary Norwegian Novel.  
(=GRMN 27000, NORW 27000)  
For course description, see Norwegian. K. Kenny. Spring, 2006.



## COMMITTEE on the HISTORY of CULTURE

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<i>Chair</i>	James K. Chandler, English	Armando Maggi, Romance
Philippe Desan	Language & Literature	Languages & Literatures
<i>Professors</i>	Philippe Desan, Romance	Martin Stokes, Music
Leora Auslander, History	Languages & Literatures	
Shadi Bartsch, Classical Languages & Literatures	Bruce Lincoln, Divinity	
William L. Brown, English Languages & Literatures	Associate Professors	<i>Emeritus Faculty</i>
	Robert Kendrick, Music	James Fernandez, Anthropology
		Martin E. Marty, Divinity

### PROGRAM

The Committee on the History of Culture is an interdisciplinary group that provides a space of opportunity for highly motivated and independent students doing original, critical work in the humanities and the interpretative wing of the social sciences or better yet work that problematizes this categorical divide. The program brings together faculty with primary expertise in a variety of signifying practices (literary/linguistic, visual, gestural, and musical/sonic), historic periods, parts of the globe (North America, Europe, eastern Mediterranean, South Asia, Australia), and theoretical orientations. At the broadest level, our goal is to explore the politics and poetics of knowledge and culture, bringing a cultural studies perspective to bear on the artifacts and historic record of the past, as on contemporary society. Beyond this, we attempt to reflect critically on the historic development of discourse about culture, as well as the cultural significance and political import of discourse about history.

Once admitted, each student is assigned a committee of advisers (including a principal adviser), at least one of whom shall be a member of the committee. They will guide the organization of the student's work, the selection of appropriate courses of study, and the formulation of a dissertation subject. The committee its faculty and students relies upon the talents and expertises of many members of the University community.

### 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:

<https://grad.application.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 58<sup>th</sup> Street  
 Chicago, IL 60637

## THE DEGREE OF MASTER OF ARTS

1. The completion of divisional requirements for the master's degree.
2. Satisfactory completion of a program of 9 courses (including the required methods course, History of Culture 40000) approved by the committee with a grade of B or better. These may be either formal courses or reading courses closely related to the student's field. In addition, entering students follow an informal year long course (31900) of basic texts in cultural history, cultural studies, and cultural anthropology.
3. Acceptance of an A.M. paper approved by two readers, one of whom must be a member of the committee.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

1. The completion of divisional requirements for the doctor's degree.
2. Students are admitted to candidacy for the doctor's degree by the dean of students on the recommendation of the committee; students must be admitted to candidacy at least nine months (three quarters) before taking the final examination. The committee's prerequisites for recommendation to the dean of students are:
  - a. The satisfactory completion of a program of work (at least 9 courses beyond the A.M. with a grade of B or better) approved by the committee.
  - b. Passing two required language examinations in two different languages of scholarship approved by the Committee.
  - c. The passing of a written examination based on approximately seventy five books, or works of similar significance, divided into the three general fields and selected in consultation with the student's advisory committee. For each part, the student writes an essay of no more than 3,000 words. Each exam is open book and to be completed within 24 hours.
  - d. Approval of a dissertation proposal by the dissertation committee (one of whom shall be a member of the committee).
3. After admittance to candidacy, the student submits a dissertation making an original contribution to a field of knowledge and successfully defends the work at a final oral examination before the committee.

At every stage in the program leading up to the defense of the dissertation, students are encouraged by their advisers to question and reformulate their initial ideas for a subject and program of study. Studies are monitored by advisers within and outside of the committee, and students are expected to complete course work in a timely manner. If an incomplete has to be taken in a formal course, it must be completed within one year (four quarters) of the end of the course. Exceptions for extraordinary circumstances may be granted through formal petition.

<i>Courses</i>	31900. Theories and Themes in the History of Culture	Other courses are typically cross listed each quarter.
31000. Rdg Course: History of Culture	40000. Introduction to the History of Culture	
<i>Staff</i>	<i>Staff</i>	

For additional information about the History of Culture program, please see <http://humanities.uchicago.edu/cmtes/histc/program.html> or call (773) 702 8486.



# COMMITTEE on JEWISH STUDIES

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*Chair*  
Philip Bohlman

*Professors*  
Leora Auslander, History  
Philip Bohlman, Music  
Michael Fishbane, Divinity  
Tikva Frymer-Kensky,  
Divinity  
Michael Geyer, History  
Martha Roth, Oriental  
Institute

Eric Santner, Germanic  
Studies  
Josef J. Stern, Philosophy  
Jerrold Sadock, Linguistics  
Bernard Wasserstein,  
History

*Associate Professors*  
Moishe Postone, College  
James Robinson, Divinity  
David Schloen, Oriental  
Institute

*Senior Lecturer*  
Ariela Finkelstein, Near  
Eastern Languages &  
Civilizations

*Emeritus*  
Howard I. Aronson, Slavic  
Languages & Literatures  
Menachem Brinker, Near  
Eastern Languages &  
Civilizations  
Joel Kraemer, Divinity

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. A few decades later, these early initiatives received a huge institutional boost with the founding of the Oriental Institute, which remains one of the pre-eminent 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. Advanced degree programs are available at the A.M. and Ph.D. degree levels. 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. The Workshop on Jewish Studies meets throughout the year to bring together faculty and students from the diverse range of departments represented in the committee for discussion of topics related to ongoing research.

## THE MASTER OF ARTS IN JEWISH STUDIES

The Master of Arts Program in Jewish Studies at the University of Chicago is unique on the American scene. The program offers students the chance to orient themselves within the domain of Jewish Studies and to pursue their own research interests in the area that most interests them. Students are required to take a core course in Jewish history and culture as well as courses in Hebrew language. In addition, each student designs the rest of the program to meet his or her needs. Students are encouraged to participate in ongoing seminars given by visiting scholars; attend

lectures by international scholars in many areas of Jewish Studies; and participate in the broad range of Jewish and general culture available at the University and in the Chicago area. Graduates of this one year program gain a deeper sense of the depth and range of Jewish traditions, as well as a sharper insight into the complexities of their chosen field.

A Jewish Studies A.M. from the University of Chicago should be of interest to students who intend to pursue more advanced work in Jewish Studies at a professional level (whether graduate work, the rabbinate, or education), but need time to develop skills or determine specific areas of interest; to students for whom a general background in Jewish Studies would contribute to advanced work in another field (such as contemporary continental philosophy, comparative literature or history, or ancient or medieval Christian thought or Bible interpretation); and to anyone interested in expanding their general knowledge of Jewish culture, whether to enrich their work in Jewish professional organizations or simply for its own sake. For all these kinds of students, access to the archival resources in Jewish Studies, the chance to work closely with professors at one of the world's great research universities, and the general vibrancy of intellectual life at the University mark the Master of Arts in Jewish Studies as a very special opportunity.

## DEGREE REQUIREMENTS

To receive the degree of A.M. in Jewish Studies, a student must complete at least nine courses with a minimum grade of B. Two of the nine courses must be taken from the three quarter sequential core, Jewish Civilization I, II, III, (covering all periods, from ancient Israel to modern times). This course is team taught by faculty from several different departments. Students are also required to take a third required course, focusing on a particular period, genre, or cultural problem in Jewish Studies, which gives students the chance to think about fundamental methodological and interpretative issues. In addition, students may be required to take up to three courses of Hebrew (or its approved equivalent in Yiddish or Ladino), if necessary to achieve proficiency. No thesis is required, but one paper of research quality must be submitted and approved by a faculty committee; it can be related to the student's course of study.

The core sequence is designed to provide students with a firm basis for delving into their own field of interest in the program they construct out of their remaining electives. These electives are to be chosen, with the help of faculty advisors, from the offerings of any of the departments in the humanities and social sciences, and even, where feasible, from elsewhere in the University. Many different interdisciplinary concentrations are possible. Some possible concentrations include: Hebrew Bible and Ancient Near Eastern History, Literature, or Archeology; Ancient Bible Interpretation in Alexandria, Eretz Israel, and Babylonia; Jews in Islamic Civilization; Jewish Liturgy and Music; Jewish History and Historiography; Medieval Bible Commentaries in Christian Europe and Islamic Civilization; Medieval Jewish Thought, Philosophy, or Mysticism; German Jewish Culture in the Ashkenaz; Hebrew Literature and Cultural Ideology.

## THE PH.D. IN JEWISH STUDIES

The Committee on Jewish Studies at the University of Chicago offers the Ph.D. degree in several areas: (1) the Hebrew Bible and the Ancient Near East; (2) the history of Judaism (with sub specialties in classical rabbinic literature and thought; medieval Jewish thought and religion; Judeo Arabic thought and culture; modern Jewish thought, history, and culture); (3) modern German Jewish thought and culture; (4) modern Hebrew literature and culture; (5) modern Jewish history and culture. Each of these areas is coordinated by faculty steering committees, and each has developed its own requirements. All areas are coordinated with programs and faculties in the appropriate cognate or comparative disciplines.

For further information about degree requirements, focus of study, and typical programs, contact the following faculty:

1. Bible and the Ancient Near East: Prof. Tikva Frymer Kensky  
office: Swift 306C  
telephone: (773) 702 1901  
e mail: [tfrymerk@uchicago.edu](mailto:tfrymerk@uchicago.edu)
2. Classical Judaism: Prof. Michael Fishbane  
office: Swift 205  
telephone: (773) 702 8234  
e mail: [mfishban@uchicago.edu](mailto:mfishban@uchicago.edu)
3. Medieval Jewish Thought & Culture: Prof. Joel Kraemer  
office: Swift 306B  
telephone: (773) 702 8247  
e mail: [jkraemer@uchicago.edu](mailto:jkraemer@uchicago.edu)
4. Modern Jewish Thought: Prof. Paul Mendes Flohr  
office: Swift 306E  
telephone: (773) 702 5084  
e mail: [prmendes@uchicago.edu](mailto:prmendes@uchicago.edu)
5. Modern German Jewish History & Culture: Prof. Moishe Postone  
office: HM E481  
telephone: (773) 702 8560  
e mail: [mmp1@uchicago.edu](mailto:mmp1@uchicago.edu)
6. Modern Hebrew Literature & Jewish Culture: Prof. Menahem Brinker  
e mail: [menachem2002@yahoo.com](mailto:menachem2002@yahoo.com)

## 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.

For additional information about the Jewish Studies program, please see <http://humanities.uchicago.edu/depts/jewish/>.

## ADMISSION REQUIREMENTS

Admission to the Master of Arts and Ph.D. in Jewish Studies is based upon grades in undergraduate courses, letters of recommendation, Graduate Record Examination scores (with some exceptions), and the quality and feasibility of an applicant's statement of purpose. While an undergraduate concentration in Jewish Studies is not required for A.M. program, applicants should have some prior study and knowledge of Hebrew. Applicants to the Ph.D. program must demonstrate strong background in the pertinent areas of study and languages, and demonstrated excellence in research or area studies. The applicants preparation will be evaluated by the different areas of the committee.

Application materials should include (1) the applicant's recent verbal, quantitative, and analytic scores on the Graduate Record Examination; (2) an official transcript from the applicant's undergraduate institution; (3) a ten to fifteen page sample of critical writing; (4) three letters of recommendation; (5) a statement of no longer than three single spaced pages about the applicant's reasons for wishing to enter the program and the interests he or she would like to pursue; and (6) a completed university application form.

## 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://gradapplication.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 58<sup>th</sup> Street  
 Chicago, IL 60637



## DEPARTMENT *of* LINGUISTICS

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<i>Chair</i> Amy Dahlstrom	<i>Associate Professors</i> Amy Dahlstrom Anastasia Giannakidou	Paul Friedrich, Anthropology
<i>Professors</i> Bill Darden, Slavic Languages & Literatures	Chris Kennedy Jason Merchant	Eric P. Hamp Carolyn G. Killean, Near Eastern Languages & Civilizations
Victor Friedman, Slavic Languages & Literatures	<i>Assistant Professors</i> Jason Riggle Alan Yu	Colin P. Masica, South Asian Languages & Civilizations
Susan Gal, Anthropology	<i>Emeritus Faculty</i> Howard I. Aronson, Slavic Languages & Literatures	G. David McNeill, Psychology
John Goldsmith Salikoko Mufwene Jerrold Sadock Michael Silverstein, Anthropology	Gene B. Gragg, Oriental Institute	Erica Reiner, Oriental Institute
		Victor H. Yngve, Psychology

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. 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 must take the following nine courses: Phonetics, Phonology 1 and 2, Syntax 1, 2, and 3, Pragmatics, and Semantics 1 and 2. After the first year, students have a great deal of freedom in the selection of courses, though the following coursework is required. In the second and third years, students must take the Research seminar. Students must also take courses in historical linguistics and morphology and must also take one advanced course in each of the following three areas beyond the first year courses and the Research seminars: 1. phonetics/phonology, 2. syntax/semantics/pragmatics, 3. socio historical linguistics. Students may take any course which fits into their general plans of studies. A large proportion of courses offered in the Linguistics Department are advanced courses that are open to all students. The topics of most of these courses change from year to year; they reflect the faculty's ongoing engagement in research and cover areas of current interest in the field at large. The selection of courses is influenced by the current interests of the students and faculty. Students are also free to take courses related to their research interests which are offered in other departments of the University.

In the third quarter of the first year, students take qualifying exams covering the mastery of the first six courses. The results of the qualifying exams also form a crucial, but not sole or defining, part of the formal first year review. Upon successful completion of these exams, students are officially admitted to the PhD program. 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), and to satisfy a non Indo European language requirement (normally by taking a one year course). On completion of the qualifying papers and language requirements and on the acceptance of a dissertation proposal, students are admitted to candidacy for the PhD degree; 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 Committee on 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.

## APPLICATION AND ADMISSION

Completed applications for admission and aid, along with all supporting materials, are due by the end of 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 BA or MA thesis. In addition, applicants are encouraged

to submit Graduate Record Examination (GRE) scores which are not more than five years old. It is advisable, especially for those applying for aid, to take the GRE no later than October so that the scores will arrive on time. 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 their research interests. General comments are of relatively little use; applicants are encouraged to discuss specific linguistic subject matters that they are interested in.

If an applicant knows faculty members with whom they 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 Chair for more general and/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://gradapplication.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 58<sup>th</sup> Street  
Chicago, IL 60637

## FINANCIAL AID

The University of Chicago offers a number of fellowships and scholarships to outstanding graduate students. The Department of Linguistics makes every effort to recommend offers of financial aid to cover tuition and, in many cases, a stipend for a student's living expenses. Financial aid is awarded primarily for five years if the student makes satisfactory progress in the degree program. In addition, qualified students may apply for a wide variety of educational loans, as well as for part time jobs in the University's work study program.

Prospective applicants should apply for an extramural fellowship (such as NSF or an equivalent type of fellowship from another country, such as the Canadian SSHRC fellowship) where possible. Prospective applicants who have been granted such fellowships generally have an excellent chance of admission.

Some linguistics students work as research assistants to faculty members involved in research projects within the Department and in other departments. Although the University of Chicago does not have an extensive system of teaching fellowships (College courses are for the most part taught by faculty members), the Department recognizes the importance of teaching experience in a student's training, and makes an effort to help students obtain such experience. We are able to employ some advanced graduate students as teaching assistants in introductory courses; such positions carry full or partial tuition remission plus additional compensation for the period of appointment. In addition, the Department makes an effort to assist advanced graduate students in finding lecturer positions at the University of Chicago and at other Chicago area institutions.

## Courses

The following are courses offered in the Department by our regular faculty. Every now and then new courses are added when needed or requested by students.

### Biological & Cultural Evolution

11100. (=BIOS 2928, BPRO 23900, CHSS 37900, HIPS 23900, NCDV 27400, PHIL 32500). *PQ: Third or fourth year standing or consent of instructor. Core background in evolution and genetics strongly recommended.* This course draws on readings and examples from linguistics, evolutionary genetics, and the history and philosophy of science. We elaborate the theory to understand and model cultural evolution, as well as to 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.

*Mufwene, Wimsatt, Winter.*

### Introduction to Linguistics I, II, III

20100 20200 20300/30100  
30200 30300. (=ANTH 27001  
27002 27003/37001 37002  
37003, SOSC

21700 21800 21900). *Must be taken in sequence.* This course is an introductory survey of methods, findings, and problems in areas of major interest within linguistics and of the relationship of linguistics to other disciplines. Topics include, but are not limited to, sentence structure (syntax), meaning (morphology, semantics), context and use (pragmatics), sound systems (phonetics), phonology), language acquisition, the biological foundation of language, geographical and social variation (dialectology, sociolinguistics), and language evolution (structural change, language birth and death, language diversification).

*Mufwene, Autumn; Goldsmith, Winter; Yakubovich, Spring.*

### Syntax I

20400/30400. (=ANTH 37801)  
*PQ: LING 20100 20200*  
20300/30100 30200 30300 or equivalent. This course is an introduction to basic goals and methods of current syntactic theory through a detailed analysis of a range of phenomena, with emphasis on argumentation and empirical justification. Major topics include phase structure and constituency, selection and subcategorization, argument structure, case, voice, expletives, and raising and control structures.

*Merchant, Autumn.*

### Syntax II

20500/30500. (=ANTH 37802)  
*PQ: LING 20500/30500 or consent of instructor.* This course will be a continuation of Syntax 1 and 2, with special emphasis on issues of the morphology syntax interface.

*Kennedy, Winter.*

### Phonetics

20600/30600. (=ANTH 37701)  
*PQ: LING 20100 20200*  
20300/30100 30200 30300 or consent of instructor. This course is an introduction to the study of speech sounds. Speech sounds are described with respect to their articula-

tory, acoustic, and perceptual structures. There are lab exercises both in phonetic transcription and in the acoustic analysis of speech sounds.

*Riggle, Autumn.*

### Pragmatics

20710/30710. Introduction to the pragmatics of natural language and its relation to basic semantic and syntactic theory. Topics will include speech acts, implicature, presupposition, and the interpretation of context.

*Sadock, Autumn.*

### Phonology I

20800/30800. (=ANTH 37301)  
*PQ: LING 20100 20200*  
20300/30100 30300 or 20600/30600, or equivalent.

This course is an introduction to the general principles of phonology as a discipline. The emphasis is on fundamental notions that have always been central to phonological analysis and that transcend differences between theoretical approaches: contrast, neutralization, natural classes, distinctive features, and basic phonological processes (e.g., assimilation). We focus on generative phonology, both classical and autosegmental models, with brief discussion of optimality theory.

*Riggle, Winter.*

### Phonology II

20900/30900. (=ANTH 37302)  
*PQ: LING 20800/30800.* This course deals with the interfaces between phonology and morphology and phonetics. Topics vary, but generally include issues in

prosodic morphology and optimality theory. *Yu, Spring*. Language in Culture I, II 31100, 31200 (=ANTH 37201, 37202) *Must be taken in sequence*. This two quarter course presents the major issues in linguistics of anthropological interest. Among topics discussed in the first half of the sequence are the formal structure of semiotic systems, the ethno graphically crucial incorporation of linguistic forms into cultural systems, and the methods for empirical investigation of functional semiotic structure and history. The second half of the sequence takes up basic concepts in sociolinguistics and their culture. We then discuss topics such as the linguistic analysis of publics, performance and ritual, and language ideologies.

*Silverstein, Autumn; Staff, Winter.*

Historical Linguistics  
21300/31300. *PQ: LING 20600/30600, LING 20800/30800 or consent of instructor.*

This course deals with the issue of variation and change in language. Topics include types, rates, and explanations of change; the differentiation of dialects and languages over time; determination and classification of historical relationships among languages, and reconstruction of ancestral stages: parallels with cultural and genetic evolution theory; and implications for the description and explanation of language in general. *Yu, Spring*.

Semantics I  
22050/32050. *PQ: LING 20400/30400 or consent of the instructor.* This is the first of two courses in formal semantics, designed to introduce students to the core empirical phenomena of natural language semantics and to familiarize them with the analytical tools involved in the investigation of this domain. The focus of this class is truth conditional meaning and the compositional interpretation of phrases and sentences. Students will develop skills in semantic analysis and argumentation by investigating several empirical phenomena (including argument structure, modification, quantification, ellipsis, variable binding and anaphora) and constructing a theoretical framework for understanding and explaining their semantic properties. *Kennedy, Winter.*

Semantics II  
22100/32100. *PQ: LING 20700/30700.* This course is a continuation of LING 20700/30700 with emphasis on the interfaces with syntax and pragmatics. Topics include temporal and aspectual operators in an event semantics with times, as well as type shifting, partitivity, and crosslinguistic variation in NP quantification. We also discuss negative polarity, scalarity, and free choice phenomena with modality, as well as scope, indefinites, choice functions, and the semantics of questions. *Giannakidou, Spring.*

Dialect Voices in Literature  
24500/34500. (=AFAM 24500, ENGL 14600/34600) In this

course we use linguistic techniques to analyze literary texts, especially to assess how adequately and successfully dialect is represented, whether it matches the characters and cultural contexts in which it is used, and what effects it produces. Authors addressed may include Toni Morrison, Zora Neale Hurston, Mark Twain, William Faulkner, and Richard Wright, but the list is by no means closed. *Mufwene, Winter.*

Comparative Germanic Syntax  
25560/35560. *PQ: Ling 20400/30400 or consent of the instructor. Previous study of another Germanic language (besides English) is desirable, but not required.* This course examines the comparative syntax of the Germanic languages, including German, Dutch, Afrikaans, Frisian, Yiddish, Danish, Norwegian, Swedish, Icelandic, Faroese, and English. We explore questions of synchronic micro and macrovariation, as well as the historical development of Germanic, through readings in the primary theoretical literature. Topics and languages may vary depending on participant interests and language expertise. *Merchant, Spring.*

Introduction to Slavic Linguistics  
26400/36400. (=SLAV 20100/30100) This course is a survey of principles of general synchronic and diachronic linguistics as applied to the Slavic languages. *Hristova, Autumn.*

History of Russian Phonology.  
26410/36410. (=RUSS 22000/32000). PQ: *SLAV* 20100/30100. The course offers a description of the sound system of Old East Slavic and its development into that of modern Russian. Texts in English and Russian. *Darden, Autumn.*

Human Being, Language, and Mind: An Introduction to Cognitive Linguistics  
26700/36700. (=SLAV 21700/31700) This course explores the relatively new framework of cognitive linguistics. Topics include metaphor and metonymy, prototypes, polysemy, categorization and conceptualization, blends, constructions, the embodiment of meaning, construal, grammaticalization, and language pedagogy. Readings are drawn from the work of Croft, Janda, Fillmore, Lakoff and Johnson, Langacker, Sweetser, Talmy, Turner, Wierzbicka, and others. *Clancy, Winter.*

Language, Power, and Identity in Southeastern Europe: A Linguistics View of the Balkan Crisis.  
27200/37200. (=ANTH 27400, 37400, HUMA 27400, SLAV 23000/33000) This course familiarizes students with the linguistic histories and structures that have served as bases for the formation of modern Balkan ethnic identities and that are being manipulated to shape current and future events. The course is informed by the instructor's thirty years of linguistic research in the Balkans as well as his experience as an adviser for the United Nations Protection

Forces in Former Yugoslavia and as a consultant to the Council on Foreign Relations, the International Crisis Group, and other organizations. Course content may vary in response to ongoing current events. *Friedman, Winter.*

Comparative East Slavic Linguistics  
27250/37250. PQ: *Knowledge of Macedonian or Bulgarian.* By means of the examination of bilingual texts in Modern Standard Bulgarian and Modern Standard Macedonian, this course familiarizes students with the differentiation of the two languages at all levels of grammar. *Friedman, Spring.*

The Zulu Language  
28360/38360. PQ: *LING* 20100/20200/20300 30100/3020/30300, one or more courses in phonology or syntax, or consent of instructor. We will study the grammar of Zulu, a major Bantu language of southern Africa, through the study of published grammars, Zulu songs, work with a Zulu speaker, and basic instruction in the Zulu language. *Goldsmith, Autumn.*

Language & Sexuality  
28960/38960. This course examines the relationship between language and sexuality as considered by researchers working in sociolinguistics, linguistic anthropology and discursive psychology. The first part of the course will consider the ways in which language mediates expressions of sexuality, including studies focusing on metaphor, implicature, and conversational interaction. The second part of the course will

examine the relationship between language and sexual identity, including studies of gay and lesbian language, heteronormative discourse, the relationship between gendered language, heteronormative discourse, the relationship between gendered language use and sexuality identity, and the ways in which linguists have applied concepts from queer theory. *Barrett, Spring.*

Reading and Research Course  
29700. PQ: *Consent of instructor and undergraduate adviser.* Students are required to submit the College Reading and Research Course Form. *Autumn, Winter, Spring.*

B.A. Paper Preparation Course

29900. PQ: *Consent of instructor and undergraduate adviser.* Students are required to submit the College Reading and Research Course Form. *Autumn, Winter, Spring.*

Discourse Analysis  
37300. *Dahlstrom, Winter.*

Seminar on Semantics: Polarity, Phenomena in Language

42100. *Giannakidou, Autumn.*

Topics in Creole Syntax

44950. In this course we will examine several morphosyntactic structures that distinguish creoles from their lexifiers. Topics include, but are not limited to, predication, serial predicate constructions, predicate clefting, focus constructions, object and relative clauses, number marking, and time reference. Students familiar with creoles are encouraged to propose other topics that interest them. *Mufwene, Autumn.*

Seminar on Languages of the Americas

45200. *Dahlstrom, Autumn.*

Seminar on Syntax: Case and Voice

46000. *PQ: Ling 20400/30400 or consent of instructor.* This seminar provides a look at a variety of case systems from a typological perspective (including various split ergative systems,

Kasusaufnahme, and differential object marking) and aims to develop a theoretical understanding of them, in particular the role of case in voice alternations (passive, antipassive, and other

valence changing morphology). Special attention is paid to Austronesian,

Australian, Native American, Indo Aryan, European, Turkic, Eskimo, Basque, and Caucasian languages. *Merchant, Autumn.*

Linguistics Proseminar

47800. *Staff, Autumn.*

Research Seminar

47900. The course aims to guide students on their research in a structured way and to present professionalization information crucial to success in the field. The course is organized largely around working on the

research paper, with the goal of making it a conference presentable and journal publishable work. Topics covered include abstracts, publishing, handouts, presentation skills, course design, creating and maintaining a cv, cover letters, webpages, and in general everything that is required for you to successfully compete for jobs in linguistics. *Yu, Winter.*

Phonology Seminar

52400. *Alan Yu, Winter.*

Seminar on Morphology

52900. *Sadock, Autumn.*

## INDO EUROPEAN LINGUISTICS (INDO)

Introduction to Indo

European Linguistics

20100/30100. (=ANCM 34300)

Fundamental principles of comparison and historical reconstruction based on Indo European data. Survey of older attested languages and evidence from the subgroups of Indo European. Sketch of correspondences, pertinent rules, and resultant reconstructed structures.

*Yakubovich, Winter.*

## LANGUAGES IN LINGUISTICS (LGLN)

Introductory Modern

Hebrew I, II, III

20100, 20200, 20300/30100,

30200, 30300. (=HEBR 10501

10502 10503, JWSC 25000

25100 25200, JWSG 35000

35100 35200) This course

introduces students to reading, writing, and speaking modern Hebrew. All four

language skills are emphasized: comprehension of

written and oral materials;

reading of nondiacritical text; writing of directed sentences, paragraphs, and compositions; and speaking. Students learn the Hebrew

root pattern system and the seven basic verb conjugations in both the past present tenses, as well as simple future. At the end of the year, students can conduct

short conversations in

Hebrew, read materials

designed to their level, and write short essays.

*Finkelstein. Autumn, Winter, Spring.*

Intermediate Modern

Hebrew I, II, III

20400, 20500, 20600/30400,

30500, 30600. (=HEBR 20501

20502 20503, JWSC 25300

25400 25500, JWSG 35300  
 35400 35500) *PQ: LGLN*  
 20300/30300 or equivalent. This course is devised for students who had previously taken either modern or biblical Hebrew courses. The main objective is to provide students with the skills necessary to approach modern Hebrew prose, both fiction and nonfiction. To achieve this formidable task, students are provided with a systematic examination of the complete verb structure. Many syntactic structures are introduced, including simple clauses, and coordinate and compound sentences. At this level, students not only write and speak extensively, but are also required to analyze grammatically and contextually all of the materials assigned. *Finkelstein, Autumn, Winter, Spring.*

K iché Maya I, II, III  
 20700, 20800, 20900/30700,  
 30800, 30900. *Barrett, and*  
*Tum, Autumn, Winter, Spring.*  
 Advanced Modern Hebrew  
 I, II, III  
 23000, 23100, 23200/33000,  
 33100, 33200. (=HEBR 30501  
 30502 30503, JWSC 25600  
 25700 25800, JWSG 35600  
 35700 35800) *PQ: LGLN*  
 20600/30600 or equivalent. This course assumes that students have full mastery of the grammatical and lexical content at the intermediate level. However, there is a shift from a reliance on the cognitive approach to an emphasis on the expansion

of various grammatical and vocabulary related subjects. Students are introduced to sophisticated and more complex syntactic constructions, and instructed how to transform simple sentences into more complicated ones. The exercises address the creative effort on the part of the student, and the reading segments are longer and more challenging in both style and content. The language of the texts reflects the literary written medium rather than the more informal spoken style, which often dominates the introductory and intermediate texts. *Finkelstein, Autumn, Winter, Spring.*

Old Church Slavonic  
 25100/35100. (=SLAV  
 22000/32000) *PQ: Knowledge of another Slavic language or good knowledge of one or two other old Indo-European languages required; SLAV 20100/30100 recommended.* This course is an introduction to 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 in Cyrillic or Cyrillic transcription of the original Glagolitic. *Friedman, Winter.*

History of Bulgarian  
 28202/38202. (=BULG  
 21200/31200, HUMA 21201)  
*PQ: BULG 2100/31000*  
*(Bulgarian for Reading Knowledge), BULG*  
*21100/31100 (Structure of Bulgarian), or knowledge of another Slavic language recommended but not presupposed.* This course is an introduction to the history of Bulgarian. *Hristova, Spring.*

Structure of Albanian  
 29700/39700. (=SLAV  
 20900/30900) This is a rare opportunity to get a functional grasp of one of the least studied national languages of Europe. Albanian is of relevance for Indo Europeanists, Balkanists, Classicists, Islamicists, and any social scientist with an interest in Southeastern Europe. In addition to being the majority language in Albania, it is spoken by compact populations in all neighboring countries, as well as by old enclaves in Italy, Croatia, Bulgaria, Turkey, Romania, and Ukraine, and by more recent émigré groups in Western Europe, North America, and Australia. The course focuses on giving students an understanding of the grammatical structure of Albanian as well as sufficient reading knowledge for the independent development of the ability to pursue research. *Friedman, Spring.*

## AMERICAN SIGN LANGUAGE (ASLG)

American Sign Language I, II, III  
10100 10200 10300.

American Sign Language is the language of the deaf in the United States and much of Canada. It is a full fledged autonomous language, unrelated to English or other spoken languages.

This introductory course teaches the student basic vocabulary and grammatical structure, as well as aspects of deaf culture. *Ronchen, Autumn, Winter, Spring.*

Intermediate American Sign Language I, II, III  
10400 10500 10600. *PQ*

*LGLN 10300.* In this course we continue to increase grammatical structure, receptive and expressive skills, conversational skills, basic linguistic convergence, and knowledge of idioms. Field trip required. *Ronchen, Autumn, Winter, Spring.*

## SWAHILI (SWAH)

Swahili I, II, III  
25200 25300 25400/35200  
35300 35400. This course is designed to help students acquire communicative competence in Swahili and a basic understanding of its structures. Through a variety of exercises, students develop both oral and writing skills. *Staff, Autumn, Winter, Spring.*



# DEPARTMENT of MUSIC CURRICULUM

## 2005 07

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*Chair*  
Robert L. Kendrick

*Associate Professors*  
Berthold Hoeckner  
Travis Jackson

*Senior Lecturers*  
Howard Sandroff  
Barbara Schubert

*Professors*  
Philip Bohlman  
Thomas Christensen  
Martha Feldman  
Philip Gossett  
Marta Ptaszynska  
Shulamit Ran  
Don M. Randel  
Anne Walters Robertson

*Assistant Professor*  
Robert L. Kendrick  
Martin Stokes  
Lawrence Zbikowski

*Lecturer*  
Ilya Levinson

*Emeritus Faculty*  
Easley R. Blackwood  
John Eaton

### PROGRAMS OF STUDY

**T**he 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 musics and popular musics. They also conduct fieldwork in 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 repertoires. 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, courses on particular skills, individual composition lessons, and proseminars in ethnomusicology, 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 the students 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 from another institution take fifteen courses during the first two years of scholastic residence. Those entering with a master's degree from another institution normally take nine courses in the first year of scholastic residence.

In addition to courses and other requirements (listed below), students who wish to obtain an A.M. 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 four seminars (or five seminars for students entering with an M.A.), 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) prepare for examinations and begin work on the dissertation (see below).

Thus students entering their program of study without a master's degree 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 from another institution have the option of taking their exams at the beginning of their second year.

Students in composition take three comprehensive examinations: (1) the composition of a work based on a set of given guidelines; (2) an oral examination on ten compositions from the repertory, selected by the candidate in consultation with a faculty committee; (3) a close analysis of a single work or movement.

Students in ethnomusicology take five comprehensive exams: (1) a close analysis of a single work or movement; (2) the identification, from score and aurally, of music from both European historical and world music traditions; (3) essays covering (a) the conceptual foundations of musical scholarship; (b) a broad area of world music (e.g. Middle East, Africa); and (c) 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): (1) analysis of tonal music; (2) analysis of atonal music; (3) the identification of a score of music from all periods of music in the European tradition; (4) historical essays on music before 1600; (5) historical essays on music from 1600 to 1800; (6) historical essays on music since 1800; (7) essays on the conceptual foundations of musical scholarship, including ethnomusicology; (8) 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 EXAMINATIONS**

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. The first part of the oral tests the student's knowledge of, and ability for synthetic thought within, a selected area of world music, period of music history, or issue in music theory, respectively. All areas emphasize a defense of the student's 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 departmental master's programs 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 Graduate Curriculum. Musicianship requirements 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 programs require successful completion of two musicianship examinations, except composition, which requires successful completion of three. Musicianship examinations are administered quarterly. The department offers free, informal, non credit instruction to help students prepare these examinations.

### COLLOQUIUM

Each quarter the department sponsors a number of colloquia in which scholars and composers present their work. Speakers include distinguished guests from outside the University, as well as students and faculty from within the department. Colloquium attendance is required for a total of six quarters.

### 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. Normally students making good progress through the program receive one or two teaching assignments during their

residence, although teaching assignments are balanced against other considerations (e.g. availability, staffing needs, student aid needs, potential for effectiveness in a given classroom situation, etc.).

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 100 piece 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 competent abilities to play a musical instrument or sing, as well as 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, 1010 East 59th 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:

<https://grad.application.uchicago.edu/intro/humanities/intro1.cfm>

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). Questions pertaining to admissions and aid should be directed to [org\\_hdso@uchicago.edu](mailto:org_hdso@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

<b>Courses</b>		
0000. Reading Course	31100, 31200. Analysis of Tonal Music I, II	31500. Analysis of Non Western Music
<i>Staff</i>	<i>Christensen, Zbikowski</i>	<i>Bohlman, Jackson, Stokes</i>
30900. Music Theory Pedagogy	31300. Analysis of Twentieth Century Music	31600. Analysis of Music Since 1950
<i>Christensen, Zbikowski</i>	<i>Zbikowski</i>	<i>Ptaszynska</i>
31000. Introduction to Analysis	31400. Topics in Theory and Analysis	31600. Analysis of Music Since 1950
<i>Christensen, Zbikowski</i>	<i>Bohlman, Christensen, Stokes,</i> <i>Zbikowski</i>	<i>Ptaszynska</i>

31800. Rhythm and Meter  
*Stokes*

31900. Cognitive Science and Music Analysis  
*Zbikowski*

32100. Pro Seminar in History and Notation of Monophonic Music  
*Robertson, Kendrick*

32200. Pro Seminar in History and Notation of Polyphonic Music to 1300  
*Robertson*

32300. Pro Seminar in History and Notation of Music from 1300 to 1450  
*Robertson*

32400. Pro Seminar in Music from 1450 to 1600  
*Feldman*

32500. Pro Seminar in Music from 1600 to 1700  
*Kendrick*

32600. Pro Seminar in Music from 1700 to 1800  
*Christensen, Feldman*

32700. Pro Seminar in Music from 1800 to 1900  
*Gossett, Hoeckner*

32800. Pro Seminar in Music since 1900  
*Hoeckner*

33000. Proseminar in Ethnomusicology  
*Bohlman, Jackson, Stokes*

33100. Jazz  
*Jackson*

33200. Popular and Vernacular Music  
*Jackson, Stokes*

33400. Folk Music  
*Bohlman*

33500. Introduction to World Music  
*Bohlman, Jackson, Stokes*

33600. Music of the Mediterranean  
*Stokes*

33700. Music of South Asia  
*Bohlman*

33800. Ethnographic Methods  
*Bohlman, Jackson, Stokes*

33900. Anthropology of Music  
*Stokes*

34000. Composition  
*Ptaszynska, Ran, Suzuki*

34100. Composition Seminar  
*Ptaszynska, Ran, Suzuki*

34200. Contemporary Opera  
*Ptaszynska*

34300. Multimedia Composition  
*Suzuki*

34400. The Musical Language of Messiaen and Stockhausen  
*Ptaszynska, Suzuki*

34500, 34600. Instrumentation and Orchestration I, II  
*Ptaszynska, Blackwood*

34700, 34800. Introduction to Computer Music  
*Sandroff*

35100. Early Music in Performance and History  
*Feldman*

36800. Studies in Computer Music  
*Sandroff*

37100, 37200. Pro Seminar in the History of Music Theory  
*Christensen, Zbikowski*

38000. Score Reading and Conducting  
*Schubert*

41000. Colloquium  
*Staff*

**Sample Seminars**

41100. The Concept Album  
*Jackson*

41200. Jewish Music and Modernity  
*Bohlman*

41300. Jazz Historiography  
*Jackson*

42600. The Courtesan s Voice  
*Feldman*

43000. Music and Dance  
*Zbikowski*

43200. Receptions of Bach  
*Christensen*

43500. Music, Ritual, and Place in the Middle Ages  
*Robertson*

43600. L'incoronazione di Poppea  
*Kendrick*

43700. Popular Culture  
*Stokes*

43800. Propering the Ordinary  
*Robertson*

43900. Music and Memory  
*Hoeckner*

44000. Music in the New Europe  
*Bohlman*

44100. Music and Performance  
*Levin, Stokes*

44200. Science and Music in the 17th Century  
*Christensen*

44300. Conceptual Blending and Music Theory  
*Zbikowski*

44400. Gender and Characterization in Baroque Opera and Oratorio  
*Kendrick*

44700. The Castrato  
*Feldman*

44900. Film Music  
*Hoeckner*

46000. Ottocento Opera: History, Sources, Performance, Reception  
*Gossett*

46100. Textual Theory  
*Gossett*

# DEPARTMENT *of* NEAR EASTERN LANGUAGES *and* CIVILIZATIONS

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<b>Chair</b> Peter F. Dorman, Oriental Institute (on leave 2005-2006)	<b>Associate Professors</b> Peter F. Dorman, Oriental Institute Franklin D. Lewis David Schloen, Oriental Institute K. Aslihan Yener, Oriental Institute	<b>Research Associates (Associate Professors)</b> W. Raymond Johnson, Oriental Institute Donald S. Whitcomb, Oriental Institute
<b>Acting Chair 2005-2006</b> Theo van den Hout, Oriental Institute		<b>Research Associate</b> Paul Walker
<b>Professors</b> Robert Dankoff Fred M. Donner Walter T. Farber, Oriental Institute Cornell Fleischer McGuire Gibson, Oriental Institute Norman Golb Janet H. Johnson, Oriental Institute Wadad Afif Kadi Heshmat Moayyad Dennis G. Pardee John R. Perry 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	<b>Assistant Professors</b> Orit Bashkin Stephen P. Harvey, Oriental Institute Rebecca Hasselbach, Oriental Institute Tahera Qutbuddin Seth Richardson, Oriental Institute Ada Holly Shissler Christopher Woods, Oriental Institute	<b>Emeritus Faculty</b> Lanny D. Bell, Oriental Institute Robert D. Biggs, Oriental Institute Menachem Brinker John A. Brinkman, Oriental Institute Richard L. Chambers Miguel Civil, Oriental Institute Gene B. Gragg, Oriental Institute Harry A. Hoffner, Oriental Institute Halil Inalcik, History Carolyn G. Killean Erica Reiner, Oriental Institute Jaroslav Stetkevych William Sumner, Oriental Institute Edward F. Wente, Oriental Institute
	<b>Professorial Lecturer</b> Farouk Mustafa	
	<b>Senior Lecturers</b> Ariela Finkelstein Hakan Özöslu M. Montserrat Rabadán Carrascosa	
	<b>Lecturers</b> Kađan Arik Stuart Creason Noha Forster Saeed Ghahremani Hripsime Haroutunian Kay Heikkinen	

**T**he 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 A.M. and Ph.D. programs are currently offered are, in the **Ancient Section**: Ancient Near Eastern History, Cuneiform Studies (Assyriology, Hittitology, Sumerology), Egyptology, Near Eastern Art and Archaeology (Anatolian, Egyptian, Iranian, Mesopotamian, Syro Palestinian), Near Eastern Judaica, and Northwest Semitic Philology; and in the **Medieval and**

**Modern Section:** Arabic Language and Literature, Islamic Archaeology, Islamic History and Civilization, Islamic Thought, Medieval Judaica and Judeo Arabic, Modern Hebrew Language and Literature, Persian Language and Literature, and Turkish Language and Literature. The department also 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's 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 MASTER OF ARTS

The A.M. degree in NELC normally requires completion of 18 courses, of which 15 must be taken for a quality grade and three may be taken on a pass/fail basis. Exact requirements vary by field, but all students must complete an M.A. thesis in the second year. Students must also high pass a foreign language reading examination in either French or German before the beginning of their second year.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

Students with sufficient background may apply directly to the department's Ph.D. program; a master's degree in a related field is not prerequisite. Depending on the student's background, the Ph.D. degree in NELC normally requires completion of between 27 and 36 courses depending on the field, of which only three may be taken on a pass/fail basis, before embarking upon research for the doctoral dissertation. Exact requirements vary by field, but all students must high pass foreign language reading examinations in both French and German before the beginning of their third year, complete an M.A. thesis in their second year, pass a battery of comprehensive examinations at the end of their fourth year, and write an original dissertation on an approved topic. 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://humanities.uchicago.edu/depts/nelc/>), by e-mail ([nelc@uchicago.edu](mailto:nelc@uchicago.edu)), or from the departmental office, 1155 East 58th Street, Room 212, Chicago, IL 60637. Within the framework outlined above, individual requirements are established for each student in consultation with the faculty adviser and the section counselor.

## APPLICATION PROCEDURE

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:

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Division of the Humanities  
Walker, Suite 111  
1115 East 58<sup>th</sup> 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).

We encourage you to check our website at <http://humanities.uchicago.edu/depts/nelc/> 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

The following is a representative list of courses offered in the department. Specific offerings each quarter will be found in the Time Schedules (<http://registrar.uchicago.edu/courses.html>) and on the departmental web site.

#### Akkadian

10101 10103. Elementary

Akkadian I, II, III

*Staff*

20307, 20308. Akkadian  
Literary Texts I, II

*Staff*

20313, 20314. Akkadian  
Historical Texts I, II

*Stolper*

20316. Non Mesopotamian  
Akkadian Texts

*Roth*

20323. Akkadian Religious  
Texts

*Staff*

30315. Introduction to  
Assyrian

*Staff*

30316. Akkadian Texts from  
Peripheral Areas

*Staff*

30321. Epic of Gilgamesh

*Farber, Roth*

30332. Mesopotamian Law  
Collections

*Roth*

#### Ancient Anatolian Languages

10101 10103. Elementary

Hittite I, II, III

*van den Hout*

20125. Advanced Readings  
in Hittite

*van den Hout*

20201. Cuneiform Luwian

*van den Hout*

20301, 20302. Hieroglyphic  
Luwian I, II

*van den Hout*

20401. Lydian

*van den Hout*

20501. Lycian

*van den Hout*

20601. Carian/Psidian/Sidetic

*van den Hout*

20901. Hurrian

*van den Hout*

#### Arabic

10101 10103. Elementary

Arabic I, II, III

*Staff*

20101 20103. Intermediate

Arabic I, II, III

*Staff*

30101 30103. Third Year

Arabic I, II, III

*Mustafa*

30201 30203. High  
Intermediate Modern

Standard Arabic I, II, III

*Staff*

30386. Early Islamic  
Historical Tradition

*Donner*

30684. Readings in the Sira  
Literature

*Donner*

40101 40103. Advanced  
Arabic Syntax I, II, III

*Qutbuddin*

40329, 40330. Readings in  
Islamic Political Thought I,

II

*Kadi*

40355 40357. Readings in  
Modern Arabic Literature I,

II, III

*Mustafa*

40382. Seminar: Classical  
Arabic Poetics

*Qutbuddin*

40393. Readings in Islamic  
Ritual Law

*Donner*

40404, 40405. Readings in  
the Qur an I, II

*Kadi*

40413, 40414. Islamic  
Heresiography and  
Sectarianism I, II

*Kadi*

40415. Arabic Paleography  
and Epigraphy

*Donner*

40420. Islamic Readings in  
al Jahiz

*Kadi*

40421 40423. Advanced  
Modern Standard Arabic I,  
II, III

*Staff*

40443, 40444. The Classical  
Sources I, II

*Kadi*

40446. Arabic Manuscripts  
and the Art of Editing

*Kadi*

40455 40457. Readings in  
Judeao Arabic I, II, III

*Golb*

#### Aramaic

10101. Biblical Aramaic

*Staff*

10102. Old Aramaic  
Inscriptions

*Staff*

10103. Imperial Aramaic

*Staff*

10401	10403. Elementary Syriac I, II, III	40436. Ramesside Inscriptions	20405. Readings in Medieval Hebrew Manuscripts
	<i>Creason</i>	<i>Dorman, Johnson, Ritner</i>	<i>Golb</i>
20301	20303. Targum I, II, III	40458, 40459. Advanced Readings in Coptic	20406. Medieval Hebrew Grammarians
	<i>Pardee</i>	<i>Johnson</i>	<i>Golb</i>
	<b>Armenian</b>	40473. Medical Texts	20501 20503. Intermediate Modern Hebrew I, II, III
10101	10103. Elementary Modern Armenian I, II, III	<i>Ritner</i>	<i>Finkelstein, Staff</i>
	<i>Haroutunian</i>	40480. Religious Texts	20580, 20581. Poetry in Israel I, II
20101	20103. Intermediate Modern Armenian I, II, III	<i>Ritner</i>	<i>Staff</i>
	<i>Haroutunian</i>	45500. Coptic Dialects	30501 30503. Advanced Modern Hebrew I, II, III
	<b>Egyptian</b>	<i>Ritner</i>	<i>Finkelstein</i>
10101, 10102.	Introduction to Middle Egyptian Hieroglyphs I, II	Ge ez	30515, 30516. Hebrew Poetry and Narrative Art I, II
	<i>Dorman, Johnson, Ritner</i>	10101 10103. Elementary Ge ez I, II, III	<i>Staff</i>
10103.	Middle Egyptian Texts I	<i>Staff</i>	30539. The Emergence of the Historical Long Poem
	<i>Dorman, Johnson, Ritner</i>	<b>Hebrew</b>	<i>Staff</i>
10201.	Introduction to Coptic	10101 10103. Elementary Classical Hebrew I, II, III	30542, 30543. Historical Introduction to the Study of Modern Hebrew Literature I, II
	<i>Dorman, Johnson, Ritner</i>	<i>Pardee, Creason</i>	<i>Staff</i>
10202.	Coptic Texts	10501 10503. Introductory Modern Hebrew I, II, III	30553, 30554. The Realistic Novel I, II
	<i>Dorman, Johnson, Ritner</i>	<i>Finkelstein</i>	<i>Staff</i>
10203.	Coptic Texts 2	20001. Hebrew Letters and Inscriptions	<b>Persian</b>
	<i>Staff</i>	<i>Pardee</i>	10101 10103. Elementary Persian I, II, III
20101.	Middle Egyptian Texts II	20002. Phoenician Inscriptions	<i>Ghahremani</i>
	<i>Dorman, Johnson, Ritner</i>	<i>Pardee</i>	20101 20103. Intermediate Persian I, II, III
20102.	Introduction to Hieratic	20003. Punic Inscriptions	<i>Ghahremani</i>
	<i>Dorman, Johnson, Ritner</i>	<i>Pardee</i>	30320, 30321. Persian Poetry: <i>Shahnameh</i> I, II
20110.	Introduction to Old Egyptian	20104 20106. Intermediate Classical Hebrew I, II, III	<i>Moayyad</i>
	<i>Staff</i>	<i>Pardee, Staff</i>	30324, 30325. Persian Poetry: <i>Mathnavi</i> of Rumi I, II
20210.	Introduction to Late Egyptian	20101, 20102. Dead Sea Scrolls I, II	<i>Moayyad</i>
	<i>Dorman, Johnson, Ritner</i>	<i>Golb</i>	30327. Persian Poetry: <i>Sa di/Imitators</i>
20211.	Late Egyptian Texts	20204. Readings in the Dead Sea Scrolls	<i>Perry</i>
	<i>Dorman, Johnson, Ritner</i>	<i>Golb</i>	30331. Persian Poetry: <i>Amir Khosrow's Romance</i>
30120.	Introduction to Demotic	20301, 20302. Tannaitic Hebrew Texts I, II	<i>Moayyad</i>
	<i>Johnson, Ritner</i>	<i>Golb</i>	
30121.	Demotic Texts	20401, 20402. Medieval Hebrew Commentaries on the Bible I, II	
	<i>Johnson, Ritner</i>	<i>Golb</i>	
40401.	Pyramid Texts	20404. Medieval Hebrew Historical Texts	
	<i>Staff</i>	<i>Golb</i>	

30332, 30333. Persian Prose: Sufi Texts I, II <i>Moayyad</i>	30501 30503. Ottoman Turkish I, II, III <i>Staff</i>	30031. Problems in NE Art and Archaeology <i>Gibson</i>
30334. Persian Prose: Mirrors for Princes <i>Moayyad</i>	40101 40103. Advanced Turkish I, II, III <i>Staff</i>	30032. Ancient Near Eastern Urbanism in Comparative Perspective <i>Stein</i>
30337, 30338. Persian Lyric Poetry I, II <i>Moayyad</i>	40517. Readings in Ottoman Prose <i>Dankoff</i>	30035. Zooarchaeology <i>Stein</i>
30343. Introduction to Tajik Persian <i>Perry</i>	40588. Ottoman Historical Texts <i>Fleischer</i>	30040. Issues in Archaeological Method and Theory: World Systems and Local Cultures <i>Stein</i>
30421. Persian Satire: Old and New <i>Moayyad</i>	<b>Ugaritic</b>	30045. Economic Organization <i>Stein</i>
30423. Persian Prose: Modern Scholarly Prose <i>Moayyad</i>	20101 20103. Ugaritic I, II, III <i>Pardee</i>	30051. Method and Theory in Near Eastern Archaeology 1 <i>Staff</i>
30424. Women in Persian Literature <i>Moayyad</i>	30107. Ugaritic: The Baal Cycle <i>Pardee</i>	30052. Method and Theory in Near Eastern Archaeology 2 <i>Staff</i>
30825. Old Persian Readings <i>Stolper</i>	30108. Ugaritic: The Aqht Cycle <i>Pardee</i>	30061. Ancient Landscapes 1 <i>Staff</i>
<b>Sumerian</b>	30109. Readings in New Ugaritic Texts <i>Pardee</i>	30062. Ancient Landscapes 2 <i>Staff</i>
10101 10103. Elementary Sumerian I, II, III <i>Staff</i>	<b>Uzbek</b>	30071. Texts in Context: Documents and Archaeology <i>Gibson</i>
20101 20103. Intermediate Sumerian I, II, III <i>Staff</i>	10101 10103. Elementary Uzbek I, II, III <i>Arik</i>	30081. The Archaeology in Technology <i>Yener, Kouchoukos</i>
20305. Sumerian Historical Texts <i>Staff</i>	20101 20103. Intermediate Uzbek I, II, III <i>Arik</i>	30090. Art/Archaeology of Alalakh <i>van den Hout</i>
20306. Sumerian Literary Texts <i>Staff</i>	<b>Near Eastern Art and Archaeology</b>	30091. Field Archaeology <i>Staff</i>
20307. Sumerian Legal Texts <i>Staff</i>	30001. Archaeology of Ancient Near East I <i>Staff</i>	30092. Computer Applications in Archaeology <i>Staff</i>
30311. Myths and Epic Tales <i>Staff</i>	30002. Archaeology of Ancient Near East 2 <i>Staff</i>	30093. Instrumental Analysis in Archaeology <i>Kouchoukos</i>
<b>Turkish</b>	30003. Archaeology of Ancient Near East 3 <i>Staff</i>	
10101 10103. Elementary Turkish I, II, III <i>Özoglu</i>	30011. Seals in the Ancient Near East <i>Gibson</i>	
20101 20103. Intermediate Turkish I, II, III <i>Özoglu</i>	30030. Rise of the State in the Near East <i>Stein</i>	

30094. Museum Exhibit Installation <i>Yener, Kouchoukos</i>	30241. Material Culture of Ancient Egypt <i>Staff</i>	30521. Egypt after the Pharaohs: Coptic and Islamic Egypt <i>Whitcomb</i>
30111. The Art of Ancient Mesopotamia <i>Staff</i>	30271. Archaeology of Ancient South Arabia <i>Gibson</i>	30522. Late Levant: Archaeology of Islamic Syria Palestine <i>Whitcomb</i>
30121. Mesopotamian Archaeology 1 <i>Gibson</i>	30281. Problems in Arabian Archaeology <i>Gibson</i>	30523. Islamic Archaeology of Iran and Iraq <i>Whitcomb</i>
30122. Mesopotamian Archaeology 2 <i>Gibson</i>	30321. Syro Palestinian Archaeology 1 <i>Schloen</i>	30524. Archaeology of Byzantine and Islamic Anatolia <i>Whitcomb</i>
30123. Mesopotamian Archaeology 3 <i>Gibson</i>	30322. Syro Palestinian Archaeology 2 <i>Schloen</i>	30531. Problems in Islamic Archaeology: Art/Artifacts <i>Whitcomb</i>
30124. Mesopotamian Archaeology 4 <i>Gibson</i>	30323. Syro Palestinian Archaeology 3 <i>Schloen</i>	30532. Problems in Islamic Archaeology: Islamic City <i>Whitcomb</i>
30125. Seleucid, Parthian, and Sasanian Near East <i>Gibson</i>	30331. Problems in Syro Palestinian Archaeology <i>Schloen</i>	30533. Problems in Islamic Archaeology: Regional Studies <i>Whitcomb</i>
30131. Problems in Mesopotamian Archaeology <i>Gibson</i>	30335. Problems in Syrian Archaeology <i>Schloen</i>	30541. Islamic Pottery (as historical evidence) <i>Whitcomb</i>
30141. Mesopotamian Pottery <i>Gibson</i>	30341. Syro Palestinian Pottery <i>Schloen</i>	30550. Jerusalem through the Ages <i>Schloen</i>
30211. The Art of Ancient Egypt <i>Staff</i>	30351. Art and Archaeology of the Near East: Anatolia <i>Yener</i>	40000. Numismatics in the Near East <i>Gibson</i>
30215. Egyptian Art and Architecture <i>Harvey</i>	30371. Anatolian Archaeology 1 <i>Yener</i>	40301. Problems in Anatolian Archaeology <i>Yener</i>
30219. Predynastic Egypt <i>Harvey</i>	30372. Anatolian Archaeology 2 <i>Yener</i>	<b>Near Eastern History and Civilization</b>
30220. Seminar: Architecture of the New Kingdom <i>Harvey</i>	30381. Problems in Anatolian Archaeology: Alalakh <i>Yener</i>	30001. History of Ancient Near East 1 <i>Staff</i>
30221. Egyptian Archaeology 1 <i>Harvey</i>	30411. Seminar: Art and Archaeology of Ancient Nubia <i>Harvey</i>	30002. History of Ancient Near East 2 <i>Staff</i>
30222. Egyptian Archaeology 2 <i>Harvey</i>	30501. Art/Archaeology of the Near East: Intro Islamic <i>Whitcomb</i>	30003. History of Ancient Near East 3 <i>Staff</i>
30223. Egyptian Archaeology 3 <i>Harvey</i>	30520. Islamic Archaeology of Arabia <i>Whitcomb</i>	30005. Nomads and Fellahin in the Ancient Near East <i>Richardson</i>
30231. Problems in Egyptian Archaeology <i>Staff</i>		

30006. Tablets and Trash  
*Richardson*

30007. Babylonian Knowledge  
*Richardson*

30010. Social Theory and Near Eastern Studies  
*Schloen*

30014. Persp: Near Eastern Literatures: Ancient Mesopotamian Lit  
*Woods*

30015. Persp: Near Eastern Literatures: Ancient Egyptian Lit  
*Harvey*

30016. Persp: Near Eastern Literatures: Classical Arabic Lit  
*Qutbuddin*

30030. Near East Religions: Hittite  
*Staff*

30031. Ancient Near Eastern Religions: Mesopotamia  
*Staff*

30032. Near East Religions: Egyptian Religion and Magic  
*Ritner*

30060. Near East Peoples and Cultures: Hittites  
*van den Hout*

30061. Near East Peoples and Cultures: Ugarik  
*Pardee*

30062. Near East Peoples and Cultures: Sumerians  
*Woods*

30063. Near East Peoples and Cultures: Mesopotamian Law  
*Roth*

30064. Near East Peoples and Cultures: Egyptians  
*Staff*

30065. Persp: Women in Ancient Egypt  
*Johnson*

30066. Persp: Women in Mesopotamia  
*Roth*

30067. Epigraphy/History of Israel 9<sup>th</sup> 4<sup>th</sup> C BC  
*Staff*

30068. Military History of the Ancient Near East  
*Staff*

30069. Persp: Women Mode Middle East  
*Shissler*

30070. Persp: Women in Arab Lit  
*Qutbuddin*

30143. History of Ancient Mesopotamia 1  
*Staff*

30144. History of Ancient Mesopotamia 2  
*Staff*

30145. History of Ancient Mesopotamia 3  
*Staff*

30211. Ugarit: Late Bronze Metropolis  
*Pardee*

30264. Saite and Persian Egypt  
*Johnson*

30265. Post Saite Egypt  
*Johnson*

30294. Religion and Politics in the Contemporary Middle East  
*Staff*

30368. Hebrew Bible Today in Research and Literature 1  
*Staff*

30369. Hebrew Bible Today in Research and Literature 2  
*Staff*

30370. Sufism  
*Dankoff*

30410. Exile in Jewish Thought and Literature  
*Mendes Flohr*

30411. Medieval Jewish History 1  
*Golb*

30412. Medieval Jewish History 2  
*Golb*

30413. Medieval Jewish History 3  
*Golb*

30414. Medieval Hebrew Commentaries: Exodus  
*Golb*

30416. Medieval Hebrew Commentaries: Job and Ecclesiastes  
*Golb*

30420. Hebrew Poetry in Byzantine Palestine  
*Golb*

30424. Culture of the Jews of Medieval Palestine, Egypt, and Andalusia  
*Golb*

30425. Manuscript Reconstruction of Medieval Jewish History  
*Golb*

30426. Historical Documents of the First and Second Crusades Relative to the Jews  
*Golb*

30430. Learning to Be Human: The Bible and Near Eastern Mythology  
*Frymer Kensky*

30431. Leviticus: Competence in Biblical Hebrew  
*Frymer Kensky*

30437. Biblical Narrative as Literature and History 1  
*Staff*

30438. Biblical Narrative as Literature and History 2  
*Staff*

30439. Hebrew Historical Texts of the Middle Ages  
*Golb*

30448. Persian Historical Texts: Safavid  
*Staff*

30458. Zionism and Its Opponents in Modern Jewish Thought and Literature  
*Brinker*

30459. Autobiography and the Novel as Vehicles of Social Criticism  
*Brinker*

30519. Modern Middle Eastern History I  
*Khalidi*

30520. Modern Middle Eastern History II  
*Khalidi*

30539. The Renaissance East and West  
*Fleischer*

30557. The Orient Trade from Roman Times to 1800  
*Donner*

30570. Mughal India  
*Staff*

30580. Poetry in Israel  
*Staff*

30581. Poetry in Israel  
*Staff*

30601. Intro to Islamic Civ 1  
*Kadi*

30602. Intro to Islamic Civ 2  
*Dankoff*

30620. Introduction to Islamic History: 600 800  
*Shahin*

30621. History Islamic Middle East 1  
*Donner*

30622. History Islamic Middle East 2  
*Woods*

30623. History Islamic Middle East 3  
*Shissler*

30629. History of Islamic Political Thought  
*Staff*

30631. Approaches to the Study of the Middle East  
*Woods*

30633. Sources for the Study of the Middle East  
*Woods*

30636. Survey: Classical Arabic Literature in Translation  
*Staff*

30638. Arabic Wisdom Literature  
*Qutbuddin*

30639. Survey of Modern Arabic Literature in Translation  
*Mustafa*

30641. Islamic Origins  
*Donner*

30642. The High Caliphate  
*Donner*

30643. Topics: Med Islamic Social Hist  
*Donner*

30650. The Foundations of Mamluk Rule  
*Craig*

30651. Hist Egpt/Syr Late Mid Ages: Mamluk  
*Craig*

30670. Colloquium: Islamic Historians and Their Works  
*Donner*

30672. Sufi Literature in Translation  
*Qutbuddin*

30680. Armenian Art A Survey  
*Rapti*

30681. Armenian Manuscript Illumination  
*Rapti*

30683. Medieval Islamic Social History  
*Donner*

30686. Word and Image in Islamic Lit  
*Dankoff*

30690. Alfarabi s Philosophical Writings and their Early Antecedents  
*Alon*

30729. The Mongol World Empire  
*Woods*

30730. The Age of Timur  
*Woods*

30731. Iran under the Safavids  
*Woods*

30732. Coll: Iran Under the Safavids  
*Woods*

30750. Modern Persian Fiction in Translation  
*Perry*

30761. Turkic Peoples of Central Asia  
*Arik*

30762. Contemporary Central Asia  
*Arik*

30765. Musical Folklore of Central Asia  
*Arik*

30766. Shamans/Epic Poets of Central Asia  
*Arik*

30820. Ottoman Empire Coming of Nationalism 1  
*Shissler*

30821. Ottoman Empire Coming of Nationalism 2  
*Shissler*

30825. Modernization of the Ottoman Empire 1  
*Shissler*

30826. Modernization of the Ottoman Empire 2  
*Shissler*

30827. The Woman Question and Reformist Thought in the Ottoman Empire  
*Shissler*

30828. Women/Family in the Late Otto Empire 1  
*Shissler*

30829. Women/Family in the Late Ottoman Empire 2  
*Shissler*

30837. Ataturk: The Early Turkish Republic  
*Shissler*

30840. Radical Islamic Pieties 1200 1600  
*Fleischer*

30850. The Ottoman Empire 1300 1750  
*Fleischer*

30852. The Ottoman World in the Age of Sileyman the Magnificent 1  
*Fleischer*

30853. The Ottoman World in the Age of Süleyman the Magnificent 2 <i>Fleischer</i>	40029. Decline/Collapse in the Ancient Near East <i>Richardson</i>	40583. Ottoman Diplomatics and Paleography <i>Fleischer</i>
30871. History of the Turkish Republic <i>Staff</i>	40032. Old Babylonian History <i>Richardson</i>	40588. Ottoman Historical Texts <i>Staff</i>
30905. Modern Arab Intellectual Thought <i>Bashkin</i>	40280. Seminar: Egyptian History <i>Staff</i>	40610. Seminar: Arabic Literature: Maqamat <i>Qutbuddin</i>
30910. Islam: Muslim World to America <i>Zeghal</i>	40401. Sem: Achaemenid History of the 4 <sup>th</sup> Century <i>Stolper</i>	40701. Sem: Iran and Central Asia <i>Woods</i>
30913. Cities in the Middle East <i>Staff</i>	40413. Islamic Hersiography/Sectarian 1 <i>Kadi</i>	<b>Near Eastern Languages</b>
30938. History of Modern Iraq <i>Bashkin</i>	40414. Islamic Heresiography/Sectarian 2 <i>Kadi</i>	30301. Introduction to Comparative Semitic <i>Staff</i>
30951. Negotiations in Arabic Speaking Islam <i>Alon</i>	40420. Islamic Readings in Al Jahiz <i>Kadi</i>	30302. Writing Systems and Decipherment <i>Woods, C.</i>
39400. Religion and Politics in the Contemporary Middle East <i>Staff</i>	40465. Early Islamic Historical Tradition <i>Donner</i>	30315, 30316. Epigraphic South Arabic I, II <i>Staff</i>
40028. Historiography of Ancient Near East Research <i>Richardson</i>	40471. Medieval Commentaries on Ecclesiastes <i>Staff</i>	



## DEPARTMENT of NEW TESTAMENT and EARLY CHRISTIAN LITERATURE

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<i>Chair</i>	Richard P. Saller, Classical Languages and Literatures.	<i>Emeritus Faculty:</i> Hans Dieter Betz Robert M. Grant Nancy P. Helmbold, Classical Languages and Literatures
<i>Professors</i>	Peter White, Classical Languages and Literatures	
Elizabeth Asmis, Classical Languages and Literatures		
Jás Elsner		
Christopher A. Faraone Classical Languages and Literatures	<i>Associate Professors:</i> David Martinez, Divinity Margaret M. Mitchell	
Hans Josef Klauck		

**T**he Department of New Testament & Early Christian Literature brings together faculty from the Divinity School and the Classics Department to engage cooperatively in critical inquiry on: (1) the interpretation of the range of documents produced by Christians in roughly the first four centuries of the Common Era, and (2) the religious, cultural and social make up of the communities and persons within the Roman Empire during this period who were identified (by themselves and by others) as Christian. This interdisciplinary study requires the acquisition of a thorough knowledge of the ancient Mediterranean world its history, literature, languages, philosophies, religions and social forms as well as the development of capacities for analyzing ancient texts as literary documents with their own genres and characteristic forms of expression. Students are expected to gain competence not only in the twenty seven documents that were later designated as the canonical New Testament, but also in the broad stream of patristic literature up through Augustine of Hippo (d. 430). The dual contexts of an emerging Christian literary culture and an existing Greco Roman world circumscribe the department's approach to this literature. The New Testament can also be studied in the Divinity School's Bible area, in which the documents of the New Testament are examined in relation to the interpretive nexus of the biblical canon (including the Hebrew Bible or Old Testament), as well their contextualization in the wider Mediterranean world, and the history of biblical interpretation up to the present.

Graduates of the NT/ECL Department have taught in such areas as New Testament studies, early church history, early history of Western civilization, history of religions (Hellenistic and Roman periods), and religious studies generally. Students develop areas of specialized research, but carry out those investigations within the framework of a broad competence in the world of antiquity and the issues involved in tracing and comprehending the emergence of distinct Christian communities and documents. The culmination of doctoral study is a dissertation which makes an original contribution to the field of early Christian studies.

This program allows students to work with a team of scholars in the department, yet also gives them ample opportunity to study throughout the University, in such areas and divisions as the Divinity School, Classics, History, Social Sciences, and the Oriental Institute, as they design their course of study in conversation with an advisor. Students meet with advisors at least once a quarter to discuss their ideas and research interests, and plan an individualized curriculum which includes formal coursework, comprehensive and language examinations, and the dissertation.

## THE DEGREE OF MASTER OF ARTS

The department expects students to engage in at least two years of full time study before taking the master's level comprehensive exams. Major goals of that study include 1. the development of a compelling research agenda for advanced study in early Christianity, 2. the cultivation of superior linguistic, literary and historical skills, and 3. the attainment of expert capacities for developing and presenting (in oral and written form) original scholarly arguments.

*Language Examinations:* The achievement of linguistic skills is demonstrated in the following way. By the end of their first year in the program, one should high pass the University reading test in either French or German. By the end of the second year, one must pass (grade of B or better) the departmental test in one ancient language (Greek, Latin or Hebrew), and one of the other two ancient languages by the end of the third year. The examination in ancient Greek consists of two parts: Part I is a two hour sight reading test on passages chosen from anywhere in the New Testament; Part II is a two hour translation test on a collection of Greek texts (at least 50 Oxford pages in total) covering a range of periods, genres and dialects (as chosen by the student and approved by the faculty member in charge of the exam that year). The Latin and Hebrew examinations test the student's knowledge of a prepared set of readings representing a diverse range of literature, chosen in consultation with the examiner, consisting of at least 50 pages of Latin texts, and at least 30 chapters of Biblical Hebrew.

### *The Comprehensive Examination*

The comprehensive examination may be taken in Autumn, Winter or Spring quarter. It consists of five written examinations (taken in one week, one exam per day), followed by an oral examination with the faculty (normally the following week). The written exams, individualized for each student, are as follows:

Part 1: Literature (each student completes both exams)

A: passages from two New Testament books selected by the student in consultation with the faculty, with translation, commentary, and interpretation (4 hours)

B: passages from one major ancient book or collection of materials (Christian or non Christian), selected by the student in consultation with the faculty (2 hours)

Part 2: Context (each student completes both exams)

A: the religious and cultural history of the Mediterranean world from the Hellenistic to the Byzantine age (2 hours)

B: the political and social history of the Roman Empire (2 hours)

Part 3: Special Topic (each student chooses one of the following, depending upon her or his research interests):

A: the history of Greek literature

B: the history of Latin literature

C: the history of Greek and Latin philosophy

D: the history of Greek and Latin theology

E: the history of Greek, Roman and early Christian art.

Part 4: Oral Examination, covering the written exams, and a research paper distributed in advance by the student which will be the basis for a conversation about future research (1.5 hours).

Bibliographies and focal questions for each examination are developed by the student in consultation with the faculty member whom they request to administer the exam to them, at least one quarter before the examination will be taken. The oral examination may be a course paper or a research paper completed expressly for this purpose. It should represent the direction of the student's interests, and demonstrate her/his skills for advanced research.

If the student passes the comprehensive examination at a high level, he or she will ordinarily be permitted to proceed to the doctoral degree. If the student does not pass at a high level, or if the student's vocational plans have changed, a terminal master's degree may be awarded.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

The department requires the student to meet its requirements for the degree of Master of Arts and, in addition, to pass its tests in Latin and Hebrew (see above).

### *Dissertation Proposal*

Two quarters before taking the examination for candidacy, the student must obtain the department's approval of a dissertation proposal at an oral colloquium (1.5 hours) on the written document. Students will solicit a faculty advisor and two readers as the evaluative committee. Dissertation proposals must show a clear line of argument, and demonstrate promise for making an original contribution to early Christian studies.

### *Doctoral Examinations*

The dissertation proposal will serve as a point of departure for the three parts of the doctoral candidacy examination. The two written examinations will deal with the general areas and background related to the literary texts upon which the proposal focuses. Part 1 will deal with religious and cultural matters (2 hours), Part 2 with political and social aspects (2 hours). These examinations resemble part 2 of the master's examination but are focused specifically on the questions, issues and sources involved in the dissertation research. The purpose of these examinations is to ensure students are well in control of the primary source material and essential secondary readings as they move forward toward the execution of the dissertation project. Part 3 will be an oral examination concerned primarily with the dissertation proposal and topics related to it.

Students will develop reading lists of primary and secondary materials for these examinations through consultation with the faculty involved. All three examinations will be administered by the whole department; an outside examiner with whom the student has done class work will also take part in the oral examination. After the successful completion of the doctoral examinations students will be formally admitted to candidacy for the doctoral degree.

Once the dissertation is written and the completed dissertation has received the approval of the student's advisor and dissertation readers, there will normally be an oral defense. It is also a Departmental tradition to sponsor a public event at which the candidate will have an opportunity to present the results of his or her research to a wider community of scholars and students.

### Courses

The following is a sampling of courses currently or recently offered:

0200. Seneca, <i>Phaedra</i> <i>White</i>	40300. The Gospel According to Luke <i>Klauck</i>	42100. The Thessalonian Letters <i>Mitchell</i>
30400. Roman Comedy <i>White</i>	40400. Seminar: Homeric Hymns <i>Faraone and Redfield</i>	42200. The Farewell Discourses of the Gospel of John <i>Klauck</i>
31600. Augustine, <i>Confessions</i> <i>White</i>	40500. Pilgrimage: Sacred Steps <i>Elsner</i>	42300. The Gospel According to Matthew <i>Betz</i>
32200. Pagan and Christian <i>Martinez</i>	40700. Seminar: Dio Chrysostom and the New Testament <i>Klauck</i>	42400. Pompeii <i>White</i>
32500. Intro. to the New Testament: Texts and Contexts <i>Mitchell</i>	40900. Seminar: Roman Stoicism <i>Asmis</i>	42500. Revelation: The New Testament Apocalypse <i>Klauck</i>
32900. Economy of Ancient Rome <i>Saller</i>	41000. Seminar: Symbol and Allegory in Greek Literature	42800. The Book of Acts <i>Klauck</i>
33100. Aristotle <i>Asmis</i>	41100. From Naturalism to Abstraction: Greek, Roman and Early Christian Art <i>Elsner</i>	43200. Colloquium: Ancient Christianity <i>Mitchell</i>
33900. The Book in the Roman World <i>White</i>	41500. Roman Satire <i>White</i>	43600. The Pastoral Epistles <i>Mitchell</i>
34000. Lucian of Samosata <i>Martinez</i>	41800. The Old Testament in The Gospel According to John <i>Klauck</i>	43900. 1 Corinthians <i>Mitchell</i>
35100, 35200, 35300. Introduction to Koine Greek I,II,III <i>Staff</i>	41801. Justin Martyr <i>Martinez</i>	44000. Horace: Epistles <i>White</i>
35300. Hellenistic Poetry <i>Asmis</i>	42000. The Gospel According to Mark <i>Mitchell</i>	44300. Seminar: The Roman Household <i>Saller</i>
37800. Aristotle's Politics <i>Asmis</i>		44500. Philo of Alexandria <i>Martinez</i>
39800. German Lecture & Discussion Group <i>Klauck</i>		

44600. Ekphrasis: Art and its Descriptions in Greco Roman Antiquity <i>Elsner</i>	51800. Seminar: 2 Corinthians <i>Mitchell</i>	53200. ECL Seminar: Hero Cults and Early Christianity <i>Mitchell</i>
44900. Paul's Letter to the Romans <i>Klauck</i>	52190. Seminar: The Acts of Thomas <i>Klauck</i>	53300. ECL Seminar: Plutarch and Early Christianity <i>Klauck/Martinez</i>
45000. Epictetus and Marcus Aurelius <i>Asmis</i>	52000. Seminar on Hellenistic Religions: The Mithras Liturgy <i>Betz</i>	
49200. Hesiod <i>Faraone</i>	52200. Pseudo Petrine Writings in Early Christianity (esp. Pseudo Clementines) <i>Klauck</i>	
50100. ECL Seminar: Greco Roman and Early Christian Magical Texts <i>Faraone and Betz</i>	52400. Seminar: The Historical Jesus in Recent Research <i>Mitchell</i>	
50400. Seminar: Early Christian Rhetoric <i>Mitchell</i>	52700. Seminar: The Acts of John and the Acts of Paul <i>Klauck</i>	
51000. Papyrology and Early Christian Backgrounds <i>Martinez</i>	57300. Galatians and James: Traditions in Conflict <i>Mitchell</i>	
51200. Paul and Ritual <i>Betz</i>	52800. Seminar: Early Christian Epistolography <i>Mitchell</i>	
51300. Seminar: Gospels from Nag Hammadi <i>Klauck</i>	53000. Flavius Josephus and Early Christian Literature <i>Mitchell</i>	
51700. Dio Chrysostom and the New Testament <i>Klauck</i>		



## DEPARTMENT of PHILOSOPHY

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<i>Chair</i>	Martha C. Nussbaum, Law	Gabriel Richardson Lear
John Haugeland	B. Pippin, Social Thought	Yitzhak Melamed
<i>Associate Chair</i>	Robert J. Richards, History	
Josef Stern	Josef J. Stern	<i>Mellon Postdoctoral Fellow</i>
	William C. Wimsatt	Timothy Bays
<i>Professors</i>	<i>Associate Professors</i>	<i>Emeritus Faculty</i>
Ted Cohen	Daniel Brudney	Leszek Kolakowski, Social
James Conant	David Finkelstein	Thought
Arnold Ira Davidson	Candace A. Vogler	Leonard Linsky
Michael N. Forster		Ian B. Mueller
John Haugeland	<i>Assistant Professors</i>	Howard Stein
Michael Kremer	Jason Bridges	William W. Tait
Charles Larmore	Kevin Davey	
Jonathan Lear, Social	Michael Green	
Thought		

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 departmental requirements for the degree of Master of Arts in addition to the divisional requirements are as follows:

Completion of three quarters of full time residence.

Completion of six graduate philosophy courses with grades of B or better. Reading and research courses do not count toward satisfying this requirement.

A thesis written under the direction of a faculty member and approved by the departmental faculty or three papers written for Department of Philosophy courses during graduate study and approved for A.M. credit. Any other papers will have to be approved by the departmental faculty as a whole.

## 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.* First year students will enroll in the first year seminar, a year long course meeting four or five times a quarter and graded on a pass fail basis. During the first two years of study, a student must complete twelve additional graduate courses, at least ten of which are in the Department of Philosophy listings (excluding reading and research courses). Four of these courses (at least three in the Department of Philosophy) should be completed by the end of the second quarter, and ten by the end of the fifth quarter. For a course to count toward the requirement, the student must earn a grade of B or better in it. Among the twelve courses there must be at least one graduate seminar in philosophy, and one course in logic (unless the student has passed with a grade of B+ or higher a course equivalent to or more advanced than Elementary Logic, as approved by the logic instructor for the year). The courses in philosophy must be chosen so as to satisfy a distribution requirement. Many, though not all, graduate courses in philosophy are identified as belonging to one of five fields: (I) value theory; (II) logic, philosophy of science and mathematics; (III) metaphysics and epistemology; (IV) Ancient or Medieval philosophy; (V) Modern philosophy from the 17<sup>th</sup> through 19<sup>th</sup> centuries. Students must take at least one course in each field and an additional course in either field IV or V.

*Foreign language requirement.* The student must pass an examination in French, German, Latin, or Greek. Students are urged to take this examination as soon as possible after they begin graduate study; however, it must be completed by the end of the spring quarter of the 4th year or before the topical examination, whichever comes first. Departmental language exams will be given twice a year. No student may take the departmental exam more than twice. Students who take the University language exam in place of the Departmental exam must receive a high pass. University language exams are offered every quarter and there is a fee for taking them.

*The preliminary essay.* In the spring quarter of their second year students will register for the first quarter of a two quarter (spring, autumn) workshop for writing the preliminary essay. The workshop will meet in the spring and autumn quarters for discussion of all aspects of the writing of the essay and for students to present their work in progress. Although students do not register for the summer quarter, they are expected to make significant progress in their preliminary essays 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 Department of Philosophy. The graduate program committee will evaluate proposed topics; 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. In choosing a committee, the graduate program committee will conform as closely as possible to the student's preferences. The criteria for accepting a topic will be whether it is a suitable topic in philosophy, whether a committee can be formed within the department for that topic, and whether the student is capable of pursuing it. The committee will supervise the writing of the essay, which should not be longer than 8,000 words, not including the bibliography and, in historical essays, not including long quotations. The final draft is to be submitted by the beginning of the winter quarter of the student's third year.

*Topical examination.* After completing the preliminary essay, students turn to their dissertations, working on determining a topic and a dissertation committee. By the end of the ninth week of spring quarter, each student should submit a dissertation sketch to those faculty and to the Graduate Program Committee. At the beginning of the fall quarter of the students fifth year, they again meet with their advisors and set a date for the Topical (no later than the beginning of the winter quarter) and the character of the materials to be submitted for the Topical. The graduate program committee is responsible for approving the topic and selecting a committee of three members, a director and two readers. The dissertation committee works with the student to prepare for the topical examination.

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 DGS, in writing, for a revision.)

The Topical normally consists of a two hour oral conducted by the student's committee. It tests the student's knowledge of the area of the dissertation topic and competence to write a dissertation on the topic. Students should take their topical exam by the middle of the spring quarter of their fourth year at the latest. The Department requires that each student submit a written progress report on their progress to his or her dissertation director and the Director of Graduate Studies by the end of the winter quarter of the fifth year. If the student is making satisfactory progress, he or she will be so notified; if there has not been satisfactory progress, a meeting will be scheduled with the student and committee to discuss the problems impeding progress.

*Admission to candidacy.* A student is granted admission to candidacy when the four requirements just described have been satisfied.

*Dissertation and final oral examination.* When the dissertation committee judges that the dissertation is ready, the committee as a whole requests a final oral examination. The student should submit 25 copies of a 10 page abstract of the dissertation, and one copy of the complete dissertation. The final oral examination, which should take place by the end of the sixth year at the latest, can be scheduled no sooner than two weeks from the submission of the formal request from the dissertation committee, and the submission of materials by the candidate.

### *Courses*

The following courses will be offered in academic year 2005/06.

30000. Elementary Logic <i>J. Bridges</i>	31010. Metaethics <i>C. Vogler</i>	31600. Human Rights I: Philosophical Foundations of Human Rights <i>M. Green</i>
32000. Introduction to Philosophy of Science <i>K. Davey</i>	31300. Aesthetics of Hume and Kant <i>T. Cdrn</i>	32500. Biological and Cultural Evolution <i>W. Wimsatt, S. Mufwene</i>
30701. German Romanticism: Science, Philosophy, Literature <i>R. Richards</i>	31404. Well Ordered Societies <i>D. Brudney</i>	

33001. Hegel s Phenomenology <i>M. Forster</i>	49700. Workshop: Preliminary Essay <i>J. Stern</i>	53801. Kierkegaard s Socrates <i>J. Lear</i>
33110. Reasons and Reasoning <i>J. Bridges</i>	50100. First Year Seminar <i>D. Finkelstein</i>	53901. Seminar: Wittgenstein <i>D. Finkelstein</i>
33505. Identity and the Individuation of Indiscernibles <i>Y. Melamed</i>	50400. German Romanticism <i>M. Forster</i>	55301. Being and One in Plato s <i>Parmenides</i> <i>J. Beere</i>
33810. Psychoanalysis and Moral Psychology <i>J. Lear</i>	51200. Law and Philosophy Seminar <i>M. Nussbaum, C. Sunstein</i>	55700. Aristotle s <i>Poetics</i> <i>G. Lear</i>
33900. Austin <i>T. Cohen</i>	51500. Practical Reason <i>C. Larmore</i>	56800. Spinoza s Metaphysics <i>Y. Melamed</i>
34601. Analytic Philosophy <i>M. Kremer</i>	51700. Readings in Contemporary Philosophy of Art <i>T. Cohen</i>	57301. Hobbes s <i>Leviathan</i> <i>M. Green</i>
37500. Kant <i>J. Beere</i>	51801. Evil <i>D. Brudney</i>	57750. Seminar on Nietzsche <i>R. Pippen, R. Geuss</i>
38500. Darwin s Origin of Species <i>R. Richards</i>	51810. The Legal and Political Philosophy of Ronald Dworkin <i>C. Larmore</i>	58600. Continental Philosophy Workshop <i>A. Davidson</i>
39600. Intermediate Logic I <i>M. Kraner</i>	52000. Foucault: Technologies of Power <i>A. Davidson</i>	59000. Workshop: Contemporary Philosophy <i>J. Stern</i>
39501. Topics in Contemporary European Thought <i>A. Davidson</i>	53300. Philosophy of Language Seminar <i>J. Stern</i>	59900. Philosophy of Mind Workshop <i>D. Finkelstein</i>



# DEPARTMENT of ROMANCE LANGUAGES and LITERATURES

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<i>Chair</i>	Larry F. Norman	Maria C. Lozada, College
Frederick de Armas	Agnes Lugo Ortiz	Veronica Vgna, College
	Mario Santana	Ana Maria Fiua Lima, College
<i>Professors</i>		
Frederick A. de Armas	<i>Assistant Professors</i>	<i>Emeritus Faculty</i>
Philippe Desan	Kelly Austin	Francisco Ayala
Françoise Meltzer	Daisy Delogu	Wells F. Chamberlin
Robert J. Morrissey	Ryan Giles	Paolo Cherchi
Thomas Pavel	Alison James	René de Costa
Elissa Weaver	Justin Steinberg	Peter F. Dembowski
Rebecca West	Lisa B. Voigt	George Haley
<i>Associate Professors</i>	<i>Senior Lecturers</i>	James Lawler
Armando Maggi	Nadine DiVito, College	

The Department of Romance Languages and Literatures offers programs in French, Italian, and Spanish literatures of both Europe and the Americas. 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, cultural studies, films, and foreign language acquisition and pedagogy. In addition to the full time faculty members listed above, the department regularly invites distinguished scholars and writers from the U.S. and abroad to lecture and to teach.

## PROGRAM OF STUDY

Most students enter the graduate program with a strong undergraduate background in at least one Romance language and with some knowledge of that linguistic and cultural space. Since the primary mission of the University of Chicago is the discovery and dissemination of new knowledge, training at the graduate level is usually conducted through small seminars and workshops directly related to current faculty and student research. The master's program is designed to familiarize students with the literary history and major works of one or more of the Romance languages, as well as to provide the critical tools for literary and cultural analysis. Students with an A.M. degree from another institution generally enter the Ph.D. program directly.

The A.M. is usually completed in one year, after which students move directly into the Ph.D. program where they enjoy a wide range of specialized department seminars on literature, culture, linguistics, and philology, as well as the opportunity to participate in and to coordinate graduate workshops. Some current workshops include the France Chicago Center; Empire; European and American Avant Gardes; Gay and Lesbian Studies; Gender and Society; Mass Culture; Medieval Studies; Theater: Text, Society, and Performance. The department also offers courses on Luso Brazilian and Catalan languages and literatures.

To prepare students for a professional career as scholar teachers, the department has developed an innovative program of theoretical and practical teacher training in Romance languages and literatures. Incoming students are usually awarded teaching research fellowships, renewable for four or five years based on satisfactory progress, which include a stipend and tuition. These students serve as drill/conversation session leaders (lectors) for the first four years allowing ample time to focus on, and complete, the course work and the examinations; only in their fifth and sixth years are they actually teachers (lecturers) who conduct stand alone courses in the College's language program. Advanced students may be selected to teach a literature course related to their scholarship. This gradual program enables RLL students to mature as scholars while progressively becoming informed and competent teachers.

Opportunities for study and research abroad exist in Barcelona, Oaxaca, Paris, Pisa, Rome, and Toledo. Year long exchange programs are available with the Ecole Normale Supérieure in Paris, and the University of Bologna, the Universitat Pompeu Fabra in Barcelona, and the Universidad Autónoma de Madrid.

Students also successfully compete for national and international fellowships such as the Chateaubriand and the Fulbright and for a variety of University sponsored dissertation fellowships.

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 on line at: <http://humanities.uchicago.edu/humanities/romance/>.

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: <https://grad-application.uchicago.edu/intro/humanities/intro1.cfm>.

Questions pertaining to admission and aid should be directed to org\_hdos@midway.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 58<sup>th</sup> Street  
Chicago, IL 60637

### *Courses*

The listing below is a sampling of the regular departmental offerings. Required courses for the A.M. are given each year; Ph.D. courses may be offered only in alternate years. In general, courses are taught in the program language. However, certain classes are taught in English, either because they are required of all students in the department or because they are more broadly conceived and appeal to a wider audience; these courses are so indicated in the department's Graduate Student Handbook.

**Catalan**

31800. Catalan for research purposes

**French**

30400. Cours de Perfectionnement  
 30500. Ecrire en français  
 30600. Phonétique et phonologie  
 31200. *Lost Illusions* by Balzac  
 31500. La Stylistique  
 31901. L'écriture autobiographique au moyen age  
 33001. La nouvelle au 19<sup>e</sup> siècle : Maupassant et Mérimée  
 33501. 33501. Les comédies de Molière: une éducation de l'honnêteté  
 34001. Fictions of the Self  
 34702. Topographie du classicisme  
 35401. Diderot et l'atelier du roman  
 35800. A.M. Seminar I  
 35900. A.M. Seminar II  
 36101. Victor Hugo  
 37701. Baudelaire  
 37901. La littérature française d'ancien régime (1580-1750) A l'épreuve de la critique génétique : Impasse ou promesse ?  
 38100. Medieval Romance  
 39400. Georges Perec et l'Oulipo

**42100. Readings and Research**

42700. Montaigne  
 42800. Mallarmé

**Italian**

30700. A.M. Survey I  
 30800. A.M. Survey II  
 30900. A.M. Survey III  
 33501. Boccaccio Decameron  
 35201. Renaissance Treatise of Love  
 35901. Petrarchismo  
 36203. Inventing Italy III: From Romanticism to the threshold of the Global Age  
 36401. Torquato Tasso  
 42100. Readings and Research

**Portuguese**

30100. Intermediate Portuguese  
 30200. Advanced Portuguese  
 31500. Estilística da língua portuguesa  
 33800. Books of Disquiet  
 33900. Gentle Peoples  
 42100. Readings and Research

**Romance Languages & Literatures**

30200. Romance Philology  
 31600. Theory of Literature  
 38800. Foreign Language Acquisition and Training

**Spanish**

30400. Curso de perfeccionamiento  
 30500. Académica para hablantes nativos  
 30600. Fonética y fonología  
 30601. Discurso Académico  
 31000. Heritage Speakers  
 31500. Introducción al análisis literario  
 33101. Literatura medieval española  
 34101. Cultura y esclavitud en América latina  
 34102. Introducción a la novela picaresca  
 34201. Cervantes e Italia: sus primeras obras  
 34300. Cervantes: sus últimas obras. Entre el Renacimiento y el Barroco  
 36101. Teatro español con temporáneo: de los clásicos a las salas alternativas  
 36701. Historia y memoria: La narración de pasado  
 37401. Literaturas del Caribe hispánico  
 38701. Poesía hispanoamericana escrita por mujeres  
 39101. Borges  
 42100. Readings and Research  
 46301. 19th Century U.S. Latino Public Sphere



# DEPARTMENT of SLAVIC LANGUAGES and LITERATURES

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<i>Chair</i>	<i>Assistant Professors</i>	<i>Lecturers</i>
Bill J. Darden	Robert Bird Daniela S. Hristova	Joanna Kurowska Mlynarczyk
<i>Professors</i>	Lina Steiner	Frida Lutskaya Litvak Nada Petkovic Djordjevic
Anna Lisa Crone Bill J. Darden Victor A. Friedman Norman W. Ingham Yuri Tsivian	<i>Senior Lecturers</i> Steven Clancy Valentina Pichugin	<i>Emeritus Faculty</i> Howard I. Aronson Milton H. Ehre Samuel Sandler Frantisek Svejkovsky Edward Wasiolek
<i>Associate Professors</i> Bozena Shallcross Malynne M. Sternstein		

## PROGRAM DESCRIPTION

### THE GRADUATE PROGRAM

The A.M. and Ph.D. programs provide rigorous professional training in Slavic Languages and Literatures in a supportive and interdisciplinary atmosphere. Students study to become generalists in Slavic Languages and Literatures, while at the same time choosing from a variety of more specific areas within the broader field. Many students also take advantage of close ties with specialists in Russian History, Linguistics, Comparative Literature, Cinema & Media Studies, and Anthropology. The Department's academic program, faculty student mentoring, training in language pedagogy, and support for early publications have consistently produced fine scholars who have succeeded in the highly competitive academic job market.

### 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.

### 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, Ukrainian, 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.

## 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.

## POLISH AND CZECH 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 A.M. and Ph.D. degrees in Polish and Czech literature and linguistics. Support for Czech and Slovak language study is provided by annual awards from the Department's Procházka Funds.

## DEGREE REQUIREMENTS

The following is an abbreviated account of department requirements.

### LITERATURE:

**A.M.:** 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. Students who intend to go on to the Ph.D. degree are encouraged to obtain preparation in a second Slavic language.

**Ph.D.:** 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. 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.

### LINGUISTICS:

**A.M.:** 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.

**Ph.D.:** 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 A.M. 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:

**A.M.:** 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 A.M. 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.

**Ph.D.:** Students must develop a plan of study by the end of their first year of study, to be approved by their A.M. 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.

#### REQUIREMENTS FOR ALL TRACKS:

**A.M.:** 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.

**Ph.D.:** 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.

## ADMISSIONS/FINANCIAL AID

The prerequisites for admission are a bachelor's degree or its equivalent and a 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:

<https://gradapplication.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admission and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 58<sup>th</sup> Street  
 Chicago, IL 60637

## CONTACT INFORMATION

For additional information about the Department of Slavic Languages and Literatures, please see <http://humanities.uchicago.edu/depts/slavic/> or call (773) 702 8033.

### Courses

Note: The following is a comprehensive listing of all graduate courses offered in the department. The more specialized courses are not usually repeated every year. The actual offerings for the year will be found in the quarterly Time Schedules (<http://registrar.uchicago.edu/courses.html>).

<u>General Slavic (SLAV)</u>			
30100. Introduction to Slavic Linguistics	31500. Teaching of Slavic Languages	32200. Linguistic Analysis of Old Slavic Texts	
<i>Hristova</i>	<i>Clancy</i>	<i>Staff</i>	
31000. Comparative Slavic I	31600. Slavic Grammatical Categories	33000. Language, Power, and Identity in Southeastern Europe	
<i>Staff</i>	<i>Staff</i>	<i>Friedman</i>	
31100. Comparative Slavic Morphology	31700. Introduction to Cognitive Linguistics	34000. Comparative South Slavic	
<i>Darden</i>	<i>Clancy</i>	<i>Friedman</i>	
31300. Slavic Syntax	32000. Old Church Slavonic	34100. Comparative West Slavic Linguistics.	
<i>Staff</i>	<i>Friedman</i>	<i>Darden, Clancy</i>	
31400. Oral Proficiency Testing	32100. Early Slavic Bible Translations		
<i>Staff</i>	<i>Darden</i>		

35000. Reading Course in Slavic Linguistics <i>Staff</i>	37700. History of Poetics II: From Romanticism to Symbolism <i>Staff</i>	39300. Sex, Sexuality, Society: The Slavia Orthodoxa World <i>Hristova</i>
35500. Practicum in Teaching Slavic Literatures <i>Staff</i>	37900. Nationalism and National Identity in East and Central European Literatures and Cultures <i>Staff</i>	39400. Fundamentals of Structuralism <i>Hristova</i>
35900. Words & Images: Introduction to Interdisciplinary Approaches <i>Shallcross</i>	38000. Theory of the Text: Textual Criticism <i>Staff</i>	39600. Eastern European Ethnography and Folklore <i>Staff</i>
36000. Slavic Performance: Theory and Practice. <i>Staff</i>	38100. The Literary Genre: Theory and History <i>Staff</i>	39900. Reading Course in Slavic Literature <i>Staff</i>
36500. Studies in Medieval Slavic Literature <i>Staff</i>	38200. Theory of Translation <i>Staff</i>	40100. Seminar: Slavic Linguistics <i>Staff</i>
36600. Novel Films: Cinematic Adaptations of Russian/Polish Literary Works <i>Shallcross</i>	38300. The Structuralist Theory of Literature and Culture in the Slavic and its European Context <i>Staff</i>	42300. Interactivity and the Cultural Analysis of Film <i>Tsivian</i>
36700. Left Wing Art and Soviet Film Culture of the 1920s <i>Tsivian</i>	38400. Avant Garde in East Central Europe <i>Sternstein</i>	45000. Proseminar: Literary Theory and Methods <i>Crone</i>
36800. Revolution & the Spirit: Russian & Polish Cinema, 1956 Present <i>Bird, Shallcross</i>	38500. Slavic Critical Theory: from Jakobson to Zizek <i>Sternstein</i>	46000. Proseminar: Slavic and East European Arts and Cultures. <i>Staff</i>
36900. Narratives of Suspense in Russian/European Literature and Film <i>Bird</i>	38600. Kitsch <i>Sternstein</i>	49900. Research on the Dissertation <i>Staff</i>
37100. Pre Romanticism <i>Staff</i>	38700. History of Slavic Poetics <i>Staff</i>	99900. Teaching Internship <i>Staff</i>
37200. Modern Central European Novel <i>Sternstein</i>	38800. Twentieth Century Literary Theory in the Slavic Countries I <i>Staff</i>	<b>Russian Languages and Literature (RUSS)</b>
37300. The Slavic Vampire <i>Sternstein</i>	38900. Twentieth Century Literary Theory in the Slavic Countries II <i>Staff</i>	30100, 30200, 30300. Advanced Russian <i>Pichugin</i>
37400. Narratives of Prague <i>Sternstein</i>	39000. East European Drama <i>Ehre</i>	30400, 30500, 30600. Intensive Russian Professional Conversation <i>Lutskaya Litvak</i>
37500. Modern Drama: 1830 1914 <i>Ehre</i>	39100. Language, Power and the Other <i>Sternstein</i>	31500. Methods of Teaching Russian <i>Staff</i>
37600. History of Poetics I: From the Middle Ages to Classicism <i>Staff</i>	39200. Slavoj Zizek and the Ljubljana School <i>Sternstein</i>	31800. Russian Historical Syntax <i>Hristova</i>
		31900. Reading Old Russian: The Primary Chronicle <i>Ingham</i>

32000. History of Russian I: Phonology <i>Darden</i>	34001. Nabokov's Early Novels <i>Bird</i>	35900. History and the Russian Novel <i>Hellie</i>
32100. History of Russian II: Morphology and Syntax <i>Darden</i>	34100. Pushkin <i>Ehre</i>	35901. Napoleon's Russian Campaign <i>Steiner</i>
32401. Enlightenment & Nineteenth Century Russian Literature <i>Steiner</i>	34101. Pushkin & His Age <i>Steiner</i>	36000. History of Russian Style <i>Ingham, Crone</i>
32700. Post Modernism and Eastern Europe <i>Sternstein</i>	34200. Russian Religious Thought <i>Crone</i>	36100. Eighteenth and Nineteenth Century Russian Poetry <i>Crone</i>
32800. Eisenstein and Soviet Aesthetic Theory <i>Tsivian</i>	34300. The Ode and the Elegy <i>Crone</i>	36200. Pushkin's Lyric Poetry <i>Crone</i>
32900. Man and Machine: Russian Prose in the 1920s <i>Staff</i>	34400. Nineteenth Century Poetry <i>Staff</i>	36300. Tyutchev and Fet <i>Crav</i>
33000. Structure of Russian I: Phonology <i>Darden</i>	34600. The Narrative Poem of the Twentieth Century <i>Bird</i>	36500. Lyric Poetry: Derzhavin through Pushkin <i>Staff</i>
33100. Morphology of Russian <i>Darden</i>	34800. Seminar: Russian Formalist Theory <i>Sternstein</i>	36600. Russian Modernism: Theory and Practice <i>Crone</i>
33200. Marxism & Modernism <i>Bird</i>	35000. Reading Course in Russian Linguistics <i>Staff</i>	36700. <i>The Idiot</i> and <i>The Possessed</i> <i>Crone</i>
33300. Andrei Tarkovsky and Andrei Rublev <i>Bird</i>	35100. East Slavic Literature to 1300 <i>Ingham</i>	36800. The Pushkin Pleiad: The Poets and the Genres <i>Crone</i>
33500. Platonov & Contemporary Criticism <i>Bird</i>	35200. Russian Literature, 1300-1600 <i>Ingham</i>	36900. Mayakovsky, Pasternak, and Tsvetaeva <i>Crone</i>
33601. Flaubert's <i>Madame Bovary</i> & Tolstoy's <i>Anna Karenina</i> <i>Wasiolek</i>	35300. Russian Literature, 1600-1725 <i>Ingham</i>	36901. Dickinson & Tsvetaeva <i>Crone</i>
33700. Four Poets of the Early 20th Century <i>Crone</i>	35400. Eighteenth Century Russian Literature <i>Ingham</i>	37100. Gogol <i>Ehre</i>
33800. Post Symbolist Prose from Remizov to Platonov <i>Bird</i>	35500. Introduction to Russian Literature I <i>Crone, Ingham, Bird, Steiner</i>	37200. Turgenev <i>Ingham</i>
33900. Superfluous Men in R(evolution) <i>Crone</i>	35600. Introduction to Russian Literature II <i>Crone, Ingham</i>	37300. Seminar: Eugene Onegin <i>Staff</i>
34000. Vladimir Nabokov <i>Sternstein, Crone</i>	35700. Introduction to Russian Literature III: Twentieth Century Russian Literature <i>Bird, Crav</i>	37400. Poetry's Place in Russian Culture <i>Staff</i>
	35800. Introduction to Russian Religious Philosophy <i>Crone</i>	37500. Dostoevsky <i>Ingham</i>
		37501. Innocence & Insight: Dostoevsky & James <i>Steiner</i>

37600. Tolstoy <i>Ingham</i>	39600. Pale Fire <i>Sternstein</i>	35000. Reading Course in Czech and Slovak Linguistics <i>Staff</i>
37601. The Psychological Novel <i>Steiner</i>	39900. Reading Course in Russian Literature <i>Staff</i>	35500. Introduction to Czech and Slovak Literature I: From the Beginnings to the Eighteenth Century <i>Sternstein</i>
37700. Chekhov <i>Staff</i>	40100. Seminar: Russian Linguistics <i>Staff</i>	35600. Introduction to Czech and Slovak Literature II: Nineteenth Century <i>Sternstein</i>
37800. Music and Thought: Baratynsky, Tyutchev, Batyushkov, and Fet <i>Crone</i>	41500. Seminar: Russian Literature <i>Staff</i>	35700. Modern Czech Literature <i>Sternstein</i>
37900. Russian Intellectual History 1830-80 <i>Crone</i>	45200. Seminar: Symbolism and Film <i>Tsivian</i>	35800. Survey of Czech and Slovak History and Culture I: From the Beginnings to the Eighteenth Century <i>Sternstein</i>
38000. Styles of Performance <i>Tsivian</i>	47200. Writing the Self <i>Crone</i>	35900. Survey of Czech and Slovak History and Culture II: Nineteenth Century <i>Sternstein</i>
38100. Russian Criticism: Nineteenth Century <i>Staff</i>	47500. Dostoevsky's <i>The Idiot</i> and the Critics <i>Crone</i>	36000. Survey of Czech and Slovak History and Culture III: Twentieth Century <i>Sternstein</i>
38200. Russian Criticism: Twentieth Century <i>Staff</i>	47600. Seminar: The Image of the Peasant in Russian Literature <i>Crone</i>	36300. Modern Literary Criticism: Czech and Slovak <i>Sternstein</i>
38300. Symbolism and Acmeism I <i>Crone</i>	47700. Bakhtin and Literature <i>Staff</i>	36400. Modern Czech Prose: Karl Capek and his Generation <i>Staff</i>
38400. Symbolism and Acmeism II <i>Crone</i>	49900. Research on the Dissertation <i>Staff</i>	36500. Modern Czech Poetry <i>Sternstein Staff</i>
38500. Homer and Tolstoy <i>Staff</i>	<b>Czech and Slovak Languages and Literatures (CZEC)</b>	36600. Modern Czech Drama <i>Sternstein</i>
38600. <i>The Brothers Karamazov</i> <i>Staff</i>	10100, 10200, 10300. Elementary Czech <i>Staff</i>	36700. Cas a Cesky Roman <i>Sternstein</i>
38700. Literary Structuralism in Russia <i>Staff</i>	20100, 20200, 20300. Second Year Czech <i>Staff</i>	37500. The Prague Linguistic Circle: The Beginnings of Structuralism <i>Staff</i>
38900. Early Soviet Prose <i>Ehre</i>	21200, 21300, 21400. Introduction to Slovak <i>Staff</i>	37600. Milan Kundera <i>Sternstein</i>
39000. Russian Drama I <i>Ingham</i>	32100. Structure of Czech and Slovak <i>Staff</i>	37700. Kafka in Prague <i>Sternstein</i>
39100. Russian Drama II <i>Staff</i>	32200. History of Czech and Slovak <i>Staff</i>	
39200. Contemporary Soviet Poetry <i>Crone</i>	34601. Capek & the Idea of Modernity <i>Sternstein</i>	
39300. Vladimir Solov'ev as Poet, Critic and Philosopher <i>Crone</i>		
39400. Theory and Practice of Translation <i>Staff</i>		

37800. Bohumil Hrabal <i>Sternstein</i>	36200. Introduction to Polish Literature III: Twentieth Century <i>Staff</i>	<b>South Slavic Languages and Literatures (SOSL)</b>
38000. Czech and Slovak Folklore <i>Staff</i>	37400. Introduction to Polish History and Culture I <i>Staff</i>	30400. Comparative South Slavic <i>Friedman</i>
38600. Medieval Czech Poetry <i>Staff</i>	37500. Introduction to Polish History and Culture II <i>Staff</i>	31000. Bulgarian for Reading Knowledge <i>Friedman, Hristova</i>
38700. Baroque Czech Poetry <i>Staff</i>	37600. Introduction to Polish History and Culture III <i>Staff</i>	31100. Structure of Bulgarian <i>Friedman, Hristova</i>
39000. Studies in Early Czech Literature <i>Staff</i>	38200. Construing the Other: The Verbal/Visual Representations of the Jewish Community in Polish Literature <i>Shallcross</i>	31200. History of Bulgarian <i>Friedman, Hristova</i>
39900. Reading Courses in Czech and Slovak Literature <i>Staff</i>	38600. Reading the Arch Text: Adam Mickiewicz's <i>Master Taeuesz</i> <i>Shallcross</i>	31700. Intensive Structure of Macedonian <i>Friedman</i>
40100. Seminar in Czech and Slovak Literature <i>Staff</i>	38700. The Art and Craft of the Polish Essay <i>Shallcross</i>	32100. Structure of Serbo Croatian <i>Staff</i>
49900. Research on the Dissertation <i>Staff</i>	38800. Postwar Polish Poetry <i>Shallcross</i>	32200. History of Serbo Croatian <i>Staff</i>
<b>Polish Language and Literature (POLI)</b>	38900. Word versus Image: Interdisciplinary and Polish Literature <i>Shallcross</i>	34000. Historical Comparative Survey of the South Slavic Languages <i>Staff</i>
10100, 10200, 10300. Elementary Polish <i>K Mlynarczyk</i>	39100. Representing the Holocaust in Polish Culture <i>Shallcross</i>	34100, 34200, 34300. Macedonian for Slavists <i>Friedman</i>
20100, 20200, 20300. Second Year Polish <i>K Mlynarczyk</i>	39400. Bodies, Things, Objects: An Interdisciplinary Inquiry <i>Shallcross</i>	34500. Comparative East South Slavic Linguistics <i>Friedman</i>
32100. Structure of Polish <i>Staff</i>	39900. Reading Course in Polish Literature <i>Staff</i>	35000. Reading Course in South Slavic Linguistics <i>Staff</i>
32200. History of Polish <i>Staff</i>	40100. Seminar: Polish Literature <i>Staff</i>	35100, 35200, 35300. Introduction to Macedonian <i>Staff</i>
35000. Reading Course in Polish Linguistics <i>Staff</i>	49900. Research on the Dissertation <i>Staff</i>	36100, 36200, 36300. Literatures of the South Slavs <i>Rakić</i>
36000. Introduction to Polish Literature I: From the Beginnings to the Eighteenth Century <i>Staff</i>		36700. South Slavic Oral Poetry <i>Rakić</i>
36100. Introduction to Polish Literature II: Nineteenth Century <i>Staff</i>		37000. Introduction to Romani <i>Friedman</i>

37100. Bosnian Ethnic Cauldron: Literature of Ivo Andrić <i>Rakić</i>	32200. History of Lithuanian <i>Darden</i>	<b>East European (EEUR)</b>
38000. Balkan Modernism in European Context <i>Staff</i>	32300. Comparative Balto Slavic <i>Darden</i>	30600, 30700, 30800. Albanian for Slavists <i>Friedman</i>
39900. Reading Course in South Slavic Literature <i>Staff</i>	35000. Readings in Balto Slavic Linguistics <i>Staff</i>	30900. Structure of Albanian <i>Friedman</i>
40100. Seminar: South Slavic Linguistics <i>Staff</i>	49900. Research for the Dissertation <i>Staff</i>	31000. Romani Language and Linguistics <i>Friedman</i>
49900. Research for the Dissertation <i>Staff</i>	<b>Bosnian/Croatian/Serbian (BCSN)</b>	32000. Contemporary East European Novel <i>Sternstein</i>
<b>Balto Slavic Linguistics (BALT)</b>	10100, 10200, 10300. Elementary Bosnian/Croatian/Serbian <i>Petkovic</i>	33100, 33200, 33300. Balkan Literature & National Identity <i>Staff</i>
30800. Lithuanian for Linguists <i>Darden</i>	20100, 20200, 20300. Intermediate Bosnian/Croatian/Serbian <i>Petkovic</i>	34000. Post Socialist Art: East/Central Europe <i>Sternstein</i>
31100, 31200, 31300. Lithuanian for Slavists <i>Darden</i>	30100, 30200, 30300. Advanced Bosnian/Croatian/Serbian <i>Petkovic</i>	34600. Structure of Lak <i>Friedman</i>
32100. Structure of Lithuanian <i>Darden</i>		36500. Hegel s Others <i>Sternstein</i>
		<b>Ukrainian (UKRA)</b>
		30100, 30200, 30300. Ukrainian for Slavists <i>Lutskaya Litvak</i>



# DEPARTMENT of SOUTH ASIAN LANGUAGES and CIVILIZATIONS

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<i>Chair</i>	Sascha Ebeling	James Lindholm
Wendy Doniger, Divinity	Rochona Majumdar	Nagaraj Paturi
	Valerie Ritter	Blake Wentworth
<i>Professors</i>	Ulrike Stark	
Muzaffar Alam		<i>Emeritus Faculty</i>
Dipesh Chakrabarty		Kali Charan Bahl
Steven Collins		Ronald B. Inden
Wendy Doniger, Divinity		Colin P. Masica
Clinton B. Seely		C. M. Naim
<i>Assistant Professors</i>		Frank E. Reynolds
Yigal Bronner	Nisha Kommattam	Norman H. Zide

The Department of South Asian Languages and Civilizations offers a program leading to the degree of Doctor of Philosophy. We consider the intellectual foundations that constitute the disciplinary identity of South Asian languages and civilizations the set of scholarly concerns, methods, and practices that define a Ph.D. degree in this department as opposed to one in history, for example, or anthropology to be the following:

skilled use of South Asian languages, seen as a primary goal of study and research (as opposed to viewing language as a tool for research);

the primacy of texts, which in turn comprises two features: close acquaintance with a wide range of major South Asian texts, and theoretical reflection on the conditions of our understanding them;

familiarity with both the pasts and presents the cultural, social, and other pasts and presents constituted by these languages and texts.

## PROGRAM OF STUDY

To receive the degree of Ph.D. in South Asian Languages and Civilizations, a student must complete at least eighteen courses. These will include the necessary language courses, two courses in South Asian texts and critical practices, one course in South Asian languages and civilizations as a unit of study, and six quarter units of course work relevant to the student's chosen specialty. Students with previous graduate work in the field of South Asian languages and civilizations may upon application receive credit for work done elsewhere.

## 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 primary languages appropriate to a student's chosen field of specialization. The languages in which the department offers concentrations are Bangla, Hindi, Pali, Sanskrit, Tamil, 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 lan-

guages; special arrangements must be made in advance with the instructors of these languages, and the students must petition the department in order to count these languages for their requirements.

Three languages are required: (A) the South Asian language of concentration; (B) a second South Asian language relevant to the student's program of study; and (C) a language of scholarship (French, German, Hindi, Japanese, etc.).

Students are required to achieve proficiency in the language of concentration (language A) equivalent to at least four years of study at the University of Chicago, and in the second South Asian language (language B) equivalent to at least two years of study at the University. Students may satisfy the requirement for proficiency at the fourth year level by writing a substantial research paper that makes use of sources written in that language and is approved by their adviser; they may satisfy the requirement for proficiency at the second year level by an examination. Students are expected to demonstrate satisfactory progress in required language courses.

Judgments of proficiency in reading the language of scholarship (language C) will be based on 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.

Students are strongly discouraged from taking two *first year* language sequences during the year in which they enter the program. It is highly desirable for students with little or no language training to plan to study a South Asian language in the summer prior to beginning their studies at Chicago.

## REQUIRED SEMINARS

Since competence in the discipline of South Asian languages and civilizations is demonstrated in part by close familiarity with major South Asian texts and by conscious reflection on strategies for understanding them, the Ph.D. program includes among its requirements two courses in South Asian Texts and Critical Practices (SALC 40100, 40200). In addition, one seminar on the unit of study the history and theory of South Asian languages and civilizations as a field of inquiry will be required (SALC 40000).

## ELECTIVES

Prior to admission to Ph.D. candidacy, students are expected to have completed at least six quarter units of course work relevant to their area of specialization. Students should consult carefully with their advisors in order to choose appropriate courses to fulfill their elective requirement.

## SEMINAR PAPER

Students must submit a paper at the end of their first year. In most cases this will be a paper already submitted to a seminar course. A faculty member from SALC will be appointed to read it, who will be different from the person who gave the seminar course. This procedure is designed to ensure that all students have a chance to get feedback on their writing skills at an early stage of the program.

## QUALIFYING PAPER

Students submit a qualifying paper in the fifth week of the spring quarter of their second year of study. This paper may address any particular theme of the student's choosing. It is expected to embody substantial research; it is not to exceed 40 double spaced pages in length. A first draft of the paper must be submitted to the adviser by the end of the winter quarter of the second year. Pass, high pass, or no pass are the grades awarded for the paper. If the qualifying paper is deemed unsatisfactory, the student is required to rewrite the paper; if the rewritten paper is not acceptable, the student is asked to withdraw from the program.

Upon successful completion of the qualifying paper, at least two years of the language of concentration, and the removal of all outstanding incompletes, a student may apply for the A.M. degree.

## BIBLIOGRAPHIES AND ORAL EXAMINATIONS

Students are required to prepare themselves for oral examinations in the literary, cultural, or other histories of South Asia through the independent study of individually prepared bibliographies. Students in consultation with their adviser design two bibliographies, and in the spring quarter of their second year they enroll in an ungraded seminar/discussion course which will provide a forum for discussing their bibliographies in progress with other students and with a member of the SALC faculty. The first must deal with the literary, cultural, or other history associated with their language of concentration. The second may be of their own choosing. Bibliographies are submitted and approved by the student's adviser by the end of the spring quarter of the second year in the program; the oral examination must be taken during the third year. The examination addresses both bibliographies together, and a single grade pass, high pass, or no pass is awarded.

## DISSERTATION PROPOSAL AND ADMISSION TO CANDIDACY

Before being admitted to candidacy, Ph.D. students must (i) complete at least 18 courses; (ii) meet general language requirements; (iii) complete the second year qualifying paper. At that point the student will write and orally defend a detailed dissertation proposal prepared under the supervision of the dissertation chair. Students may also choose to work on a preliminary draft of the dissertation proposal in the context of the seminar/discussion course given during spring quarter of their second year in the program. Students must have completed all requirements, and have removed all incompletes, by the end of the quarter in which the proposal is defended. This will usually occur near the end of a student's third year of graduate study. With successful completion of the dissertation proposal defense, the student is admitted to Ph.D. candidacy.

## THE DISSERTATION

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

The above is a synopsis of material contained in the *Graduate Student Handbook of the Department of South Asian Languages and Civilizations* available at <http://salc.uchicago.edu/degree.html>.

## 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:

<https://gradapplication.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@uchicago.edu) or (773) 702 1552. All correspondence and materials sent in support to applications should be mailed to:

The University of Chicago  
 Division of the Humanities  
 Walker, Suite 111  
 1115 East 58<sup>th</sup> 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). (current minimum scores, etc, are provided with the application.)

For additional information about the Department of South Asian Languages and Civilizations, please see <http://salc.uchicago.edu/> or email [salc@humanities.uchicago.edu](mailto:salc@humanities.uchicago.edu)

<u>Courses</u>			
20100, 20200. Introduction to the Civilizations of South Asia I, II	40100. South Asian Texts and Critical Practices I <i>Staff</i>	30100 30300. Third year Bangla <i>Seely</i>	
20800/30800. Music of South Asia <i>Bohlman, Winter 2006.</i>	40200. South Asian Texts and Critical Practices II <i>Staff</i>	40100 40300. Fourth year Bangla <i>Seely</i>	
209001/30900. Cultural Politics of Contemporary India <i>Mazzarella, Autumn 2005.</i>	40300. Workshop: Exams, Proposal Prep	47900. Readings: Advanced Bangla <i>Seely</i>	
22602/32602. Literature of Bengal: M.M. Dutt and Nineteenth Century Bengali Identity	48303. Indian Buddhism <i>Wedemeyer</i>		<u><b>Hindi</b></u>
<i>Seely</i>	48304. The Twenty Verses of Vasubandhu <i>Wedemeyer/Kapstein/Arnold</i>	10100 10300. First year Hindi <i>Grunebaum</i>	
23002/33002. Gender and Literature in South Asia <i>Ritter, Spring 2006.</i>	40300. Workshop: Exams, Proposal Prep	20100 20300. Second year Hindi <i>Grunebaum</i>	
29900. Informal Course: South Asia	49900. Thesis Research: South Asia	30100 30300. Third year Hindi <i>Ritter</i>	
<i>Staff</i>	60100. Teaching South Asia <i>Collins</i>	40100 40300. Fourth year Hindi <i>Ritter</i>	
38302. Hinduism: A Chronicle <i>Doniger</i>	<u><b>Bangla</b></u>	47900. Readings: Advanced Hindi <i>Ritter</i>	
39001. Tibetan Buddhism	10100 10300. First year Bangla <i>Seely</i>		
<i>Wedemeyer</i>	0100 20300. Second year Bangla <i>Seely</i>		

**Malayalam**

10100 10300. First year	
Malayalam	
<i>Kommattam</i>	
20100 20300. Second year	
Malayalam	
<i>Kommattam</i>	

**Marathi**

10100 10300. First year	
Marathi	
<i>Engblom</i>	
20100 20300. Second year	
Marathi	
<i>Engblom</i>	

**Pali**

10100 10300. First year	Pali
<i>Collins</i>	
20100 20300. Second year	
Pali	
<i>Collins</i>	
47900. Readings: Advanced	
Pali	
<i>Collins</i>	

**Sanskrit**

10100 10300. First year	
Sanskrit	
<i>Leavitt</i>	

**20100 20300. Second year**

Sanskrit	
<i>Staff</i>	
30100 30300. Third year	
Sanskrit	
<i>Bronner</i>	
40100 40300. Fourth year	
Sanskrit	
<i>Bronner</i>	

**47900. Readings: Advanced**

Sanskrit	
<i>Lindholm</i>	
20100 20300. Second year	

**20100 30300. Third year**

Sanskrit	
<i>Tamil</i>	
30100 30300. Third year	
Tamil	
<i>Ebeling</i>	
40100 40300. Fourth year	
Tamil	
<i>Ebeling</i>	

**10100 10300. First year****Tamil**

10100 10300. First year	
Tamil	
<i>Lindholm</i>	
20100 20300. Second year	
Tamil	
<i>Lindholm</i>	
30100 30300. Third year	
Tamil	
<i>Ebeling</i>	
40100 40300. Fourth year	
Tamil	
<i>Ebeling</i>	

**47900. Readings: Advanced**

Sanskrit	
<i>Tamil</i>	
30100 30300. Third year	
Tamil	
<i>Ebeling</i>	

**Telugu**

10100 10300. First Year	
Telugu	
<i>Paturi</i>	
20100 20300. Second year	
Telugu	
<i>Paturi</i>	

**Tibetan**

10100 10300. First year	
Tibetan	
<i>Jorden</i>	
20100 20300. Second year	
Tibetan	
<i>Jorden</i>	

**Urdu**

10100 10300. First year	
Urdu	
<i>Bashir</i>	
20100 20300. Second year	
Urdu	
<i>Bashir</i>	
30100 30300. Third year	
Urdu	
<i>Alam</i>	
40100 40300. Fourth year	
Urdu	
<i>Alam</i>	
47900. Readings: Advanced	
Urdu	
<i>Alam</i>	



## COMMITTEE on the VISUAL ARTS

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<i>Chair</i>	<i>Associate Professors</i>	<i>Harper Schmidt Fellow</i>
Laura Letinsky	Herbert George Darwin English, Art History	Dianna Frid
<i>Professors</i>	Kotaka Suzuki, Music	<i>Curator</i>
Bill Brown, English Charles Cohen, Art History Laura Letinsky Robert C. Peters	Matthew Jackson, Art History Alison Ruttan Drew Beattie	Stephanie Smith, Smart Museum
		<i>Emeritus Faculty</i>
		Vera Klement Thomas Mapp

**T**homas MappThe University of Chicago offers a Master of Fine Arts degree through the Committee on the Visual Arts, located at Midway Studios. Our MFA student body is comprised of artists working in sculpture, photography, painting, print making, installation, performance, video and new media. While our faculty has expertise in all these specific areas, students are expected to 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 art should not be an isolating activity and that students/artists benefit from the cross fertilization of daily contact with people dealing with similar sets of issues but working in different media. Art is a cultural product and, as such, we encourage students to explore not only the specifically artistic issues pertinent to their work, but also 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 their advisors. Each student will be assigned two advisors each quarter from the Committee on Visual Arts, but students are encouraged to develop a dialogue with as many faculty members as possible.

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 art history and other academic disciplines. Individual programs will be formulated with advisors 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 the first year, MFA students take a series of three specially designed seminars, one each quarter, that facilitate the investigation of their own artistic language and the development of community. The seminars aim to sharpen skills of critical thinking and writing, and include the examination of 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. Students are encouraged to be creative and analytical as they examine their own visual vocabulary and intellectual underpinnings. There are other rele

vant advanced seminars listed both through COVA and other departments. Some recent examples are: Early Video Art 1968-1979, The Skyscraper, Frankfurt School on Cinema, Modernity, and Mass Culture, Kitsch, and Sound Theory/Sound Practice. Also available to graduate students are the many classes offered by the College, which are listed in the undergraduate course catalog.

Throughout the academic year we have a lively schedule of visiting artists. These visitors come to Midway Studios 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 Committee on Cinema and Media Studies, Art History, and so on. Workshops that focus on professional and pedagogical issues are also offered periodically both by COVA and by Career and Placement Services to assist students in everything from taking slides to 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 spring COVA helps support a faculty led weekend tour of museums, galleries and studios in New York City.

Each student has two advisors with whom they meet once a week to discuss their 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 weekly meetings with two advisors, quarterly group critiques bring the faculty and students 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 facilitate students' understanding of their own and others' practice and are part of a supportive critical atmosphere that characterizes the Midway 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 his/her advisor, with the concurrence of the Graduate Student Advisor.

1. Studio courses (9-12). 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. Core academic sequence (3). In order to provide a core of common intellectual experience, each student is required to take a specially designed sequence of three seminar courses in the first year 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 each degree candidate will present an exhibition of their work at an appropriate University location that at least in part reflects the history of their activity while in the program. This work will be defended orally and requires approval of a majority of the faculty committee chosen to review it. A Master of Fine Arts paper 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. Each member of the graduating class also participates in a group show at a non University affiliated gallery in Chicago.

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: [cova@humanities.uchicago.edu](mailto:cova@humanities.uchicago.edu) or see us online: <http://cova.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:

<https://grad.application.uchicago.edu/intro/humanities/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [org\\_hdos@uchicago.edu](mailto:org_hdos@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 58<sup>th</sup> Street  
Chicago, IL 60637







# THE DIVISION *of the* SOCIAL SCIENCES

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JOHN MARK HANSEN  
*Dean*

CONSTANTIN FASOLT  
*Deputy Dean and  
Master of the Collegiate  
Division*

LOIS STEIN  
*Dean of Students*

PATRICK HALL  
*Associate Dean of  
Students*

TIM BLACKMAN  
*Associate Dean of  
Students*

**T**he 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 A.M. 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 A.M. 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

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<b>MAPSS Executive Committee</b>	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 Alan Kolata, Anthropology Susan Goldin Meadow, Psychology	Gary Herrigel, Political Science Bruce Lincoln, Divinity Martha McClintock, Psychology Omar McRoberts, Sociology Howard Nussbaum, Psychology Anne Terry Straus, Social Sciences Richard Taub, Human Development and Sociology
<b>Director</b>	John J. MacAloon, Social Sciences	
<b>Associate Director</b>	Betty Farrell, Social Sciences	
Ralph Austen, History		
Dipesh Chakrabarty, South Asian Languages and Civilization		

## 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. degree. MAPSS offers a wide variety of disciplinary and interdisciplinary opportunities for advancing academic or career goals, while allowing a flexibility unusual among graduate programs. MAPSS makes the resources of a great university available for student centered 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.

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, non profit 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.

## ADMISSION

Applications are due by December 28 for admission to the autumn quarter of the next academic year. 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 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).

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 day time 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:

<http://grad-application.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd-admissions@uchicago.edu](mailto:ssd-admissions@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 59<sup>th</sup> 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](mailto:mapss@uchicago.edu).

You may also contact Diana Gray, Student Affairs Administrator at: 773 702 8312 or [dgray@uchicago.edu](mailto:dgray@uchicago.edu).

## PROGRAM REQUIREMENTS

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

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.

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.

Students select courses 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 Belz Holocaust 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.

## 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.

Recent MAPSS preceptors include:

Kim Babon, M.A., Ph.D. candidate in the Department of Sociology  
Kevin Caffrey, M.A., Ph.D. candidate in the Department of Anthropology  
Chad Cyrenne, M.A., Ph.D. candidate in the Department of Political Science  
Nicholas Dempsey, M.A., Ph.D. candidate in the Department of Sociology  
Alexander Dent, M.A., Ph.D. Anthropology, Earl S. Johnson Instructor  
Alexandra Hartnett, M.A., Ph.D. candidate in the Department of Anthropology  
Matthew Millikan, M.A., Ph.D. candidate in the Department of History  
Priya Shimpi, M.A., Ph.D. candidate in the Department of Psychology  
Sarah Van Deusen Phillips, M.A., Ph.D. candidate in the Committee on Human Development

## FURTHER INFORMATION

Additional information about the program: Master of Arts Program in the Social Sciences, The University of Chicago, 5828 South University Avenue, Chicago, IL 60637, telephone: (773) 702 8316, visit the MAPSS webpage at: <http://mapss.uchicago.edu> or send an e mail to: mapss@uchicago.edu.



## MASTER of ARTS *in* LATIN AMERICAN STUDIES

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**Director**

Dain Borges

**Associate Director**

Kristine Jones

**Academic Programs**

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>.

**T**he 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 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/degree/undergrad.html>).

The master's program attracts students who 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 multi disciplinary perspective. Others strengthen their training in a single discipline as it relates to Latin American Studies, or explore new fields.

Through the Masters 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. Led by the Associate Director of Latin American Studies, the Proseminar meets during the Fall and Winter quarters (for a total of one course credit).

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 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 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:

<http://gradapplication.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd.admissions@uchicago.edu](mailto:ssd.admissions@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).

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 masters degree program is generally not a required prerequisite to entering a PhD 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, equivalent to five quarters of study at the University of Chicago. This requirement normally will be met in Spanish or Portuguese. However, substitution of an Amerindian language (such as Aymara, Yucatec Maya or Nahuatl) or a language spoken in the Caribbean, such as French, 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. Placement examinations will be administered to allow entering students to register at the appropriate level of language instruction. Students may meet all or part of the language requirement through the placement examination (as often occurs in Spanish or Portuguese).

## COURSE REQUIREMENTS

The standard course requirement is fourteen quarter courses, to be met as follows: the Masters Proseminar in Latin American Studies; five courses in Latin American and Caribbean Studies, three disciplinary elective courses, and five language courses. Most students fulfill the language requirement through placement 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 five academic quarters or fewer. Students who place out of the language requirement may complete the remaining course requirements for the degree in three academic quarters, as most students do.

## 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 *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 and through the Rio Branco Visiting Professorship of Brazilian Studies. 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/degree/ctbo.html>.

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

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*Director*  
Martin Stokes

*Assistant Director*  
Rusty Rook

*Associate Director*  
Holly Shissler

*Project Assistant*  
Traci Lombré

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 admission 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.

## HOW TO APPLY THROUGH THE DIVISION OF THE SOCIAL SCIENCES

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:

<http://grad-application.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd-admissions@uchicago.edu](mailto:ssd-admissions@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 59<sup>th</sup> Street  
Chicago, IL 60637.

## PROGRAM REQUIREMENTS

Only courses taken for a quality grade 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 such as

Introduction to Judaic Civilization, or History of the Islamic Middle East, 600 to the Present;

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 Graduate School of Business. A student may earn the M.P.P. in Public Policy or the M.B.A. along with the A.M in Middle Eastern Studies in an integrated joint program normally requiring a total of three years of study.

## LANGUAGE

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.

## MIDDLE EASTERN STUDIES

All students in the A.M. program are required to take the core colloquium Approaches to the Study of Middle East (History 58000; Near Eastern History and Civilization 30631). Students must enroll in one of the two following three quarter sequences: Introduction to Judaic Civilization (Jewish Studies 31000, 31100, 31200) or History of the Islamic Middle East (History 35700, 35800, 35900; Near Eastern History and Civilization 30621, 30622, 30623). Those with previous work in Islamic studies will be advised to substitute, where appropriate, more advanced and specialized courses in the field.

## 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; or computer training. 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 Graduate 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 these Announcements and 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 ANTHROPOLOGY

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**Chair**

Jean Comaroff (2005 06)  
John D. Kelly (2006 09)

**Professors**

Manuela Carneiro da Cunha  
Jean Comaroff  
John L. Comaroff  
Judith B. Farquhar  
Raymond D. Fogelson  
Susan Gal  
John D. Kelly  
Karin Knorr Cetina,  
    Sociology  
Alan L. Kolata  
Kathleen D. Morrison  
Michael Silverstein  
Ronald Singer, Organismal  
    Biology and Anatomy  
Michel Rolph Trouillot  
Russell H. Tuttle

**Associate Professors**

Michael Dietler  
Stephan Palmié  
Danilyn Rutherford  
Adam T. Smith

**Assistant Professors**

Jessica R. Cattelino  
Shannon Dawdy  
Kesha D. Fikes  
Nicholas T. Kouchoukos  
Joseph P. Masco  
William T.S. Mazzarella

**Lecturer**

Maria Cecilia Lozada Cerna  
Mark Lycett

**Research Associate**

(*Professor*)  
Robert McCormick Adams

**Emeritus Faculty**

James W. Fernandez  
Leslie G. Freeman  
Paul Friedrich  
McKim Marriott  
Norman A. McQuown  
Nancy D. Munn  
Ralph W. Nicholas  
Marshall D. Sahlins  
Raymond T. Smith  
George W. Stocking, Jr.  
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; Anthropology of Latin America and the Caribbean; Art and Politics of East Asia; East Asia: Society, Politics and Economy; East Asia: Transregional Histories; Interdisciplinary Approaches to Modern France; Latin American History; Middle East History and Theory; Rethinking Traditional China;

and Theory and Practice in South Asia; Visual and Material Perspectives on East Asia), some thematic (e.g., Interdisciplinary Archaeology; Ancient Societies; Built Environment; Clinical Ethnography; Comparative Colonialisms; Culture, Life Course, and Mental Health; Education; EthNoise: The Ethnomusicology Workshop; Gender and Sexuality Studies; Human Rights; Interdisciplinary Christianities; Mass Culture; Political Communication and Society; Race and Religion: Thought, Practice, and Meaning; Reproduction of Race and Racial Ideologies; Science, Technology, Society and the State; Semiotics: Culture in Context; Social Processes and Institutions in Urban Space; Social History; and Sociologies and Cultures of Globalization), 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

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:

<http://grad.application.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to ssd admissions@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).

## 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 pre field 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), Eurasia (from the early bronze age through the Scythian era), South Asia and Oceania (state formation in South India, agricultural intensification, precolonial and 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 Armenia, Bolivia, Peru, France, India, Spain, Syria, 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.

<i>Courses</i>	34100, 34200. Development of Social and Cultural Theory (2 courses each) <i>Rutherford, da Cunha</i>	42000. Anthropological Methods <i>Fraquhar, Rutherford</i>
<u>Core Courses</u>		42010. Media Techniques for the Social Sciences <i>Kouchoukos</i>
Core Courses in all subfields	37200. Language in Culture I, II <i>Silverstein, Gal</i>	46900. Archaeological Data Sets <i>Lycett</i>
34000. Introduction to Chicago Anthropology	39000. Theory & Method in Archaeology <i>Morrison, A.T. Smith</i>	
<i>Staff</i>		

52200. Thesis Proposal Preparation  
*J. Comaroff, Gal, Silverstein*

52210. Archaeology Research Design  
*Dawdy, Kouchoukos*

52300. Craft of Anthropology Methods and Ethics  
*JL. Comaroff*

54100. Post Field Professionalization  
*Silverstein, J.L. Comaroff*

**Sociocultural Anthropology**

30300. Gender Theory and Anthropology  
*Gal*

31400. Media & Collective Identity in India  
*Mazzarella*

31700. Slavery & Unfree Labor  
*Palmié*

31800. Religious Movements: Native North America  
*Fogelson*

32000. Topics in Native America: Native Americans and the City; Federal Indian Law; Indian Civil Rights Act; Legal Context American Indian Gaming; Ethnography of Native American Novels  
*Straus*

32300. Anthropology of Science  
*Masco*

32700. Conditions of Indigeneity  
*Cattelino*

33100. Native North America I, II  
*Fogelson*

33400. Narrative & Experimental Ethnography  
*Fernandez*

33500. Lévi Strauss  
*Carneiro da Cunha*

33610. Medicine & Society in 20th Century China  
*Farquhar*

33700. Capitalism, Colonialism and Nationalism in the Pacific  
*Kelly*

33900. Trends in Amazonian Ethnology  
*Carneiro da Cunha*

34300. Topics in Psychological Anthropology  
*Fogelson*

34400. Fourth World Religion I, II  
*Fogelson*

34500. Anthropology of Museums I, II  
*Fogelson, Fred*

34600. History and Ethnography of Indonesia  
*Rutherford*

34900. Big Science & the Birth of the Nation State  
*Masco*

35200. Military Theory & Practice  
*Kelly*

35401. Consumption  
*Knorr Cetina*

35402. Markets and Money  
*Knorr Cetina*

35410. Anthropology of Everyday Life  
*Farquhar*

35500. Anthropology of Development  
*Kolata*

35800. Techscientific and Information Society  
*Knorr Cetina*

40200. Neoliberal Predicaments  
*Mazzarella*

40300. Medicine & Culture  
*J. Comaroff*

40400. Colonialism/Post Colonialism: Dialectics of Modernity  
*J. Comaroff, JL. Comaroff*

40500. Traditional Peoples Intellectual Rights  
*Carneiro da Cunha*

40900. Modernity and Its Margins: Southeast Asia  
*Rutherford*

41000. Introduction to the Anthropology of Media  
*Mazzarella*

41020. Media and Mediation  
*Mazzarella*

41100. Ethnography of Central and Eastern Europe  
*Gal*

41200. Anthropology of History  
*Palmié*

41400. Metaphor Theory  
*Fernandez*

41600. Digital Culture: Ethnography in and of the Internet  
*Mazzarella*

41800. Semiotic Technologies  
*Kelly*

41900. Crowds and Publics  
*Mazzarella*

42100. Kinship and Everyday Life  
*Rutherford*

42200. Interpreting the Potlatch  
*Masco*

42400. Anthropology of Christianity  
*Rutherford*

42500. Anthropology of the Afro Caribbean World  
*Palmié*

42600. Cultural Politics in Contemporary India  
*Mazzarella*

42605. Gandhi Today  
*Mazzarella*

42900. Performance and Politics  
*Mazzarella*

43400. Ethnography of the Global <i>Knorr Cetina</i>	51900. Semiotic Technologies <i>Kelly</i>	55305. Cultural Dimensions of Markets <i>Knorr Cetina</i>
43500. Beyond Modernity: The Future of Modern Society <i>Knorr Cetina</i>	52100. Anthropologies of Body and Experience <i>Farquhar</i>	55400. Utopia <i>Masco, Mazzarella</i>
43600. Locating America <i>Cattelino</i>	52600. Africanist Anthropology <i>J. Comaroff, JL. Comaroff</i>	55500. Law & Anthropology <i>JL. Comaroff</i>
43700. Weber, Veblen & Genealogies of Global Capitalism <i>Kelly</i>	52700. Anthropology of Security <i>Masco</i>	55600. Money, Economy, Value <i>Cattelino</i>
45100. Anthropology of the Body <i>J. Comaroff</i>	52800. Politics of Reproduction <i>Gal</i>	<b>Language and Culture/Linguistic Anthropology</b>
45300. Oral Narrative <i>Fernandez</i>	52900. The Fetish in History and Theory <i>Rutherford</i>	34800. Anthropology & Literature: Various Topics <i>Friedrich</i>
50400. Race, Geography & Transatlantic Discourse <i>Fikes</i>	53000. Postmodern and Experimental Ethnography <i>Fernandez</i>	34805. Comparative Poetry/Poetics <i>Friedrich</i>
50500. Commodity Aesthetics <i>Mazzarella</i>	53100. Performance Theory <i>Rutherford, Levin</i>	37000. Introduction to Linguistics I, II, III <i>Staff</i>
51001. Science Studies I: Military Science & War <i>Masco</i>	53200. Sovereignty, Citizenship and Nation <i>Cattelino</i>	37100. Culture History of American English <i>Silverstein</i>
51002. Science Studies II: Reinventing the Body <i>Masco</i>	53700. The 21st Century <i>J. Comaroff, JL. Comaroff</i>	37200. Language in Culture I, II <i>Silverstein, Gal</i>
51003. Science Studies III: The Information Age <i>Masco</i>	53800. Pornography & Publicity <i>Mazzarella</i>	37300. Phonology I, II (=Ling 308 9) <i>Staff</i>
51100. Colonial Law Givers <i>Kelly</i>	53900. Modern China: Anthropological & Historical Studies <i>Farquhar</i>	37400. Language, Power & Identity in Southeastern Europe <i>Friedman</i>
51200. Institutions and Ideologies <i>Rutherford</i>	54400. Paradoxes of Race <i>Palnié</i>	37500. Morphology and Syntax(=Ling 310) <i>Aronson</i>
51302. Topics in Psychological Anthropology: Culture Bound Syndromes <i>Fogelson</i>	54500. Political Anthropology <i>JL. Comaroff, AT. Smith</i>	37605. Language, Culture and Thought <i>Lucy</i>
51505. Tropics Logics, Anthropology and Twentieth Century Portuguese Colonialism <i>Fikes</i>	54800. Uncanny Modernities <i>Masco</i>	37700. Phonetics (=Ling 306) <i>Staff</i>
51600. Images, Idols, Icons: Problems in Representation <i>Carneiro da Cunha</i>	55100. Writing Race in Ethnography <i>Fikes</i>	37800. Syntax I, II (=Ling 304 5) <i>Staff</i>
	55200. Lefebvre, Geography and Subjectivity <i>Fikes</i>	45300. Explorations in Oral Narrative: The Folktale <i>Fernandez</i>
	55300. Media and Collective Identity in India <i>Mazzarella</i>	

47300. Historical Linguistics (=Ling 313) <i>Staff</i>	39300. Logic & Practice of Archaeology <i>Morrison, Lycett</i>	46900. Archaeological Data Sets <i>Lycett</i>
47500. Semiotics of Culture <i>Silverstein</i>	39400. South Asia before the Buddha <i>Morrison</i>	48000. Vision, Image, Aesthetics <i>A.T. Smith, Kouchoukos</i>
57700. Linguistic Anthropology Seminar: Current Research Topics <i>Silverstein, Gal</i>	39500. Archaeology of Eurasia <i>A.T. Smith</i>	56000. The Preindustrial City <i>Kolata</i>
<b>Archaeology</b>	39800. Anthropology of Technology <i>Kouchoukos, Yener</i>	56100. Long Term Histories of Tropical Forager Traders <i>Morrison</i>
36000. Great Excavations <i>A.T. Smith</i>	39900. Instrumental Analysis in Archaeology <i>Yener, Kouchoukos</i>	56200. The Human Environment <i>Kolata</i>
36100. Nomads & Settlers <i>Kouchoukos</i>	40100. The Inca and the Aztec States <i>Kolata</i>	56300. Archaeology of Empires <i>Morrison</i>
36200. Ceramic Analysis for Archaeologists <i>Dietler, Kouchoukos</i>	42300. Comparative Agricultural Systems <i>Kolata</i>	56400. The Intensification of Production <i>Morrison</i>
36300. Andean Prehistory <i>Kolata</i>	46000. Mesoamerican Archaeology <i>Kolata</i>	56500. The Archaeology of Colonial Encounters <i>Dietler</i>
36400. Archaeological Field Studies: Southwestern Archaeology <i>Lycett, Morrison</i>	46100. Archaeology and the Politics of the Past <i>Dietler</i>	56800. Power, Gender, Archaeology: Problems of Method <i>Morrison</i>
36500. Archaeological Field Studies: Design and Method <i>Lycett, Morrison</i>	46200. Archaeology of Industry <i>Kouchoukos</i>	56900. Landscapes: Theory and Interpretation <i>A.T. Smith</i>
36600. Archaeological Field Studies: Advanced Analytical Methods <i>Lycett</i>	46300. Archaeology & Natural Science <i>Kouchoukos</i>	58100. Current Directions in Archaeological Theory <i>A.T. Smith</i>
36700. Archaeology of Race and Ethnicity <i>Dawdy</i>	46400. Ancient States & Empires of Caucasia & Eastern Anatolia <i>A.T. Smith</i>	58200. Material Culture and Consumption <i>Dietler</i>
36800. Rise and Fall of Early Complex Societies <i>A.T. Smith</i>	46500. Ancient Celtic Societies <i>Dietler</i>	58300. Andean Ethnohistory <i>Kolata</i>
36900. Commerce & Culture: Indian Ocean Trade in Archaeological Perspective <i>Morrison</i>	46600. Economic Archaeology <i>Dietler</i>	58400. The Industrial City <i>Kouchoukos</i>
39000. Theory and Method in Archaeology <i>Morrison, A.T. Smith</i>	46700. Colonial Landscapes: Ancient Western Mediterranean <i>Dietler</i>	58500. Spatial Representation <i>Kouchoukos</i>
39100. Archaeobotanical Analysis <i>Morrison</i>	46800. Ethnoarchaeology and Material Culture <i>Dietler</i>	58600. Social Theory and the City <i>Kolata</i>
39205. Landscape History and Place Making <i>Lycett</i>		58700. Archaeological Approaches to Political Life <i>A.T. Smith</i>

58701. Archaeologies of Politics <i>A.T. Smith</i>	38200. Comparative Primate Morphology (=Evol 38200) <i>Tuttle</i>	38800. Bioarchaeology and the Human Skeleton <i>Lozada</i>
58800. Pollen Analysis <i>Morrison</i>	38300. Celebrity and Science in Paleoanthropology <i>Tuttle</i>	48100. Advanced Problems in Paleoanthropology (=Evol 48100) <i>Tuttle</i>
<b>Physical Anthropology</b>	38400. History and Theory of Human Evolution (=Evol 38400) <i>Tuttle</i>	48500. Advanced Problems in Primate Locomotion and Comparative Morphology (=Evol 48500) <i>Tuttle</i>
38000. Human Morphology I, II (=OrB/An 300 301) <i>Singer, Staff</i>	38600. Apes and Human Evolution (=Evol 38600) <i>Tuttle</i>	
38100. Evolution of the Hominoidea (=Evol 38100) <i>Tuttle</i>		



## DEPARTMENT of COMPARATIVE HUMAN DEVELOPMENT

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<b>Chair</b> Richard P. Taub	<b>Associate Professors</b> William Goldstein Dario Maestripieri Jennifer Cole	Sydney Hans Salikoko Mufwene
<b>Professors</b> Bertram J. Cohler Raymond Fogelson Susan Goldin Meadow John A. Lucy Tanya Luhrmann Martha K. McClintock David E. Orlinsky Richard Shweder Nancy Lou Stein Susan B. Stodolsky Richard P. Taub	<b>Assistant Professors</b> Micere Keels Christopher Johnson Jill Mateo	<b>Emeritus Faculty</b> R. Darrell Bock Mihaly Csikszentmihalyi Irene Elkin Daniel G. Freedman Eugene T. Gendlin Philip W. Jackson
	<b>Faculty Associates</b> Kathleen Cagney Jean Comaroff Judith Farquhar Susan Fisher	

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, cognition and clinical psychology. 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 through 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 psycho social 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.

*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 various high civilizations, including India, Japan, China, 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.

*Professional education in clinical psychology.* (option that can be taken with any of the current five programs). The professional education in clinical psychology provides an opportunity for students following one of the five substantive CHD programs to take the additional courses as part of the process necessary for licensure as a clinical psychologist. Students electing this option notify Dr. Bertram Cohler of their intention to participate in this program. Ideally, students are able to integrate their clinical psychology education into their scholarly work in the other areas of human development and culture. Students who anticipate seeking clinical psychology licensure after graduation should plan to take four core courses which overlap with the CHD requirements: biological basis of behavior, cognitive affective basis of behavior, individual (psychological) differences, and social basis of behavior. In addition, students should take a course in each of the following areas: psychological assessment, psychological intervention, and ethics of psychological practice.

Students should plan to have two part time (20 hours a week) practicum experiences (psychological assessment and psychological intervention). Further, students will need to have a year's full time internship in professional psychology. However, since practicum and, particularly, internship placements are difficult to obtain, we provide a year long course in psychological assessment (Wechsler scales, Rorschach, TAT) which is what internship sites expect of students. Further, we urge students to take two intervention courses (psychodynamic and cognitive behavioral therapy), and an additional course in structured diagnosis founded on the DSM IV. Students often elect to have three practicum experiences prior to applying for their pre doctoral internship. Completion of this course of study is presently recognized by many states as the necessary background for taking the licensure examination when accompanied by an additional year of post doctoral internship participation. The professional education in clinical psychology option is not an approved professional psychology training program by the American Psychological Association.

## WORKSHOPS

The Department of Comparative Human Development sponsors faculty student workshops, currently the Culture, Life Course, and Mental Health Workshop, a Clinical Ethnography Workshop, and a Center on Culture and Mental Health.

## 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://grad-application.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd-admissions@uchicago.edu](mailto:ssd-admissions@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 59<sup>th</sup> 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> or call 773 702 3971.

## 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 courses (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.

### Courses

This is a representative list of courses offered.

30401. Intensive Study of a Culture: Lowland Maya History and Ethnography <i>Lucy</i>	32800. Advanced Psychoanalytic Theory <i>Fisher</i>	36900. Family and Life Course <i>Cohler</i>
30501. Psychological Anthropology <i>Luhmann</i>	33400. Research Methods in Language Acquisition <i>Goldin Meadow</i>	37000. Classic Readings in the Ethnography of Psyche <i>Luhmann, Fogelson</i>
30600. Introduction to Social Psychology <i>Stein</i>	33500. Fourth World Religions <i>Fogelson</i>	37400. Personality: Community, Culture and Life Course <i>Orlinsky</i>
30700. Introduction to Developmental Psychology <i>Goldin Meadow, Hans</i>	33800. Emotion, Mind and Rationality <i>Stein</i>	37700. Models of Analysis of Variance and Factor Analysis <i>Stein</i>
30900 Biopsychology of Sex Differences <i>Mateo</i>	34100. Freud and the Interpretation of Dreams <i>Cohler</i>	37800. Evolutionary Social Psychology <i>Maestripieri</i>
31000. Cultural Psychology <i>Shweder</i>	34300. Primate Behavior <i>Maestripieri</i>	38000, 38100, 38200. Mind and Biology Proseminar I, II, III <i>Maestripieri, McClintock, Mateo</i>
31101. Psychopathology: Core Concepts and Current Directions <i>Staff</i>	34400. Observations of Child Behavior <i>Stodolsky</i>	38300. Clinical Ethnography <i>Luhmann</i>
31200. Education and Human Development <i>Stodolsky</i>	34600. Sexual Identity, Life Course and Life Story <i>Cohler</i>	38500. Freud and Psychoanalysis: The Lectures and Case Studies <i>Cohler</i>
31300. Freud: Human Development and Personality <i>Orlinsky</i>	34800 Kinship and Social Systems <i>Mateo</i>	38701. Social and Cultural Foundations of Mental Health <i>Orlinsky</i>
31603. Language Development <i>Goldin Meadow, Johnson</i>	34900. Biopsychology of Attachment <i>Maestripieri</i>	39200. Grammar, Cognition, and Experience <i>Johnson</i>
31700. Memory Techniques: The Constructions and Reconstruction of Self and Society <i>Cole</i>	35601. The Study of Conflict of Cultures, Attitudes and Changes <i>Stein</i>	39300. Qualitative Methods in the Social Sciences <i>Cohler</i>
31800. Modern Psychotherapies <i>Orlinsky</i>	35700. Urban Field Research <i>Taub</i>	40000. HD Concepts <i>Luhmann</i>
31900. Language, Culture, and Thought <i>Lucy</i>	36400. Theories of Emotion and the Psychology of Well Being <i>Stein</i>	40100, 40200. Human Development Colloquium <i>Orlinsky</i>
32000. Developmental Biopsychology <i>McClintock</i>	36500. Ethnographic Analysis <i>Luhmann</i>	40400. Qualitative Research Methods <i>Stodolsky</i>
32100 Culture, Power, Subjectivity <i>Cole</i>	36600. The Role of Early Experience in Development <i>Hans, Stein</i>	40800. Culture and Mind: Russians and Pragmatists <i>Cole</i>
	36800. Nonverbal Communication in Humans and Other Primates <i>Goldin Meadow, Maestripieri</i>	

41200. Perspectives on Educational Program Evaluation <i>Stodolsky</i>	42700. Theories of the Self <i>Lucy</i>	45400. Seminar: Research on Psychotherapists <i>Orlinsky</i>
42200. Seminar: Research in Behavioral Endocrinology <i>McClintock</i>	44300. Communicative Uses of Non Verbal Behavior <i>Goldin Meadow, McNeill</i>	45500. Entrepreneurship <i>Taub</i>
42300. Development through the Life Course <i>Hans</i>	44400. Seminar: Research and Evaluation Projects in Education <i>Stodolsky</i>	45600. When Cultures Collide: Norm Conflict in Multicultural Societies <i>Shweder</i>
42401. Trial Research 1 <i>Stodolsky</i>	44700. Seminar: Topics in Judgment and Decision Making <i>Goldstein</i>	54000, 54100. Statistical Research Methods I, II <i>Keller</i>
42402. Trial Research 11 <i>Taub</i>		



## COMMITTEE on CONCEPTUAL and HISTORICAL STUDIES of SCIENCE

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<b>Chair</b> Adrian Johns	Karin Knorr Cetina, Sociology and Anthropology	<b>Associate Professors</b> Adrian Johns, History (Chair)
<b>Professors</b> Arnold Davidson, Philosophy	John Lantos, Pediatrics and Maclean Center for Clinical Medical Ethics	Terry Regier, Psychology
Michael Foote, Geophysical Sciences	Howard Margolis, Public Policy	Alison Winter, History
Robert P. Geroch, Physics	Robert Perlman, Pediatrics	
Jan Goldstein, History	Robert J. Richards, History	
John Haugeland, Philosophy	Stephen M. Stigler, Statistics	
Janelle Huttenlocher, Psychology	Noel M. Swerdlow, Astronomy & Astrophysics	
Leo Kadanoff, Physics and Mathematics	Leigh Van Valen, Ecology & Evolution	
	William C. Wimsatt, Philosophy	
		<b>Assistant Professors</b> Jonathan Beere, Philosophy
		James Evans, Sociology
		Joseph Masco, Anthropology
		<b>Emeritus Faculty</b> George Stocking, Anthropology
		William W. Tait, 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 astronomy, 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://humanities.uchicago.edu/humanities/chss>. 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 ([chss@humanities.uchicago.edu](mailto:chss@humanities.uchicago.edu)).

## APPLICATION

Beginning in 2005/06, the Committee will exist jointly in the Divisions of the Humanities and the Social Sciences. New students will be admitted to the Committee only 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. If possible, the writing sample should deal with some topic in the history or philosophy of science.

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://grad.application.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd.admissions@uchicago.edu](mailto:ssd.admissions@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 by the chair of the committee 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 and statistics).

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.

In addition to formal graded courses, the committee conducts an informal, bi weekly Seminar on Important Things. It brings together students and faculty to discuss topics of general interest in the culture of science, and provides common ground for students whose quite varied interests might not otherwise draw them to the same classes. Topics are chosen by the participants themselves, and change from quarter to quarter. First and second year students are required to participate in the seminar, but do not receive a grade for doing so. After the second year, participation is optional, but many older students continue to attend.

Students must then pass oral examinations in the history of science and in the 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*

0300. Scientific and Technological Change <i>Wimsatt</i>	35100. Astronomy in the Scientific Revolution <i>Swerdlow</i>	39000. Astronomy of Kepler <i>Swerdlow</i>
30700. Michel Foucault's <i>History of Sexuality</i> <i>Davidson</i>	35600. Astronomy in Antiquity <i>Swerdlow</i>	39200. Goethe: Literature and Science <i>Richards</i>
30800. History, Epistemology, and Morality of Sex <i>Davidson</i>	37200. Philosophy of History: Narrative and Explanation <i>Richards</i>	40100. Seminar: Topics in Cognitive Development <i>Huttenlocher</i>
32500. Science in Victorian Britain <i>Winter</i>	37400. Cognitive Development <i>Huttenlocher</i>	41000. Science, Politics and Population, Europe: 1700-2000 <i>Goldstein and Geyer</i>
32900. History of Statistics <i>Stigler</i>	37600, 39600. Philosophy of Biology I, II <i>Wimsatt</i>	41700. Seminar: Evolution and Epistemology <i>Wimsatt</i>
33000. Intellectual Property and Piracy <i>Johns</i>	37700. Philosophy of the Social Sciences <i>Wimsatt</i>	41900. Michel Foucault: Power and Sexuality <i>Davidson</i>
33000. History of Cosmology <i>Swerdlow</i>	38200. Galileo's Astronomy and Conflicts with the Church <i>Swerdlow</i>	42000. Seminar: From Social Darwinism to Sociobiology <i>Richards</i>
33500. Elementary Logic <i>Cohen</i>	38300. Memory: History of a Mental Faculty and of a Historiography <i>Goldstein</i>	44900. Natural Philosophy 1200-1800 <i>Johns</i>
33700. Foundations of Modern Psychology: Wundt and James <i>Richards</i>	38400. Darwin's <i>Origin of Species</i> and <i>Descent of Man</i> <i>Richards</i>	42300. Seminar: Scientific and Technological Change <i>Wimsatt</i>
34800. Evolutionary Processes <i>Van Valen</i>		50000. Historical Epistemology <i>Davidson</i>

# DEPARTMENT of ECONOMICS

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<i>Chair</i>	Robert Shimer	<i>Visiting Professors</i>
Derek A. Neal	Hugo F. Sonnenschein	Kenneth Judd
<i>Professors</i>	Nancy L. Stokey	Iourii Manovskii
Fernando Alvarez	Robert M. Townsend	Motty Perry
Gary S. Becker		
Pierre André Chiappori	<i>Assistant Professors</i>	<i>Senior Lecturers</i>
Robert W. Fogel	Thomas Chaney	Victor O. Lima
David W. Galenson	Jeremy Fox	Allen R. Sanderson
Lars Peter Hansen	William Fuchs	Grace Tsiang
James J. Heckman	Ali Hortaçsu	
Steven Levitt	Marcin Peskin	<i>Lecturers</i>
Robert E. Lucas, Jr.	Susanne M. Schennach	Peter Bondarenko
Casey Mulligan	Chad Syverson	Thomas A. Evans
Kevin M. Murphy	Balázs Szentes	
Roger B. Myerson		<i>Emeritus Faculty</i>
Derek A. Neal	<i>Instructors</i>	Milton Friedman
Philip J. Reny	Shareen Joshi	Arnold C. Harberger
	Sebastian Ludmer	Larry A. Sjaastad
		Lester G. Telser
		George S. Tolley

**C**hicago is an unusually innovative department of economics. The proportion of new ideas in economics over the last forty years that have emanated from or become associated with Chicago 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 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, and rational expectations in macroeconomics. 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.shtml> .

## ADMISSION REQUIREMENTS

The Department of Economics enrolls an entering class of approximately thirty to thirty five graduate students every autumn. For admission to graduate study, a bachelor's degree (or equivalent) is required; for some international students, this may mean a degree beyond the baccalaureate. This degree need not be in economics, although some background in economics is 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).

In addition, prospective students who plan to concentrate in econometrics or mathematical economics are urged to take advanced courses in mathematics and statistics while they are undergraduates, and those who plan to concentrate in Economic History are urged to take advanced courses in history.

The program is designed as a Ph.D. program and there are no master's level courses or a self contained master's program. The department 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 taken as part of the doctoral program.

## ADMISSION PROCEDURE

Given the year long sequence of courses, students should plan to enter 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://gradapplication.uchicago.edu/intro/ssd/intro1.cfm> .

Questions pertaining to admissions and aid should be directed to [ssd-admissions@uchicago.edu](mailto:ssd-admissions@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 105  
1130 East 59th Street  
Chicago, IL 60637.

All applicants are required to submit scores from the Graduate Record Examination (GRE) General Test. Foreign applicants 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 employs a number of criteria to evaluate each applicant: previous educational record, letters of recommendation, 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 submitted; 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 October. 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 find themselves eligible for a M.A. degree.

The department devotes a large proportion of its resources to research in economics and to the training of advanced students in research. The research training activities are organized on a continuing basis in workshops and other groups. Each group consists of one or more faculty members and advanced students working on related endeavors. Student members receive individual instruction and participate in the seminars. Research training and facilities for research are available to all qualified students, both those associated with a research group and those engaged in individual research.

The program of a typical Ph.D. student consists of the following: 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.

<b>Courses</b>	30800. Social Choice and Mechanism Design	33701. Macroeconomic Dynamics
<b>CORE COURSES</b>	30900. Advanced Auction Theory	39600. Topics in Asset Pricing (=GSBC 35907)
<b>Price Theory</b>		
30100. Price Theory I		
30200. Price Theory II		
30300. Price Theory III		
<b>Quantitative Methods</b>		
30400. Introduction to Mathematical Methods in Economics	31500. Multivariate Time Series Analysis (=GSBC 41914)	<b>Labor Economics/ Human Capital</b>
31000. Empirical Analysis I	31601. Bayesian Statistics, Marketing and Micro econometrics (=GSBC 37904/ STAT 32600)	34201. Applied Price Theory
31100. Empirical Analysis II	31700. Topics in Econometrics	34300. Human Capital
31200. Empirical Analysis III	31800. Advanced Econometrics (=GSBC 41911)	34400. Job Mobility and Wage Determinants
<b>Theory of Income</b>		
33000. Theory of Income I	32000. Topics in American Economic History	<b>Development, Micro Theory, and Econometric Methods</b>
33100. Theory of Income II	32100. Colonization, Servitude, and Slavery: The Early American Experience	34600. Family, Firm and Collective Groups in General Equilibrium: Theory, Identification, and Estimation I
33200. Theory of Income III	32200. Population and the Economy (=GSBC 33470)	34900. Family, Firm and Collective Groups in General Equilibrium: Theory, Identification, and Estimation II
<b>SPECIALIZED FIELD COURSES</b>		35000. Empirical Microeconomics
<i>[Note: The Core courses are normally considered to be prerequisites for the specialized field courses. Specialized Fields and the courses within them may change from year to year depending on faculty preference.]</i>		
<b>Mathematical Economics</b>		<b>Economic Growth/ International Trade</b>
30500. Game Theory	32400. Economics and Demographics of Marketing (=GSBC 37104)	35301. International Trade and Growth
30600. The Economics of Information (=GSBC 33911)	32500. Topics in Monetary History	
30700. Decision Theory		<b>Public Sector Economics</b>
	<b>Money, Banking, and Macroeconomic Dynamics</b>	
	33600. Money and Inflation (=GSBC 33941)	36101. Economic Models of Politics
		36200. Public Sector Economics
		36301. Public Economics (=PPHA 44000)

**Financial Economics**

38900. Theory of Financial Decisions I (=GSBC 35901)  
 39001. Theory of Financial Decisions II (=GSBC 35902)  
 39100. Asset Pricing (=GSBC 35904)  
 39400. Theory of Financial Decisions III  
 39700. Topics in Dynamic Asset Pricing (=GSBC 35909)

**Industrial Organization**

40101. Advanced Industrial Organization I (=GSBC 33921)  
 40201. Advanced Industrial Organization II (=GSBC 33922)  
 40301. Advanced Industrial Organization III (=GSBC 33923)  
 40400. Topics in Industrial Organization  
 40500. Theories of Competition and their Applications  
 40600. Topics in Market Design

**OTHER COURSES**

*NOTE: The courses listed as Other may change from year to year depending on faculty preference.*

40900. Topics in Contract Theory  
 41800. Numerical Methods in Economics  
 42100. An Introduction to Doing Empirical Microeconomic Research  
 42300. Introduction to Doing Formal Economic Theory  
 49900. Individual Research: Economics (for Required Research Paper: to be arranged between individual faculty and students)

**SEMINARS AND WORKSHOPS**

*Note: This is a representative list that may change from year to year.*

50000. Workshop in Economic Theory  
 51400. Econometrics and Statistics Colloquium (=GSBC 41600)

51600. Workshop On Applied Dynamic Economics and General Equilibrium Theory  
 52100. Workshop in Economic History  
 53000. Workshop in Money and Banking  
 54300. Workshop in Applied Economics (=GSBC 33610)  
 58900. Workshop in Demography (=SOCI 60001)  
 59000. Workshop in Applications of Economics  
 59200. Workshop in Economic Policy and Public Finance  
 59300. Workshop in Applied Price Theory  
 60200. Applied Micro Working Group  
 60300. Economic Dynamics Working Group  
 60600. Capital Theory Working Group



## DEPARTMENT of HISTORY

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<i>Chair</i>	<i>Associate Professors</i>	
Prasenjit Duara	Guy S. Alitto	John Craig, Social Sciences Division
<i>Professors</i>		Leora Auslander
Ralph A. Austen	Dain Borges	Fred Donner, Near Eastern Languages and Civilizations
John W. Boyer	Susan Burns	Robert W. Fogel, Graduate School of Business
Dipesh Chakrabarty	Edward M. Cook	Richard Helmholz, Law School
George Chauncey	Rachel Fulton	Dennis Hutchinson, Master New Collegiate Division
Kathleen Conzen	Emilio H. Kouri	James Heria, International Studies
Bruce Cumings	Mae Ngai	Paul Mendes Flohr, Divinity School
Prasenjit Duara	Adrian D.S. Johns	A. Holly Shissler, Near East Languages
Constantin Fasolt	William Novak	
Sheila Fitzpatrick	Julie Saville	
Cornell Fleischer, Near Eastern Languages and Civilizations	Amy Dru Stanley	
Michael E. Geyer	Alison Winter	
Jan Ellen Goldstein		
Jonathan Hall		
Neil Harris	<i>Assistant Professors</i>	<i>Emeritus Faculty</i>
Richard Hellie	Maria Fusaro	Allen G. Debus
Thomas Holt	James Sparrow	T. Bentley Duncan
Walter E. Kaegi		John Hope Franklin
James Ketelaar	<i>Visiting Professor</i>	Charles Gray
Emmet Larkin	James Grossman, Newberry Library	Hanna H. Gray
Moishe Postone, College		Harry Harootunian
Robert J. Richards		Ping Ti Ho
Richard P. Saller	<i>Visiting Assistant Professors</i>	Halil Inalcik
William Sewell, Political Science	Tamara Griggs	Ronald B. Inden
Noel M. Swerdlow, Astronomy and Astrophysics		Barry D. Karl
Bernard Wasserstein	<i>Associate Faculty</i>	Friedrich Katz
John E. Woods	Muzaffar Alam, South Asian Languages and Civilizations	Julius Kirshner
	Catherine Brekus, Divinity School	William H. McNeill
	Jean Comaroff, Department of Anthropology	Tetsuo Najita
		Peter Novick

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 background; 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; and (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/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd\\_admissions@uchicago.edu](mailto:ssd_admissions@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, Foster105  
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) grades in the autumn and winter quarters courses, and (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/courses/index.html>.



## COMMITTEE on INTERNATIONAL RELATIONS

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<i>Chair</i>	Susan Gzesh, Law	Ronald Suny, Political Science
Duncan Snidal	Gary B. Herrigel, Political Science	Nathan Tarcov, Social Thought
<i>Professors</i>	Patrick Heuveline, Sociology	Bernard Wasserstein, History
Robert Z. Aliber, Business	Ronald Inden, History	Lisa Wedeen, Political Science
Ralph A. Austen, History	Friedrich Katz, History	
Charles Boix, Political Science	Charles Lipson, Political Science	Dali Yang, Political Science
John W. Boyer, History	Claudio Lomnitz, History	Salim Yaqub, History
Terry Clark, Sociology	Joseph P. Masco, Anthropology	Iris M. Young, Political Science
Bruce Cumings, History		
Daniel Drezner, Political Science	John J. Mearsheimer, Political Science	Dingxin Zhao, Sociology
Jean Bethke Elshain, Divinity	Robert Pape, Political Science	Marvin Zonis, Business
Michael E. Geyer, History	William L. Parish, Sociology	<i>Instructor</i>
Andreas Glaeser, Sociology	Eric Posner, Law	Kevin Narizny, International Studies
Charles Glaeser, Public Policy Studies	Martin Riesebrodt, Sociology	
Lloyd Gruber, Public Policy Studies	Saskia Sassen, Sociology	

**T**he Committee on International Relations (CIR) offers opportunities for graduate study at the master's level. The committee has a tradition of leadership and innovation in the study of international relations. Begun in 1931, and the oldest international relations program in the country, the committee's faculty has included such renowned scholars as Hans Morgenthau, Quincy Wright, and Morton Kaplan. The committee's current faculty members are actively engaged in research in their various fields of specialization within international relations.

The A.M. in international relations is broadly interdisciplinary. In addition to courses offered by the Committee, students select from graduate offerings in the academic divisions, the Graduate School of Business, the Law School, and the Irving B. Harris Graduate School of Public Policy Studies. The Division of the Social Sciences administers the program through a committee of faculty drawn from the departments and professional schools.

Graduates of CIR pursue varied careers. More than forty percent pursue continue academic and professional studies becoming academics, lawyers, and business professionals. Almost a third of CIR alumni work in the public sector at the state and national level as analysts and administrators. Others work in the private sector in a wide variety of fields, such as consulting, commerce, and journalism. They also work for philanthropic and research organizations, many with an international focus.

## PROGRAMS AND REQUIREMENTS

At present CIR offers four broad subfields: 1) Security, International History and International Relations Theory; 2) International Political Economy and Development; 3) Regional Studies and Nationalism; 4) Human Rights, International Law, and the Environment. By working in the several fields within international relations, students acquire knowledge on a range of issues and subjects, while also pursuing special interests in depth.

The Committee on International Relations offers a one year program leading to the Master of Arts in International Relations. Degree requirements for the one year program are: satisfactory completion of nine approved courses (three courses each quarter); satisfactory participation in the noncredit course Perspectives in International Relations in the autumn quarter; satisfactory participation in the master's paper workshop; and faculty acceptance of a 35-50 page master's paper.

The program also provides for a second year of study for select students to pursue an 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. CIR also offers graduate joint degree programs with the Law School and the Graduate School of Business administered through the Division of the Social Sciences. The requirements for the international relations portion of joint programs are the same as for the one year Master of Arts in International Relations. The joint J.D./A.M. degree program will normally take at least three years and students must register in the Division of the Social Sciences for six of the nine courses in the CIR portion of the program. Joint M.B.A./A.M. students must take twenty four courses to satisfy the program and distribution requirements of both the Business School and the Committee on International Relations.

CIR offers only the A.M. degree. Students who decide to advance their study of international relations at the University of Chicago beyond the master's level may apply for admission to a Ph.D. program. If admitted, the department will independently evaluate credit toward departmental program requirements.

## ADMISSION

All applicants are required to submit scores for the Graduate Record Examination (GRE) and a 10-20 page 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).

## 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:

<http://gradapplication.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd-admissions@uchicago.edu](mailto:ssd-admissions@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.

Applicants interested in the joint 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 contact The Graduate School of Business. An applicant who is also considering a non joint degree program must make a separate application to either the Graduate School of Business or the Committee on International Relations or both.

Additional program information can be found at the Committee's website: <http://cir.uchicago.edu>

### *Courses*

The following listing of courses is organized according to the four recognized international relations fields of study. This is a representative sampling only. Specific offerings vary from year to year. Prospective students should also consult other listings in these Announcements under the departments and committees of interest.

<u>Field 1: Security and International History</u>	<u>Field 2: International Political Economy and Development</u>	<u>Field 3: Regional Studies and Nationalism</u>
PolSci. 39800. Introduction to International Relations: <i>Lipson</i>	Business 33522. Assessing and Managing Political Risk in Global Investment: <i>Zonis</i>	Hist. 30201. Nationalism/Anti Colonial Movements in Africa I: <i>Randrianja</i>
PolSci. 53000. Seminar on Great Power Politics: <i>Mersheimer</i>	PolSci. 30200. Political Economy of Public Policy: <i>Snidal</i>	Hist. 75601. Seminar: Modern Korean History I: <i>Cumings</i>
PolSci. 39900. Strategy: <i>Pape</i>	PubPol. 35300. International Trade Theory and Policy: <i>Durkin</i>	PolSci. 35600. Japanese Politics; <i>Silberman</i>
Soc. 30114: Globalization: Empirical and Theoretical Elements	PubPol. 42800. U.S. Foreign Economic Policy: <i>Gruber</i>	Hist. 34300. History of Modern China: <i>Alitto</i>
PolSci. 32500. World Politics in the Twentieth Century: <i>Lipson</i>	PubPol. 42900. Seminar: Foundations of Int. Political Economy: <i>Gruber</i>	Soc. 30109. Revolutions/Rebellions in 20th Century China: <i>Zhao</i>
PolSci. 37600. War and the Nation State: <i>Mersheimer</i>	PolSci. 45000. Comparative Capitalisms I: <i>Herrigel</i>	PolSci. 37900. European Political Development: <i>Boix</i>
PolSci. 39700. IR: Transnationalism in a Postcolonial World: <i>Wade</i>		Hist. 36001. The United States and the Mideast, 1900 Present: <i>Yaqub</i>
PolSci. 50200. Political Realism: <i>Elshtain</i>		

Hist. 58001. Approaches for Study of Middle East: <i>Woods</i>	Soc. 50003. Seminar: Sociology of the State: <i>Zhao</i>	InterRel. 57900. Human Rights 3: <i>Gzesh</i>
Hist. 61900. Postwar Soviet History: <i>Fitzpatrick</i>	<b>Field 4: Human Rights, Environment and Law</b>	PubPol. 38900. Environmental Science and Policy: <i>Coursey/Frederick</i>
PolSci. 49000. History and Politics of Soviet Union: <i>Suny</i>	InterRel. 31600. Human Rights I: <i>Green</i>	Law 46001. Environmental Law: <i>Sunstein</i>
Hist. 38000. The United States Latinos: Origins and Histories: <i>Ngai</i>	InterRel. 39400. Human Rights 2: <i>Geyer</i>	Law 72901. Public International Law: <i>Swain</i>
Hist. 61100. Nation and Nationalism: <i>Suny</i>	InterRel. 44700. Immigration Law and Policy: <i>Gzesh</i>	Law 77201. Introduction to European Union Law: <i>Duquette</i>
Hist. 53200. Catastrophic Nationalism: <i>Geyer</i>	HumRights. 35600. When Cultures Collide: <i>Shweder</i>	Law 79601. Elements of International Law: <i>Gottlieb</i>



## DEPARTMENT *of* POLITICAL SCIENCE

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<b>Chair</b> Dali Yang	Nathan Tarcov, Social Thought Dali Yang Iris M. Young	Jacob T. Levy Patchen Markell Daniel Slater
<b>Professors</b>		
Danielle Allen, Classical Languages and Literatures	<b>Associate Professors</b> Gary B. Herrigel John McCormick J. Eric Oliver John F. Padgett Robert Pape Gerald N. Rosenberg Duncan Snidal Lisa Wedeen	<b>Emeritus Faculty</b> Leonard Binder Joseph Cropsey David Easton Morton A. Kaplan Norman H. Nie Lloyd Rudolph Susanne Rudolph Ronald Suny
Carles Boix		
John J. Brehm		
Cathy Cohen		
Michael Dawson		
J. Mark Hansen		
Charles Larmore, Philosophy		
Charles Lipson		
John J. Mearsheimer	<b>Assistant Professors</b> Daniel Drezner Jeffrey Grynaviski Melissa Harris Lacewell	<b>Associate Members</b> Elisabeth Clemens Jean Bethke Elshtain Charles Glaser Roger Myerson Martha Nussbaum
William Sewell		
Bernard S. Silberman		
Cass R. Sunstein, Law		

**T**he Department of Political Science offers a course of study leading to the Ph.D. degree. It does not have a master's degree program. 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. Our recently revised 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 three fields. Overall, eleven courses taken for quality grades are required by the end of the seventh 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 in the concentration area.

Students are required to pass comprehensive exams in two fields. The exams are offered twice a year and they may be taken at any point but the final deadline by which the exams must be taken is the ninth quarter (normally spring quarter of the third year).

Students beyond the A.M. level usually have opportunities to be teaching assistants and subsequently may be selected to teach in the College Core curriculum. Every year, several students at the advanced dissertation level are awarded Grodzins Prize Lectureships to teach their own course in the department.

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, hypotheses and methodology of the dissertation. 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. To meet the special needs of advanced graduate students who often work alone while conducting library research or writing the department has established a set of workshops where advanced graduate students present research in progress for discussion and constructive criticism. Within the department there are workshops in Comparative Politics, East Asia, Political Economy, Political Psychology, Political Theory, International Relations, and International Security Policy. There are many other interdisciplinary workshops throughout the University ranging from Law and Economics, to Gender and Society, to Russian Studies which are open to political science students. Writing a dissertation is usually an extended process of going back and forth with committee members on drafts and redrafts of chapters. Upon receiving final approval by the dissertation committee, the candidate gives a formal presentation based on the dissertation at the University. Following the presentation, which is open to the public, the candidate is questioned by an examining committee of three faculty members.

Our home page on the World Wide Web, with more information about current faculty, students, requirements and courses may be reached at <http://politicalscience.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://grad.application.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd.admissions@uchicago.edu](mailto:ssd.admissions@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.*

31600. Ancient and Medieval Political Thought <i>Allen</i>	35200. Two Revolutions: American and French <i>Tarcov</i>	42300. Democratic Theory <i>Markell</i>
31700. Pragmatism <i>Larmore</i>	36200. Women and Political Theory <i>Young</i>	42500. Postcolonial Political Theory <i>Young</i>
32100. Machiavelli <i>Tarcov</i>	36600. Value Pluralism <i>Larmore</i>	43900. Language, History and Political Theory <i>Markell</i>
33800. Socrates <i>Tarcov, Lerner</i>	38700. Politics of Rhetoric and Symbols <i>Wedeen</i>	44000. Hegel and Marx <i>Markell</i>
34000. American Political Thought, 1700-1900 <i>Levy</i>	40800. Normative Reasoning <i>Larmore</i>	45300. Liberalism and Democracy <i>Larmore</i>
34200. Reason and Tradition in Political Philosophy <i>Larmore</i>	41000. Rousseau <i>Tarcov</i>	45900. Theories of Equality <i>Young</i>
34520. Arendt's The Human Condition <i>Markell</i>	42000. Augustine or Rousseau? <i>Elshtain</i>	46600. Jurisprudence <i>Levy</i>

48200. Contemporary Theories of Justice <i>Larmore</i>	50500. War and Human Identity <i>Elshtain</i>	52500. Contemporary Democratic Theory <i>McCormick</i>
48300. Plato: Laws <i>Tarco</i>	51300. Topics in Social Theory <i>Sewell</i>	52315. Machiavelli's Political Thought <i>McCormick</i>
50200. Political Realism <i>Elshtain</i>	52000. Workshop on Political Theory <i>Allen, Larmore, Levy, Markell, McCormick, Elshtain, Postone</i>	55600. Workshop on Social Theory <i>Sewell, Postone</i>
50300. Just War and Politics <i>Elshtain</i>		

### 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. Courses cover the range of the field.*

30300. Survey of American Politics <i>Staff</i>	37200. Race, Politics and Segregation <i>Oliver</i>	46700. Religion and U.S. Politics <i>Harris Lacewell</i>
32200. Urban Politics/Voting Behavior <i>Oliver</i>	37500. Organizational Decision Making <i>Padgett</i>	48800. Introduction to Constitutional Law <i>Rosenberg</i>
34300. Research Seminar on African American Politics <i>Dawson</i>	38500. Recent Literature on Courts <i>Rosenberg</i>	49700. Obesity, Politics and Society <i>Oliver</i>
34900. American Political Behavior <i>Harris Lacewell</i>	39100. Seminar on Legal Classics <i>Rosenberg</i>	54500. Workshop on American Politics <i>Brehm, Dawson, Hansen, Harris Lacewell, Oliver, Rosenberg</i>
35000. Race and U.S. Politics <i>Dawson</i>	40302. American Indian Law and Politics <i>Levy</i>	
35500. Public Opinion <i>Brehm</i>	41700. Social Movements <i>Cohen</i>	
37000. Law and Politics: U.S. Courts and Political Institutions <i>Rosenberg</i>	46500. Politics of Deviance <i>Cohen</i>	

### 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.*

32800. Capitalism in Modern Europe <i>Sewell</i>	39500. Membership and Citizenship <i>Wedgeen</i>	49400. Nations and Nationalism <i>Wedgeen</i>
35600. Japanese Politics <i>Silberman</i>	40200. Seminar on Japanese Politics <i>Silberman</i>	53400. States and Cultures <i>Sewell</i>
36500. State, Society, and Democratization in <i>Slater</i>	44400. Comparative Political Economy of East Asia <i>Yang</i>	54600. Workshop on East Asia <i>Yang</i>
37100. Comparative Political Economy <i>Boix</i>	44900. Topics in Historical Political Economy <i>Herrigel</i>	55400. Social Bases of Comparative Politics <i>Boix</i>
37300. Organizations in Historical Context <i>Padgett</i>	45010. Social Theory and the Economy <i>Herrigel</i>	55500. Workshop on Comparative Politics <i>Boix, Wedeen</i>
38000. Organizations, Ideology, and Political Change <i>Silberman</i>	45110. Issues in Comparative Capitalism <i>Herrigel</i>	65200. Bureaucratic Rationalization of the State: Japan and Germany <i>Silberman</i>
38400. Chinese Politics and Political Economy <i>Yang</i>	47400. State and Market Formation <i>Padgett</i>	65300. Modern Japanese Politics and Political Development <i>Silberman</i>
38800. Politics of Economic Reforms <i>Yang</i>	47800. Rethinking Democratic Practice <i>Wedgeen</i>	65400. Japanese Political Institutions <i>Silberman</i>
39200. Power and Resistance <i>Wedgeen</i>	48000. Seminar in Comparative Politics I <i>Boix, Wedeen</i>	
39300. Comparative Politics of the Middle East and North Africa <i>Wedgeen</i>	48100. Seminar in Comparative Politics II <i>Boix, Wedeen</i>	

#### **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.

32400. World Politics in the 19th Century <i>Lipson</i>	32600. World Politics in the 20th Century, 1945 1991 <i>Lipson</i>	35400. Essentials of International History for International Relations <i>Lipson</i>
32500. World Politics in the 20th Century, 1914 1945 <i>Lipson</i>	34700. Political Economy of China and International Affairs <i>Yang</i>	37400. International Relations: Perspectives on Conflict and Cooperation <i>Lipson</i>

37600. War and the Nation State <i>Mearsheimer</i>	39900. Strategy <i>Pape, Mearsheimer</i>	47600. Classics of International Relations <i>Drezner</i>
37700. Global Political Economy <i>Drezner</i>	40600. International Relations Theory <i>Pape</i>	48400. Workshop on International Security Policy <i>Glaser, Mearsheimer, Pape</i>
38310. Global Governance <i>Drezner</i>	41200. Terrorism <i>Pape</i>	49800. Risks of International Agreements <i>Lipson</i>
39400. International Political Economy <i>Lipson</i>	41500. Nationalism in the Age of Globalization <i>Mearsheimer</i>	53000. Great Power Politics <i>Mearsheimer</i>
39800. Introduction to International Relations <i>Lipson</i>	42700. Politics of Unipolarity <i>Pape</i>	59300. Workshop in International Relations <i>Lipson, Snidal</i>
	42900. Seminar on Realism <i>Mearsheimer</i>	

#### **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.*

30100. Mathematics for Political Science <i>Staff</i>	30800. Introduction to Game Theory <i>Staff</i>	43500. Applied Bayesian Statistics <i>Grynaviski</i>
30200. Political Economy/Public Policy I: Formal Models <i>Snidal</i>	30900. Game Theoretical Applications <i>Staff</i>	47300. Complexity <i>Padgett</i>
30500. Introduction to Data Analysis <i>Staff</i>	33300. Interpretive Methods in Political Science <i>Wedeen</i>	50900. Comparative Case Study Method <i>Mearsheimer</i>
30700. Introduction to Linear Models <i>Staff</i>	43100. Maximum Likelihood <i>Brehm</i>	57200. Social Network Analysis <i>Padgett</i>



## DEPARTMENT of PSYCHOLOGY

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<b>Chair</b> Howard C. Nusbaum	Joel M. Pokorny, Ophthalmology and Visual Science	<b>Emeritus Faculty</b> R. Darrell Bock Norman M. Bradburn Robert A. Butler, Surgery Mihaly Csikszentmihalyi Daniel G. Freedman Eugene T. Gendlin Sebastian P. Grossman Eric P. Hamp, Linguistics Philip W. Jackson, Education Jerre Levy Frederick F. Lighthall, Education
<b>Professors</b>		
Bennett Bertenthal	Steven K. Shevell	
Abraham Bookstein, Humanities Division	Richard Shweder, Human Development	
John T. Cacioppo	Michael Silverstein, Anthropology	
Bertram J. Cohler, Human Development	Steven K. Small, Neurology	
Jean Decety	Nancy Lou Stein	
Starkey Duncan	Benjamin D. Wright, Social Sciences Division	
Susan Goldin Meadow		
Janellen Huttenlocher	<b>Associate Professors</b>	
Boaz Keysar	William Goldstein	
Susan Cohen Levine	Penelope S. Visser	
John A. Lucy, Human Development	Terry Regier	
Daniel Margoliash, Organismal Biology and Anatomy		
Martha K. McClintock	<b>Assistant Professors</b>	
Howard C. Nusbaum	Sein Beilock	
	David C. Bradley	
	Josh Correll	
	David Gallo	
	Leslie M. Kay	
	Vera Maljkovic	
	Brian Prendergast	

**T**he 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, education, linguistics, 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 Biopsychology Program, the Cognition Program, the Developmental Psychology 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; and (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 who do not already hold a master's degree 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.

### CERTIFICATE IN SOCIAL PSYCHOLOGY

Students who have already been admitted to a Ph.D. program in the Division of the Social Sciences may pursue a Certificate in Social Psychology upon application to the Social Psychology area and approval by the Social Psychology area chair. The certificate will be awarded upon successful completion of the following requirements.

1. Three graduate courses in the Social Psychology Program taken for qualitative grades.

2 A teaching assistantship in a course on a topic related to Social Psychology under the supervision of a faculty member in the Social Psychology Program. (Faculty members in the Social Psychology Program include affiliate faculty whose primary appointment falls outside the Department of Psychology.)

3. A dissertation on a topic related to Social Psychology under the direction of a member of the Social Psychology Program.

Completion of these requirements will result in the notation Certificate in Social Psychology posted to the student's transcript.

Upon application and approval, as described above, Ph.D. students in other units who are working with affiliated Social Psychology faculty members may also pursue a Certificate in Social Psychology.

## 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. The Graduate Record Subject Examination in Psychology is also recommended, as is an example of the applicant's research and writing skills.

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 Biopsychology Program, the Perception 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:

<http://grad-application.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd-admissions@uchicago.edu](mailto:ssd-admissions@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 59<sup>th</sup> 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 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 12 courses. Other requirements for graduate students will be set by the student's area of specialization.

**Proseminar:** One quarter course in which faculty members give a summary of their ongoing research. This introduces new students to the range of research areas in the department.

**Statistics requirement:** Three courses: (1) Statistics 22000: Statistical Methods and Applications, or a more advanced Statistics course. (2) Psychology 37300: Experimental Design I, (3) Psychology 37900: Experimental Design II. These courses must be passed with a grade of B or better.

**Trial research seminar:** All graduate students are required to take a two quarter trial research seminar. One quarter is taken in the spring of the first year, and one quarter is taken in the autumn of the second 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. These courses will be Psych 30300: Biological Psychology; Psych 30400: Cognitive Psychology; Psych 30500: Developmental Psychology; Psych 30600: Social Psychology and Psych 30700: Sensation and Perception. Students will be required to take three of these five courses. These courses must be passed with a grade of B or better.

**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.

## SPECIALIZED TRAINING AND RESEARCH PROGRAMS IN THE DEPARTMENT OF PSYCHOLOGY

### BIOPSYCHOLOGY PROGRAM

Biological Psychology provides training in the dynamic interaction between behavior and multiple biological systems, including the nervous, endocrine, immune systems as well as gene regulation. Research with both animals and humans are encouraged as well as research on the development and evolution of behavior. The research training is provided within a mentored laboratory paradigm. Therefore students must be affiliated with a Biopsychology laboratory at all times. This affiliation and research training is recognized by registering for academic research credit.

To provide training in different research approaches, some part of the student's Trial or Dissertation research must be collaborative with another laboratory. For example, a student doing research on human pheromones in the McClintock Lab could collaborate with the Nusbaum or Cacioppo labs to assess their effects on attention or the autonomic nervous system. Or, a student in the Kay lab could collaborate with the Bradley or Margoliash labs on a computational model of neural systems. The course requirements for the Biopsychology Program are:

1. The common graduate curriculum of the Department of Psychology.

Within the common curriculum, there are two requirements of Biopsychology students.

(a) Biopsychology students must take Psychology 30300, Biological Psychology as one of their three core psychology classes and

(b) Fulfill the Department Minor Area requirement by taking three courses from the following disciplines: Neuroscience, Computational Neuroscience, Genetics, Immunology, Endocrinology, Ecology and Evolution.

They may be three courses within the same discipline, or across them, as long as they form a coherent whole.

2. Two courses taken in different areas of Biopsychology: Behavioral Neuroscience, Social Neuroscience, Behavioral Neuroendocrinology and Immunology, Animal Behavior and Comparative Psychology. (At least one of the courses used to fulfill the requirements should focus on animal research and one on human research.)

### 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. At the University of Chicago, the Cognition Program has three specific areas of study: Cognitive Psychology, Language, and Cognitive Neuroscience.

Goals of the Cognitive Psychology Area. The goal of the Cognitive Psychology area is to provide training that is grounded in the basic principles and theories of cognitive psychology. The focus of training in this area is on behavioral research methods and theories of human information processing and computational modeling. Research topics include categorization, learning, attention, long term memory, working memory use, visual perception, speech perception, and motor behavior.

Goals of the Language Area. The psychological study of language is central to psychology, and is strongly represented in our department. This area offers graduate study investigating human language from several perspectives. There are four major research topics that comprise this area: (i) language and thought, (ii) modalities of linguistic expression, (iii) language acquisition, and (iv) discourse and pragmatics. Specific topics of research include: linguistic meaning and its relation to non linguistic cognition, speech perception, the study of gesture and other forms of nonverbal communication, vocabulary acquisition, syntax acquisition, the social bases of language use, discourse and narrative structure, and pragmatics. Methods used include experimentation, observational study, and computational modeling.

Goals of the Cognitive Neuroscience Area. The development of noninvasive neuroimaging methods has provided new ways of directly measuring neural activity in humans. The Brain Research Imaging Center provides the facilities for graduate student research at the University of Chicago using functional neuroimaging, transcranial magnetic stimulation, and human electrophysiology. In addition, graduate students can carry out single, multi unit, and field electrophysiological recordings on a range of different nonhuman animals. These methods are used to study the cortical and subcortical mechanisms involved in vision, olfaction, motor processing, language, learning, and attention.

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.

They must take Cognitive Psychology as one of their three core psychology classes.

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. Pre approved courses are:

Psych 31200: Systems neuroscience

Psych 31500: Neuroethology

Psych 32600: Speech perception

Psych 33200: Introduction to language development

Psych 34214: Cognitive neuroscience

Psych 34400: Computational models of language

Psych 34700: Social cognition

Psych 37500: Introduction to the psychology of language

Psych 38300: Attention

Psych 38500: Cognitive neuropsychology

Psych 39000: Vision

Students may also propose other courses, based on course offerings in a given year. Such student proposed courses should be approved by the curriculum committee prior to taking the courses.

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.

1. General course: Psych 30500. Psych 30500 is required of all students in the program except those who have already taken it as undergraduates at the University of Chicago. This course will also fulfill part of the core course requirements for the common graduate curriculum.

2 An advanced course in each of four areas of Developmental Psychology. The offerings may change from year to year. Certain seminars may also fulfill these requirements.

*Cognitive/Intellectual Development:* Psych 32500: Cognitive Development (Huttenlocher); Psych 33300: Cognition, Development and Learning (Stein, Trabasso); Psych 33600: Development in Infancy (Bertenthal)

*Biological Development:* Psyc 31700: Developmental Biopsychology (McClintock); Psyc 33100: Introduction to Developmental Neuropsychology (Levine); Psyc 34900: Biopsychology of Attachment (Maestripieri)

*Language/Communicative Development:* Psyc 33200: Language Development (Goldin Meadow); Psyc 35500: Language Socialization (Lucy); Psyc 38000: Language and Thought in Development (Huttenlocher)

*Language/Communicative Development:* Psych 33200: Language Development (Goldin Meadow); Psych 35500: Language Socialization (Lucy); Psych 38000: Language and Thought in Development (Huttenlocher)

*Social/Emotional Development:* Psyc 34300: Topics in Early Socialization (Duncan); Psyc 34500: Conflict in Early Parent child interaction (Duncan); Psyc 34700: The Development of Social Understanding (Stein)

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, or human development. The minor area courses must form a cohesive unit that relates to the student's program of study.

4. Students are strongly encouraged to take advanced courses and seminars, particularly in their area of interest.

## THE PERCEPTION PROGRAM

The Perception Program offers broad doctoral training in preparation for a research career in visual, auditory, olfactory and speech perception. A strong emphasis on research and faculty mentorship engages students in laboratories from the first year. The Perception curriculum includes the common requirements of the Department of Psychology as well as advanced preparation described below.

1. Psyc 30700 (Sensation and Perception) is required of all students in the Perception Program. This course also fulfills part of the core course requirement of the common graduate curriculum.

2. Four advanced courses in perception, usually taken during the first two years. Acceptable courses include

- Psyc 32000: Color Vision
- Psyc 32600: Speech Perception
- Psyc 33700: Perception and Action
- Psyc 35000: Physiology of Vision
- Psyc 38300: Attention
- Psyc 39000: Vision

3. Three neurobiology/neuroscience courses. These could be chosen from Systems Neurobiology (Neurobiology 30015, 30016, 30018), Computational Neuroscience (34400, 34500, 34600), or Dynamical Foundations of Neuroscience (Neurobiology 30031). These courses normally fulfill the Minor Area requirement of the Department of Psychology.

4. Three quarters of research. Beginning no later than the third quarter of the first year, Perception students register for research with one of the faculty members in the Perception program. The student will conduct an independent research project, which should be completed by the end of the seventh week of spring quarter of the second year. This project is intended to satisfy the Trial Research requirement of the Department of Psychology.

5. Participation in ongoing seminars and activities of other pre- and post-doctoral students in the Perception area. Students also are expected to attend department-wide colloquia in psychology.

## 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. Social Psychology: Introductory course in experimental social psychology. Can be waived with appropriate undergraduate coursework.

b. Proseminar in Social Psychology: One quarter course in which faculty members in the Chicago Program (but not in the Department of Psychology) give summaries 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:

- a. Self
- b. Social Cognition
- c. Social and Cognitive Neuroscience
- d. Decision Making
- e. Attitudes and Affect
- f. Stereotyping and Prejudice
- g. Communication and Language Processes
- h. Interpersonal Relations and Group Processes
- i. Political Psychology
- j. 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.

#### *Current Courses Offerings*

30300. Biological Psychology <i>Kay, Prendergast</i>	30500. Developmental Psychology <i>Goldin, Meadow, Levine, Staff</i>	30700. Sensation and Perception <i>Bradley</i>
30400. Cognitive Psychology <i>Maljkovic</i>	30600. Social Psychology <i>Goldstein, Cacioppo</i>	30801. Motivation and Biological Clocks <i>Prendergast</i>

31401. Cognitive Development and Complex Language Acquisition <i>Stein</i>	34100. Psychoneuroimmunology: Links between Nervous and Immune Systems <i>McClintock, Quintans</i>	37500. Introduction to the Psychology of Language <i>Nusbaum</i>
31500. Neuroethology <i>Margoliash</i>	34300. Early Socialization <i>Duncan</i>	37900. Experimental Design II <i>Shevell, Hedges</i>
31700. Developmental Biopsychology <i>McClintock</i>	34200. Universals in Language and Thought <i>Regier</i>	38100. Advanced Introduction to the Psychology of Language <i>Keysar</i>
31800. Adolescence and Youth: Personal Development and Social Context <i>Cohler</i>	34400. Computational Neuroscience III Language <i>Regier, Staff</i>	38300. Attention <i>Nusbaum</i>
31900. Language, Culture, and Thought <i>Lucy</i>	34500. Conflict in Early Parent Child Interaction <i>Duncan</i>	38500. Cognitive Neuropsychology <i>Nusbaum</i>
32000. Color Vision <i>Shevell</i>	34600. Sexual Identity, Life Course, and Life Story <i>Cohler</i>	39000. Vision <i>Pokorny</i>
32200/42250. Social Neuroscience <i>Cacioppo</i>	35000. Physiology of Vision <i>Bradley</i>	39200. fMRI Research Methods <i>Small</i>
32500. Topics in Cognitive Development <i>Huttenlocher</i>	35101. Perceiving Real life Scenes <i>Maljkovic</i>	39201, 39202, 39203. Brain Imaging Roundtable 1, 11, 111 <i>Small</i>
32800. Seminar: Environmental Effects on Cognitive Growth <i>Huttenlocher, Levine</i>	35400. Cognition, Culture, and Learning <i>Stein</i>	39300. Qualitative Methods in Psychology <i>Cohler</i>
33000. Cultural Psychology <i>Shweder</i>	35500. Language Socialization <i>Lucy</i>	39700, 39800, 39900. Topics in Experimental Social Psychology <i>Cacioppo, Visser</i>
33100. Seminar: Introduction to Developmental Neuropsychology <i>Levine</i>	35601. Population Coding in the Perceptual Brain <i>Bradley</i>	40500. Advanced Seminar in Developmental Psychology <i>Bertenthal</i>
33200. Language Development <i>Goldin Meadow, Johnson</i>	35650. The Study of Conflict, Culture, Attitudes, and Change <i>Stein</i>	40801, 40802, 40803. Developmental Seminar I, II, III <i>Levine, Bertenthal, Goldin Meadow, Huttenlocher</i>
33500. Special Populations: Lessons for Developmental Psychology <i>Levine</i>	36400. Theories of Emotion and the Psychology of Well Being <i>Stein</i>	41000, 41100, 41200. Advanced Topics in Vision I, II, III <i>Pokorny, Shevell</i>
33600. Development in Infancy <i>Bertenthal</i>	36900. Seminar: Olfaction and Cognition <i>Kay</i>	41901. Topics in Language, Culture, ad Thought <i>Lucy</i>
33800. Seminar: Mental Representation <i>Huttenlocher</i>	37000, 37100, 37200, Mind and Biology Proseminar. <i>Kay, McClintock, Maestripieri, Mateo</i>	42200. Seminar: Research in Behavioral Endocrinology <i>McClintock</i>
33900. Political Psychology <i>Visser</i>	37300. Experimental Design I <i>Shevell</i>	42500. Seminar: Attention <i>Nusbaum</i>

42800. Maps and Diagrams in Reasoning <i>Huttenlocher</i>	45300. Where Cultures Collide: Norm Conflict in Multicultural Societies <i>Shweder</i>	46900, 47000. Multidisciplinary Approaches to Psychiatric and Behavioral Genetics I, II <i>McClintock</i>
43200. Seminar: Language Development <i>Goldin Meadow</i>	45500. Visual Attention <i>Maljkovic</i>	47001, 47102 Language in Culture I and II <i>Silverstein</i>
43600. Processes of Judgment and Decision Making <i>Goldstein</i>	45600. Population Coding in the Perceptual Brain <i>Bradley</i>	47550. Seminar: Psychology of Language <i>Nusbaum</i>
43900. Professional Development, Research Ethics, and Science Policy <i>Bertenthal</i>	45900. Cognitive Neuropsychopharmacology <i>Nusbaum</i>	48500. Research Seminar in Social Neuroscience <i>Cacioppo</i>
44700. Topics in Judgment and Decision Making <i>Goldstein</i>	46000. What Counts as Data <i>Goldin Meadow, Luhman</i>	49700. Readings in Psychology <i>Staff</i>
45250. Advanced Methods in Psychology <i>Cacioppo</i>	46100. Attitudes and Persuasion <i>Visser</i>	49800. Research in Psychology <i>Staff</i>
	46500. Readings in Gesture <i>Goldin Meadow</i>	



## COMMITTEE on SOCIAL THOUGHT

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<i>Chair</i>	Jonathan Lear	David Wellbery
Robert Pippin	Mark Lilla	Anthony C. Yu
<i>Professors</i>	Jean Luc Marion	<i>Emeriti</i>
Danielle Allen	Glenn W. Most	Paul Friedrich
John Coetzee	Thomas Pavel	Leszek Kolakowski
Wendy Doniger	Robert B. Pippin	Joel Kraemer
Marc Fumaroli	James M. Redfield	Ralph Lerner
Hans Joas	Mark Strand	Charles W. Rosen
Leon R. Kass	Nathan Tarcov	
	David W. Tracy	

**T**he 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. 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. 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 fundamental 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 WH 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

## 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:

<http://grad-application.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd-admissions@uchicago.edu](mailto:ssd-admissions@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 59<sup>th</sup> 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.

<i>Courses</i>	32400. Liberalism & Religion <i>Lilla</i>	34500. The Saturated Phenomenon <i>Marion</i>
The following courses are among those that have been offered since autumn 1993.	32410. Emile <i>Lilla</i>	34510. Heidegger, Sein und Zeit, The Self, Individuation & Being <i>Marion</i>
30300. Plato's Laws <i>Tarcov</i>	32430. Don Quixote <i>Lilla</i>	34511. Heidegger, Sein und Zeit: Care, Historicity & Being <i>Marion</i>
30400. Short Fiction of Thomas Mann <i>Strand</i>	32700. Comparative Poetry/Poetics <i>Friedrich</i>	35400. Human Rights & Sociological Theory <i>Joas</i>
30800. Pushkin in Translation <i>Friedrich</i>	32900. Homer: Iliad/Western Muse <i>Friedrich</i>	35410. William James <i>Joas</i>
31100. The Enlightenment <i>Wellbery</i>	32910. Frazier's Cold Mountain <i>Friedrich</i>	35600. Religion, Sex, Politics & Release in Ancient India <i>Doniger</i>
31110. The Emergence of Modernism <i>Wellbery</i>	34100. Averroes Decisive Treatise <i>Lerner, Kraemer</i>	35610. Mythologies of Transvestism & Transsexuality <i>Doniger</i>
31300. Aeschylus <i>Allen</i>	34200. Critical Theory/Adorno <i>Pippin</i>	35900. Nietzsche: The Birth of Tragedy <i>Most</i>
31700. Machiavelli: Florentine Histories <i>Tarcov</i>	34400. Kierkegaard: Either or Or <i>Lar</i>	35910. Aeschylus, Agamemnon <i>Most</i>
31710. Machiavelli's Prince <i>Tarcov</i>	34410. Plato's Phaedrus <i>Lear/Coetzee</i>	
31720. Tyranny Ancient & Modern <i>Tarcov</i>	34420. Kierkegaard: Stages on Life's Way <i>Lear/Conant</i>	

35920. Aeschylus, <i>Choephoroi</i> <i>Mosf</i>	39100. More s Utopia <i>Lerner</i>	42800. Pushkin in Translation <i>Friedrich</i>
35930. The Gospel of John <i>Mosf</i>	39110. Churchill s <i>Marlborough</i> <i>Lerner</i>	43100. Thucydides in English <i>Redfield</i>
37400. Wallace Stevens <i>Strand/Tracy</i>	40500. Mythologies of Evil <i>Doniger/Yu</i>	43400. Max Scheler <i>Jas</i>
37510. Kierkegaard: The Sickness Unto Death <i>Lear</i>	40700. Storytelling in India <i>Doniger</i>	43410. Modern Sociological Theory <i>Jas</i>
38001/38002. Hegel s Phenomenology I & II <i>Pippin</i>	41500. Musil: The Man Without Qualities <i>Lilla</i>	46010. Whitman & Successors: Pessoa, Neruda <i>Strand/von Hallberg</i>
38200. Pascal s Pensées (In French) <i>Paxel</i>	41510. Hegel on Religion <i>Lilla</i>	49100/49101. Journey to the West, I & II <i>Yu</i>
38400. Une dramaturgie de la jeunesse: les comedies de Comeille <i>Fumaroli</i>	41600. Introduction to Freud & to Psychoanalysis <i>Lar</i>	49401. The Theology of the Late Augustine <i>Tracy/Schreiner</i>
38410. The Role of Academies in European Art Since the Renaissance <i>Fumaroli</i>	41700. Ralph Elison <i>Allen</i>	53600. Paradise Lost <i>Yu</i>
38420. Découvrir Marivaux <i>Fumaroli</i>	41810. Plutarch s Lives <i>Tarcov</i>	53610. T.S. Eliot <i>Yu</i>
38600. Tristam Shandy <i>Redfield</i>	42700. Quarrel of the Images <i>Fumaroli</i>	54600. Subjectivity & Morals in Descartes <i>Marion</i>
	42710. The European Novel: The 18 <sup>th</sup> Century <i>Fumaroli</i>	



## DEPARTMENT *of* SOCIOLOGY

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<i>Chair</i>	Richard P. Taub, College	<i>Visiting Professor</i>
William Parish	Linda Waite	Hans Joas
	Kazuo Yamaguchi	Karin Knorr Cetina
<i>Professors</i>	Dingxin Zhao	
Andrew Abbott		<i>Emeritus Faculty</i>
Gary S. Becker, Economics		Charles E. Bidwell
Terry N. Clark		Donald J. Bogue
John L. Comaroff, Anthropology		Evelyn M. Kitagawa
Edward O. Laumann		Fred L. Strodtbeck
Donald N. Levine		Gerald D. Suttles
William L. Parish	<i>Associate Professors</i>	
Stephen W. Raudenbush	Jason Beckfield	<i>Associated Faculty:</i>
Martin Riesebrodt, Divinity	James A. Evans	Ronald S. Burt, Business
Saskia Sassen	Ryon Lancaster	James A. Davis, NORC
Barbara Schneider	Yang Yang	Susan E. Mayer, Public
Ross M. Stolzenberg		Policy

**T**he 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 an urban 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, in which the institutions of other societies are compared with those of the United States. 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 type 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; the Alfred P. Sloan Center on Parents, Children, and Work; 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

<http://grad.application.uchicago.edu/intro/ssd/intro1.cfm>

Questions pertaining to admissions and aid should be directed to [ssd.admissions@uchicago.edu](mailto:ssd.admissions@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 59<sup>th</sup> 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 A.M. degree.

*Common core course requirements.* To complete the requirements for the A.M. and Ph.D. degrees, students are required to complete for credit a two quarter sequence, Sociological Inquiry I and II, as well as History of Social Theory, during the first year 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.

*Cross National Competence requirement.* Students have two options for fulfilling this requirement: 1) a high pass on one of the foreign language proficiency examinations administered by the university's Office of Test Administration, or 2) completion of a substantial paper, equivalent to the level of a master's paper, that makes extensive use of materials from one or more societies outside the anglophone world. Students whose high school or college degrees were received from schools where the language of instruction was not English are exempt from this requirement.

*Preliminary examination.* This is an A.M. final/Ph.D. qualifying written examination designed to demonstrate competence in several major subdisciplines of sociology. The examination is based on the common core courses, Sociological Inquiry I & II 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, in course work during the first year, and in the A.M. research paper, the department determines whether the student is allowed to continue for the Ph.D.

*The AM research paper.* The A.M. requirement is to write a publishable piece of work. Normally this will be an independent research article, in some cases it may be a review piece or purely theoretical argument. The requirement is designed to allow for a broad range of types of paper and to set a standard of professional form and quality. Typically, it is done in the second year. Students entering with an M.A. that required a major paper may petition to have this requirement waived.

*Special field examinations.* Each student is required to pass two special field examinations usually during the second and third years of residence, but in any case after passing the preliminary examination. The examinations are prepared on an individual basis in fields 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 examinations 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.

*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 passing the preliminary examination, students may 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 A.M. 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/Society, Politics and Economy; Gender and Sexuality; Organizations and Markets; Organizations and State Building; Political Communication and Society; Reproductions of Race and Racial Ideologies; Semiotics: Culture in Context; Social Theory; Sociology and Cultures of Globalization; Urban Education Reform; Urban Policy, Urban Social Processes.

<i>Courses</i>	
30001, 30002. Sociological Inquiry 1,2	30115. Conflict Theory & Aikido <i>Levine</i>
<i>Staff</i>	30116. Global Local Politics <i>Clark</i>
30003. History of Social Theory	30117. Religion and the City <i>McRoberts</i>
<i>Staff</i>	30118. Survey Research Overview <i>xan Huisma</i>
30004, 30005. Statistical Methods 1,2	30119. Sociology of Childhood and Family <i>Heuveline</i>
<i>Staff</i>	30120. Urban Policy Analysis <i>Clark</i>
30101. Organizational Analysis	30122. Introduction to Population <i>Waite</i>
<i>Laumann</i>	30123. Sociology of the Family <i>Waite</i>
30102. Social Change	30124. Population and Development <i>Heuveline</i>
<i>Parish</i>	30125. Rational Foundations of Social Theory <i>Yamaguchi</i>
30104. Urban Structure and Process	30126. Japanese Society <i>Yamaguchi</i>
<i>Sassen</i>	30127. Philosophical Anthropology <i>Levine</i>
30105. Educational Organization/Social Inequality	30128. Sociology of Education <i>Staff.</i>
<i>Bidwell</i>	30129. Economic Development in the Inner City <i>Tab</i>
30106. Political Sociology	30130. Implementation of Public Policy <i>Tab</i>
<i>Clark</i>	30131. Social/Political Movements <i>Zhou</i>
30107. Sociology of Human Sexuality	30301. Organizational Decision Making <i>Padgett</i>
<i>Laumann</i>	
30108. The Institution of Education	
<i>Bidwell</i>	
30109. Revolutions/Rebellions 20th Century China	
<i>Zhou</i>	
30110. Classical Theories of Culture	
<i>Glaeser</i>	
30111. Survey Analysis	
<i>Davis</i>	
30112. Hierarchical Linear Models	
<i>Hedges</i>	
30113. Sociology of China	
<i>Zhou</i>	
30114. Globalization: Empirical/Theoretical Elements	
<i>Sassen</i>	
	30302. Problems of Policy Implementation <i>Tab</i>
	30303. Urban Landscape as Social Text <i>M. Corzen</i>
	30304. Human Capital <i>Beder</i>
	30305. Ethiopian Society & Culture <i>Levine</i>
	30308, 30309. Applied Regression 1, 2 <i>Stolzenberg</i>
	30310. Demography of Aging and the Life Course <i>Cagney</i>
	39999. Reading/Rsch: Sociology MA Level <i>Staff</i>
	40101. Basic Demographic Analysis <i>Heuveline</i>
	40102. Advanced Demographic Analysis <i>Heuveline</i>
	40103. Event History Analysis 1 <i>Yamaguchi</i>
	40104. Event History Analysis 2 <i>Yamaguchi</i>
	40105. Culture and Identity <i>Glaeser</i>
	40107. Fertility/Reproductive Health in the 3rd World <i>Bogue</i>
	40108. Human Reproduction <i>Heuveline</i>
	40109. Loglinear Analysis <i>Yamaguchi</i>
	40110. Introduction to Max Weber <i>Riesebraat</i>
	40111. Introduction to Sociology of Religion <i>Riesebraat</i>

40112. Ethnographic Methods <i>McRoberts</i>	50004. Sem: Proposal Writing <i>Abbott</i>	50017 Sem: Urban Field Research <i>Tab</i>
40113, 40114. Ethnography Practicum 1,2 <i>Salzinger</i>	50005. Sem: Paradigms of Cultural Analysis <i>Glaeser</i>	50018. Sem: Chicago as Global City <i>Sassen</i>
40117. Design of Experiments <i>Stolzenberg</i>	50006. Sem: Entrepreneurship <i>Tab</i>	50019. Sem: Simmel <i>Levine</i>
40118. Community <i>Tab</i>	50007. Sem: Social Stratification <i>Laumann</i>	50020. Sem: State and Society <i>Clemens</i>
40119, 40120. Survey Research Practicum 1, 2 <i>Bartot</i>	50008. Sem: Religious Competition & Mission <i>Riesebrat</i>	50025. Seminar: U.S. Healthcare Industry <i>Casalino</i>
40122. Historical Sociology <i>Abbott</i>	50009. Sem: Religious Violence <i>Riesebrat</i>	50026. Modern Sociological Theory <i>Joas</i>
40123. Theorizing Religion <i>Riesebrat</i>	50010. Sem: Conversion & Commitment <i>Riesebrat</i>	50029. Seminar: William James <i>Joas</i>
40124. Communications Theory <i>Soderlund</i>	50012. Sem: A Clash of Civilizations? <i>Riesebrat</i>	50030. Religious Innovation and Historical Sociology <i>Joas</i>
<b>Seminars</b>	50013. Sem: Economic Sociology <i>Staff</i>	50031. Microsociology <i>Smith, Levine</i>
Seminar topics change frequently with shifts in current faculty research interests.	50014. Sem: Modernity & Discontents <i>Levine</i>	50032. Contemporary Policy Regimes <i>Clemens</i>
50002. Sem: Topics/Cultural Analysis <i>Glaeser</i>	50015. Sem: Max Scheler <i>Joas</i>	59999. Reading/Research PhD Level: Sociology <i>Staff.</i>
50003. Sem: Sociology of the State <i>Zwo</i>	50016. Sem: Paper Writing <i>Parish</i>	



# THE MORRIS FISHBEIN CENTER *for the* HISTORY *of* SCIENCE *and* MEDICINE

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**Director**

Robert J. Richards

**Faculty**

Jean Comaroff,  
Anthropology

Arnold Ira Davidson,  
Philosophy

Jan Ellen Goldstein, History  
Adrian Johns, History

Donald N. Levine, Sociology  
Howard Margolis, Public  
Policy Studies

Robert J. Richards, History

Joel M. Snyder, Art History

Stephen M. Stigler, Statistics

Noel M. Swerdlow,  
Astronomy and  
Astrophysics

Russell H. Tuttle,  
Anthropology

William C. Wimsatt,  
Philosophy

Alison Winter, History

**Emeritus Faculty**

Allen G. Debus, History

William H. Kruskal,  
Statistics

Saunders MacLane,  
Mathematics

Ian B. Mueller, Philosophy  
Peter Novick, History  
George W. Stocking, Jr.,  
Anthropology

**T**he 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 the Ph.D. program in 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.

The graduate program in the history of science and the history of medicine leads to the Ph.D. degree through the Department of History or through 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.

In addition to the study of the technical development of the sciences, programs are prepared for those who wish to investigate the relationship of science and medicine to religion, philosophy, literature, and technology, and to the broader context of social structure and cultural change. The program is thus oriented toward the training of professional historians of science and medicine who have an interest in internal as well as external approaches to the field. 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: [www.uchicago.edu/ssd/fishbein/](http://www.uchicago.edu/ssd/fishbein/) or by writing the Secretary of the Center, 1126 East 59th Street, Chicago, IL 60637.

### Courses

The following courses are representative of those offered by members of the center. Not all are offered in any one year.

<b>General Areas of History of Science</b>	<b>History and Philosophy of Biology and Medicine</b>	<b>Ethnographic Practice in Historical Perspective</b>
Antiquity to Scientific Revolution I, II <i>Swerdlow</i>	History of Medicine <i>Winter</i>	<i>Stocking</i>
Institutionalized Knowledge: The Human Sciences and Professions in 19th Century France <i>Goldstein</i>	Medicine and Culture <i>Comaroff</i>	History of Anthropology <i>Stocking</i>
History of the Book <i>Johns</i>	Darwin's Origin of Species <i>Richards</i>	Mesmerism and Psychology in the 19th century <i>Winter</i>
Natural Philosophy in the Early Modern Period <i>Johns</i>	From Social Darwinism to Sociobiology I, II <i>Richards</i>	Technologies of Truth <i>Winter</i>
German Romanticism <i>Richards</i>	History and Theory of Human Evolution <i>Tuttle</i>	Sociology of Scientific Knowledge <i>Johns</i>
Goethe: Literature and Science <i>Richards</i>	Philosophy of Biology <i>Wimsatt</i>	Workshop in the History of Human Sciences <i>Johns, Richards, Stocking, Winter</i>
Philosophy of History: Narrative and Explanation <i>Richards</i>	History and Philosophy of Genetics <i>Wimsatt</i>	<b>History of the Physical Sciences and Mathematics</b>
Science and Science Fiction <i>Wimsatt</i>	<b>History of the Social Sciences</b>	History of Astronomy <i>Swerdlow</i>
Seminar on Important Things <i>Johns, Richards, Winter</i>	History, Epistemology, and Morality of Sex <i>Davidson</i>	Galileo and the Church <i>Swerdlow</i>
Workshop in the History and Philosophy of Science <i>Staff</i>	Memory: History of a Mental Faculty and of a Historiography <i>Goldstein</i>	Astronomy in the Scientific Revolution <i>Swerdlow</i>
	From Evolutionism to Functionalism in British Anthropology <i>Stocking</i>	History of Statistics <i>Stigler</i>
		Scientific/Technologic Change <i>Wimsatt</i>



## COMMITTEE on GEOGRAPHICAL STUDIES

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### *Professors*

Michael P. Conzen  
Neil Harris, History  
Marvin W. Mikesell

### *Visiting Faculty*

Richard L. Edmonds  
Richard P. Greene

### *Associate Faculty*

Virginia Parks, Social  
Service Administration  
Saskia Sassen, Sociology  
Todd Schuble, GIS  
Specialist, Social Science  
Computing

### *Emeritus Faculty*

Donald Bogue, Sociology  
Norton S. Ginsburg  
Gerson M. Rosenthal,  
Biology  
Gerald Suttles, Sociology

**T**he 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.

#### 30100. Cultural Geography

*Mikesell*

A survey of problems having to do with the relationship of culture and nature as well as culture and nationality.

#### 31900. Historical Geography of the United States

*Conzen*

Examination of the spatial dynamics of frontier settlement, regional development, the social character of settlement patterns, and evolution of the cultural landscapes of America from pre European times to 1900. Includes an all day field trip.

#### 32000. United States in Geographical Perspective

*Conzen*

Systematic analysis of contemporary regional organization of American society and its economy, emphasizing the dynamics that explain the locational distribution of people, resources,

and economic activity and the settlement pattern; examines regional restructuring of industry and services, transportation, city growth, and cultural consumption.

#### 33500. Urban Geography

*Conzen*

Examination of the spatial organization and current restructuring of modern cities in light of the economic, social, cultural, and political forces that shape them.

#### 35300. Seminar: Problems in the Human Geography of the Middle East

*Mikesell*

Review and cartographic demonstration of habitat types, modes of livelihood, and ethnic distribution followed by student reports on selected aspects of human geography.

#### 36100. Roots of the Modern American City

*Conzen*

The economic, social, and physical development of the city in North America from early industrialization to the present. Emphasis is on evolving urban systems and the changing spatial organization of people and land use.

#### 36300. The Chinese Environment

*Edmonds*

This course explores the changing interrelationship between humans and the physical environment in China. The initial section of the course deals with physical geography and the country's resource base. The course then considers the human response to the opportunities offered by China's physical environment. In the final segment emphasis will be on environmental problems.

38200. Introduction to Cartography and GIS  
*Greene*

This course provides an introduction to cartographic practices (including map preparation, compilation, construction, and design) using computer based geographic information system (GIS) techniques. Lab sessions required.

39400. Seminar: Relationship of Nature and Culture  
*Mikesell*

Research and discussion on the logic and pathology revealed in evidence of the human use and misuse of the earth.

39500. Seminar: Culture and Nationality  
*Mikesell*

Examination of the role of language and religion in the integration of nation states and of examples of cultural dissidence and cultural conflict.

41000, 41100. American Landscapes I: 1850-1904  
*Harris*

Changes in the natural and man made environment, focusing on the settings American builders, architects, and their clients developed for work, housing, education, recreation, worship, and travel. Lectures and slides relate physical changes to social values, technological skills, and social structure.

41700. Seminar: History of Geography  
*Mikesell*

42400. Urban Landscapes as Social Text  
*Conzen*

In relation to the fundamental approaches in the analytical literature on landscapes (normative, historical, and communication modes of conceptualization), the course explores the meanings to be found in varieties

of urban landscapes, both in the context of individual elements and composite structures.

42500. Seminar: The Geography of American Urbanization  
*Conzen*

Advanced graduate research seminar for students interested in any aspect of urbanism and urban processes in North America, either contemporary or historical.

47000. Seminar: Problems in Teaching Geography  
*Mikesell*

## NORC

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**N**ORC 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 predoctoral 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.







# THE DIVISION *of the* BIOLOGICAL SCIENCES *and the* PRITZKER SCHOOL *of* MEDICINE

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JAMES MADARA, M.D.

*Richard T. Crane Professor  
Dean, Division of the  
Biological Sciences and the  
Pritzker School  
of Medicine  
University Vice President for  
Medical Affairs*

NANCY B. SCHWARTZ

*Dean for Graduate  
Affairs*

HOLLY J. HUMPHREY, M.D.

*Professor of Medicine  
Dean for Medical  
Education*

**T**he 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.

- (a) Those individuals not continuing in their Ph.D. program of study may be awarded a terminal masters degree.
- (b) 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.

- (a) Bachelors degree from an accredited undergraduate institution or equivalent training.
- (b) 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.
- (c) 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.
- (d) Preliminary examinations testing the candidates qualifications for candidacy.
- (e) Fulfillment of the divisional teaching requirement. Before the Ph.D. can be awarded, students are required to teach twice (two quarters) for credit in pre approved teaching assistant positions in the biological sciences.
- (f) 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.
- (g) 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.
- (h) 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.)
- (i) Acceptance of a dissertation submitted by the student to the department or committee having jurisdiction over the student's program.
- (j) A successful final examination given by the department or committee concerned.

## A.B./S.M. DEGREE

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. Currently only a few departments 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. See the section on the Pritzker School of Medicine for details.

## 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 and the Growth and Development M.D./Ph.D. Program.



## PROGRAMS *of* GRADUATE STUDY *in the* BASIC BIOLOGICAL SCIENCES

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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:

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

The Department of Molecular Genetics and Cell Biology

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

Neurobiology, Pharmacology and Physiology

The Committee on Cell Physiology

The Committee on Computational Neuroscience

The Committee on Neurobiology

The Department of Neurobiology, Pharmacology and Physiology

Biomedical Sciences: Cancer, Immunology, Nutrition, Pathology, and Virology

The Committee on Cancer Biology

The Committee on Molecular Metabolism and Nutrition

The Committee on Immunology

The Department of Pathology

The Committee on Microbiology

Three degree granting units have not entered into a cluster arrangement and provide separate admission. They are:

The Department of Health Studies

(master's program only)

The Department of Ophthalmology and Visual Science

The Committee on Medical Physics

## 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 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://gradprogram.bsd.uchicago.edu>. We recommend that you apply online.

## DEADLINES

Applications are due December 28<sup>th</sup> 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 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 set up 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 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, and (5) the Test of English as a Foreign Language (for foreign students whose native language is not English).

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 is 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

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***Chair***

Anthony Kossiakoff

***Professors***Francisco Benzanilla,  
Pediatrics

Glyn Dawson, Pediatrics

Godfrey S. Getz, Pathology

Geoffrey Greene, Ben May  
Institute for Cancer

Research

Robert Haselkorn,  
Molecular Genetics and

Cell Biology

Stephen Kent

Anthony Kossiakoff

Shutsung Liao, Ben May

Institute for Cancer  
Research

Marvin W. Makinen

John Keith Moffat

Eduardo Perozo, Pediatrics

Bernard Roizman,  
Molecular Genetics and  
Cell Biology

Benoit Roux, Pediatrics

Angelo M. Scanu, Medicine

Nancy B. Schwartz,  
Pediatrics

James A. Shapiro

Theodore L. Steck

Donald F. Steiner

Ira G. Wool

***Associate Professors***Herbert C. Friedmann  
Shohei Koide

Tao Pan

Joseph A. Piccirilli

Phoebe Rice

Tobin R. Sosnick

***Assistant Professors***

Erin Adams

Sean D. Crosson

Robert Keenan

Ronald S. Rock

Edwin W. Taylor

***Emeritus Faculty***

Wolfgang Epstein

Eugene Goldwasser

Alvin Markovitz

Robert B. Uretz

John L. Westley

**T**he Department of Biochemistry and Molecular Biology offers graduate training for careers in biochemistry and molecular biophysics. Research encompasses all areas of modern biochemistry, ranging from chemical biology to molecular endocrinology, with an emphasis on structural biology, biophysics, and RNA biochemistry applied to a wide range of biological topics. Our department is distinguished by its intellectual rigor and collaborative style. The interdisciplinary nature of the department is further accentuated by the recent formation of the Institute for Biophysical Dynamics, which brings together biological and physical scientists to pursue common research goals.

## ADMISSION

For information about applying to our graduate program, please visit our website at <http://molbio.uchicago.edu>.

## 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 grade courses. One research rotation (BMB 39900) will count as one of the nine courses. Of the nine courses only 30400, 32300, 31600 and 31200 are required. An additional course (BMB 31900 Introduction to Faculty Research, affectionately called Faculty All Stars) is required but is not for 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. Students can pass the examination unconditionally, can pass the examination based on certain conditions that might be set by the Committee, or can fail the examination. Students who fail the examination will be placed on academic probation and given guidance by the Committee on how to improve their performance, and will be given an opportunity to submit and to defend a new or revised proposal.

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.

#### Courses

##### 30100. Biochemistry and Molecular Biology *Meredith, Philipson*

The course is intended as an introduction to biochemistry and molecular biology for the first year graduate students, first year medical students, and advanced undergraduates. It has three sections. The first is the structure and function of macromolecules (proteins including enzymes, and nucleic acids) and supramolecular aggregates such as biological membranes. The second section is on cellular metabolism, emphasizing enzymatic mechanisms, cellular compartmentalization, and integration of metabolic systems. The third is the beginning of molecular biology of the gene, emphasizing DNA replication, transcription, and translation.

##### 30400. Protein Fundamentals

*Piccirilli, Correll*

The Physico chemical phenomena that define protein structure and function. Topics include 1) the interactions/forces that define polypeptide conformation; 2) the principles of protein folding, structure and design; and 3) the concepts of molecular motion, molecular recognition, and enzyme catalysis.

##### 30500. Fundamentals of Structural Biology *Kossiakoff, Koide*

This course emphasizes the basic principles of protein structure determination by X ray crystallography and NMR spectroscopy. The underlying physical concepts of these methods will be introduced and the capabilities of each will be discussed and compared in context of their uses in de novo structure determination and protein engineering studies.

30600. Nucleic Acid Structure and Function  
*Rice, Pan, Susnick*

This course focused on the biochemistry of nucleic acids. Topics include nucleic acid structure, folding, and chemistry, protein nucleic acid interactions, non coding RNAs, and the enzymology of key processes such as DNA repair and recombination. A special emphasis is placed on primary literature.

31000. Fundamentals in Molecular Biology  
(=MGCB 31000)

*Storb, Shalev*

The course covers nucleic acid structure and DNA topology, recombinant DNA technology, DNA replication, DNA damage, mutagenesis and repair, Transposons and site specific recombination, prokaryotic and eukaryotic transcription and its regulation, RNA structure, splicing and catalytic RNAs, protein synthesis, and chromatin.

## 31200. Molecular Biology I (=MGCB 31200)

*Rothman, Denes*

Nucleic acid structure; mechanisms of transcription and replication. Regulation of transcription in prokaryotes, and of DNA replication in prokaryotes and eukaryotes.

## 31300. Molecular Biology II: Eukaryotic Gene Expression. Transcriptional and Posttranscriptional Regulation. (=MGCB 31300)

*Singh, Staley*

Eukaryotic Gene Expression. Transcription and Posttranscriptional Regulation. Analysis of regulatory pathways and mechanisms involved in the control of eukaryotic gene activity.

## 31400. General Principles of Genetic Analysis (=MGCB 31400)

*Preuss, Bishop, Lahn*

Coverage of the fundamental tools of genetic analysis as used to study biological phenomena. Topics include genetic exchange in prokaryotes, eukaryotes, analysis of gene function, and epigenetics.

## 31500. Genetic Mechanisms (=MGCB 31500)

*Esposito, Bishop*

Advanced coverage of genetic mechanisms involved in genome stability and rearrangement in lower and higher organisms. Topics include the genetics of mutagenesis, DNA repair, homologous and site specific recombination, transposition and chromosome segregation.

## 31600. Cell Biology I (=MGCB 31600)

*Turkewitz, Glick*

Eukaryotic protein traffic and related topics, including molecular motors and cytoskeletal dynamics, organelle architecture and biogenesis, protein translocation and sorting, compartmentalization in the secretory pathway, endocytosis and exocytosis, and mechanisms and regulation of membrane fusion.

## 31700. Advanced Cell Biology (=MGCB 31700)

*Lamppa*

Chromatin structure and its role in transcription, communication between nucleus and cytoplasm, translation, protein folding and assembly, molecular chaperones, elements of signal transduction, homeostasis, growth control and the cell cycle, cytoarchitecture, cell adhesion and migration.

31900. Introduction to Faculty Research  
(=MGCB 31900)

*Staff*

Introduction to scientific literature, scientific writing, and the development of ideas in laboratory research by departmental and other invited speakers.

32100. Designer Proteins and Peptides  
*Meredith*

This graduate level course will deal with the design, synthesis, and characterization of novel non natural proteins and peptides. Some specific topics included are the following: Peptide models of transmembrane domains, membrane fusion and membrane binding proteins, apolipoproteins, and peptide hormones. Side chain modified peptides and proteins, peptide backbone modified peptides, covalent lipid peptide and nucleotide peptide adducts, peptide block copolymers, e.g., PEG peptides, synthetic and supersecondary structures, including 4 and 6 helix bundles, synthetic beta structures, and template assisted folding of beta sheet structures. Readings would consist entirely of journal articles.

## 32200. Molecular Biophysics: Theory and Applications

*Sosnick*

Exposees students to modern biophysical methods and provides background for use of existing facilities at the University of Chicago. Topics include the measurement of physical properties of biological molecules including structure, thermodynamics, and kinetics. The primary focus is on practical aspects but covers a sufficient amount of theoretical background for the proper understanding of the technique.

## 32300. Protein Molecular Structure and Function

*Kent, Moffat*

This course presents a series of advanced case studies designed to familiarize students with current protein research and to expand on the protein fundamentals taught in Biochemistry 30400. Topics include: post translational modification of proteins; protein protein interactions; principles of enzyme catalysis; natural inhibitors of enzyme action; integral membrane proteins and ion channels; molecular motors; allosteric phenomena; conversion of light energy in photosynthesis.

## 39800. Selected Topics in Biochemistry and Molecular Biology

*Staff*

Subject matter for individual tutorial based study is selected through prior consultation and is given under the guidance of a faculty member. The student and faculty member must indicate at time of registration whether the course will be taken on a letter grade or pass/fail basis.

## 39900. Introduction to Research

*Staff*

The student participates in one of the research programs of the department.  
Prereq: Consent of Department Chair and individual faculty member.

## 40100. Research in Biochemistry and Molecular Biology

*Staff*

The student conducts original investigation under the direction of a faculty member.  
Prereq: Completion of course requirements and qualifying examination at the Ph.D. level and approval of the chair of the department.



## COMMITTEE on CANCER BIOLOGY

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<i>Chair</i>	<i>Associate Professors</i>	<i>Assistant Professors</i>
Geoffrey L. Greene	Douglas K. Bishop, Radiation and Cellular Oncology	Iannis Aifantis, Medicine Suzanne Conzen, Medicine John D. Crispino, Ben May Institute for Cancer Research
<i>Professors</i>	Marcus R. Clark, Medicine	Nickolai Dulin, Medicine Karen M. Frank, Pathology
Eric C. Beyer, Pediatrics Glyn Dawson, Pediatrics M. Eileen Dolan, Medicine David Grdina, Radiation and Cellular Oncology Geoffrey L. Greene, Ben May Institute for Cancer Research	Wei Du, Ben May Institute for Cancer Research Edwin L. Ferguson, Molecular Genetics and Cell Biology	Lucy Godley, Medicine Tong Chuan He, Surgery Barbara Kee, Pathology Todd Kroll, Pathology Bruce T. Lahn, Human Genetics
Howard Halpern, Radiation and Cellular Oncology Michelle M. Le Beau, Medicine Shutsung Liao, Ben May Institute for Cancer Research	Guido Franzoso, Ben May Institute for Cancer Research Thomas F. Gajewski, Pathology & Medicine	Ernst Lengyel, Obstetrics and Gynecology Kay Macleod, Ben May Institute for Cancer Research
Terence E. Martin, Molecular Genetics and Cell Biology Olufunmilayo Olopade, Medicine Marcus E. Peter, Ben May Institute for Cancer Research	Elizabeth Grove, Neurobiology, Pharmacology and Physiology Akira Imamoto, Ben May Institute for Cancer Research	Carl G. Maki, Radiation & Cellular Oncology Piers D. Nash, Ben May Institute for Cancer Research
Marsha Rosner, Ben May Institute for Cancer Research Janet D. Rowley, Medicine Hans Schreiber, Pathology Harinder Singh, Molecular Genetics and Cell Biology Ursula Storb, Molecular Genetics and Cell Biology Mitchel L. Villereal, Neurobiology, Pharmacology and Physiology Ralph R. Weichselbaum, Radiation and Cellular Oncology	Gregory Karczmar, Radiation and Cellular Oncology Stephen J. Kron, Molecular Genetics and Cell Biology Anning Lin, Ben May Institute for Cancer Research Mark Lingen, Pathology Ilaria Rebay, Ben May Institute for Cancer Research Carrie W. Rinker Schaeffer, Surgery Ravi Salgia, Medicine Walter Stadler, Medicine Wei Jen Tang, Ben May Institute for Cancer Research	Kenan Onel, Pediatrics Michael J. Thirman, Medicine Amittha Wickrema, Medicine Wei Du, Ben May Institute for Cancer Research
		<i>Instructor</i> Deborah Lang, Medicine

**T**he Committee on Cancer Biology offers a graduate program of study leading to the Ph.D. in Cancer Biology, and is supported by an NCI 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 53 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 a joint admissions committee, 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 Meeting, ten joint group meetings with established research groups, and an annual cluster retreat in which students and trainees present their research findings. In addition, the program co sponsors the Cancer Biology Symposium with the Ben May Institute 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 Institute 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 28 of each year and indicate Cancer Biology as their field of specialization.

### Courses

#### 30800. Cancer Biology I: Introduction to Cancer Biology

*Conzen, Imamoto, Noffsinger*

Overview of cancer biology, including epidemiology, pathology, diagnosis and staging, the basis for various therapeutic strategies, and the conduct of Phase I, II, and III clinical trials. Also covered are experimental models for cancer, including the generation and validation of animal models. The course emphasizes several tumor models, such as

breast cancer, hematological malignancies, cervical carcinoma, colon carcinoma, and sarcomas.

#### 30900. Cancer Biology II: Molecular Mechanisms of Cancer (=PATH 30900)

*Le Beau, Madad, Maki*

Examines our current understanding of the processes leading to malignant cell transformation. Topics include comparative properties of normal cells and cells transformed spontaneously or by chemicals, radiation, or viruses; multistage mechanisms of carcinogenesis; genetic basis of cancer; oncogenes

and tumor suppressor genes; metabolic activation of chemical carcinogens; DNA adduct formation; repair of DNA damage; metastasis/invasion; and mechanisms of cancer therapeutics.

31200. Cancer Biology III: Signal Transduction and Cell Cycle Regulation (=NPHP 32100, CPHY 31200)

*Du, Lin*

Topics include receptor ligands, membrane receptor tyrosine kinases and phosphatases, G proteins, proto oncogenes, signaling pathways, cytoplasmic protein kinases and phosphatases, transcription factors, receptor nucleus signaling, development and cancer, genetic dissection of signaling pathways, oncogenes and tumor suppressor genes, cell growth and cell proliferation, interplay of cell cycle regulators, cell cycle progression and apoptosis.

31300 02. Cancer Biology IV: Frontiers in Cancer Research

*Dolan, Rinker Schaeffer*

This is a lecture discussion course on selected topics in Cancer Biology that will vary from year to year but may include such subjects as metastatic progression, experimental animal models and systems, DNA

mediated gene transfer, cancer cytogenetics, chromosome damage and repair, growth factors, and cancer therapy.

39000. Cancer Biology V: Introduction to Experimental Cancer Biology

*Franzoso, Peter*

This course is linked to the seminar series sponsored by the Committee on Cancer Biology and also incorporates seminars of interest from other Cluster programs.

Typically, students meet to discuss research papers published by the following week's seminar speaker, attend the seminar, and then meet with the speaker afterward. The goal of the course is to broaden the student's exposure to current research and to encourage discussion of scientific ideas among peers.

39900. Readings in Cancer Biology

*Staff*

Reading course on various topics in cancer biology.

40100. Research: Cancer Biology

*Greene and Staff*



## COMMITTEE on CELL PHYSIOLOGY

<b>Chair</b>	Eric A. Schwartz, Neurobiology, Pharmacology and Physiology	Institute for Cancer Research
Eric Beyer	Theodore L. Steck, Biochemistry and Molecular Biology	Aaron Turkewitz, Molecular Genetics and Cell Biology
<b>Professors</b>	F. Gary Toback, Medicine	<b>Assistant Professors</b>
Eric Beyer, Pediatrics	Mitchel Villereal, Neurobiology, Pharmacology and Physiology	Matthew Brady, Medicine
Eugene Chang, Medicine		Sean Cook, Anesthesia and Critical Care
Aaron Fox, Neurobiology, Pharmacology and Physiology		Akira Imamoto, Ben May Institute for Cancer Research
Dorothy A. Hanck, Medicine		Stephen J. Kron, Molecular Genetics and Cell Biology
Alan Leff, Medicine		Daniel McGehee, Anesthesia and Critical Care
H. Clive Palfrey, Neurobiology, Pharmacology and Physiology		Elizabeth M. McNally, Medicine
Deborah J. Nelson, Neurobiology, Pharmacology and Physiology	Associate Professors	Jerrold Turner, Pathology
	James Brorson, Neurology	
	Benjamin Glick, Molecular Genetics and Cell Biology	<b>Emeritus Faculty</b>
Robert L. Perlman, Pediatrics	William Green, Neurobiology, Pharmacology and Physiology	Harry A. Fozard, Neurobiology, Pharmacology and Physiology
Louis H. Philipson, Medicine	Philip E. Lloyd, Neurobiology, Pharmacology and Physiology	
Marsha Rosner, Ben May Institute for Cancer Research	Jeremy Marks, Pediatrics	
Paul Schumacher, Medicine	Wei Jen Tang, Ben May	

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.

Students are admitted to the Cellular and Molecular Physiology graduate program by an admissions committee representative of the cluster of Neurobiology, Pharmacology and Physiology. Strong applicants are invited to interview with faculty on campus. Official offers of admissions are sent from the Dean of Students Office to applicants by April 1.

## 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.

### Courses

#### **Biochemistry**

CPHY 31200. Signal Transduction and Cell Cycle Regulation (=CABI 31200, NPHP 31200). Spring

*Du Lin*

Topics include receptor ligands, receptor tyrosine kinases and phosphatases, G protein coupled receptors, signaling pathways, cytoplasmic protein kinases and phosphatases, receptor nucleus signaling, nuclear proto oncogenes, cell growth suppression, tumor suppressors, regulation of cell cycle progression, modulation of cell cycle progression and apoptosis.

CPHY 31900. Molecular Mechanisms of Cell Signaling (=NURB 31900)

*Tang*

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 in the course, with an emphasis on the structural basis of cell signaling. Offered alternate years.

CPHY 33600. Cell Signaling (=NPHP 33600). Autumn

*Palfrey*

Cells in the body communicate with each other by a variety of extracellular signals (e.g., hormones and neurotransmitters) that are disseminated locally or in the blood stream to distant targets. What happens when these signals are received by the target cells? The subject matter of this course con

siders the wide variety of intracellular mechanisms that, when activated, change cell behavior. Both general and specific aspects of intracellular signaling are covered in the course, the latter including detailed discussions of receptors, G proteins, cyclic nucleotides, calcium and calcium binding proteins, phosphoinositides, protein kinases, and phosphatases. C. Prereq: BIOS 20200 and 20181, or BIOS 20191.

BCMB 30100. Basic Biochemistry and Molecular Biology. Autumn

*Meredith, Philipson*

The course is intended as an introduction to biochemistry and molecular biology for first year graduate students, first year medical students, and advanced undergraduates. It has three sections. The first is the structure and function of macromolecules (proteins, including enzymes, and nucleic acids) and supramolecular aggregates such as biological membranes. The second section is on cellular metabolism, emphasizing enzymatic mechanisms, cellular compartmentalization, and integration of metabolic systems. The third is the beginning of molecular biology of the gene, emphasizing DNA replication, transcription, and translation. Prereq: Two quarters of organic chemistry.

BCMB 30400. Protein Fundamentals.

Autumn

*Piccirilli, Corell*

The physico chemical phenomena that define protein structure and function. Topics include 1) the interactions/forces that define polypeptide conformation; 2) the principles of protein folding, structure and design; and 3) the concepts of molecular motion, molecular recognition, and enzyme catalysis.

Prereq: BCMB 30100.

39900. Readings in Cell Physiology

*Staff*

Reading courses on various topics in cell physiology.

40100. Research in Cell Physiology

*Staff*

Research credit (varied units) for research undertaken by graduate students under the guidance of a faculty member of the Committee on Cell Physiology.

## **Cell Biology**

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MGCB 31600. Cell Biology. Autumn  
*Turkewitz, Glick*

Eukaryotic protein traffic and related topics, including molecular motors and cytoskeletal dynamics, organelle architecture and biogenesis, protein translocation and sorting, compartmentalization in the secretory pathway, endocytosis and exocytosis, and mechanisms and regulation of membrane fusion.

MGCB 31700. Advanced Cell Biology.  
Winter

*Lamppa*

Chromatin structure and its role in transcription, communication between nucleus and cytoplasm, translation, protein folding and assembly, molecular chaperones, elements of signal transduction, homeostasis, growth control and the cell cycle, cytoarchitecture, cell adhesion and migration.

NPHP 31800. Cellular Neurobiology  
(=NURB 31800). Autumn

*Lloyd*

The cell biology of neurons is considered, with emphasis on intracellular and intercellular communication and regulation. Simple neuronal systems, especially those of invertebrates, are analyzed from a functional viewpoint.

## **Molecular Biology**

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MGCB 31000. Fundamentals in Molecular Biology. Winter

*Storb, Staley*

The course covers nucleic acid structure and DNA topology, recombinant DNA technology, DNA replication, DNA damage, mutagenesis and repair, Transposons and site specific recombination, prokaryotic and eukaryotic transcription and its regulation, RNA structure, splicing and catalytic RNAs, protein synthesis, and chromatin.

MGCB 31200. Molecular Biology I. Winter  
*Rothman, Denes*

Nucleic acid structure; mechanisms of transcription, replication, and recombination and their regulation in prokaryotes and eukaryotes.

MGCB 31300. Molecular Biology II. Spring  
*Singh, Staley*

Analysis of regulatory pathways and mechanisms involved in the control of eukaryotic gene activity.

## **Physiology**

CPHY 30300. Cell and Organ Physiology (NPHP 30300), Autumn.

*Lloyd and Staff*

Membrane and cell physiology; muscle, cardiovascular, and gastrointestinal physiology.

CPHY 30400. Organ Physiology and Endocrinology (NPHP 30400), Winter.

*Chung and Staff*

Renal, respiratory, endocrine and reproductive physiology and the regulation of metabolism.

CPHY 31600. Vertebrate Neural Systems (=NURB 31600). Autumn

*Ragsdale and Staff*

This lab centered course teaches students the fundamental principles of mammalian neuroanatomy. Students learn the major structures and the basic circuitry of the CNS and PNS. Somatic, visual, auditory, vestibular and olfactory sensory systems are presented in particular depth.

CPHY 33200. Ionic Channels and Excitable Membranes (=NPHP 33200; CPNS 33200).

Winter

*Nelson, Hanck*

A review of the voltage gated and ligand gated channels, including the functional role(s) of the channels in cell behavior and biophysical aspects of ion transport through channels. Correlation is made between known channel protein structure and channel functional characteristics, including gating, block and drug related changes in channel current kinetics.

## **Genetics**

MGCB 31400. General Principles of Genetic Analysis. Autumn

*Preuss, Bishop, Lahn*

Coverage of the fundamental tools of genetic analysis as used to study biological phenomena. Topics include genetic exchange in prokaryotes, eukaryotes, and their viruses and plasmids; principles of transformation; analysis of gene function.

MGCB 31500. Genetic Mechanisms. Autumn

*Bishop*

Advanced coverage of genetic mechanisms involved in genome stability and rearrangement. Topics include genetics of transposons, site specific recombination, gene conversion, reciprocal crossing over, and plasmid and chromosome segregation.

HGEN 46900. Human Genetics II. Human Variation and Disease. Autumn

*DiRienzo, Hudson, Pritchard*

This course focuses on principles of population genetics and complex trait mapping as they apply to humans. It will include the discussion of genetic variation and disease mapping data.

HGEN 47000. Human Genetics I.

Mechanisms of Human Disease. Spring

*Ober, Millen, Lese Martin, McNally, Carlson*

This course covers classical and modern approaches to studying cytogenetic, Mendelian, and complex human diseases. Topics include chromosomal structure, human gene discovery for single gene and complex diseases, non Mendelian inheritance, mouse models of human disease, cancer genetics, and human population genetics. The format includes lectures and student presentations.

## **Other courses of interest:**

31900. Molecular Mechanisms of Cell Signaling (=CPHY 31900)

*Tang*

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 in the course, with an emphasis on the structural basis of cell signaling. Offered alternate years.



## COMMITTEE on COMPUTATIONAL NEUROSCIENCE

---

***Chair***

Philip S. Ulinski

***Professors***

Yali Amit, Statistics

Bennet Bertenthal,  
Psychology

Jack Cowan, Mathematics

John Ebersol, Neurology

John Goldsmith, Linguistics

Dorothy Hanck, Medicine

Daniel Margoliash,  
Organismal Biology and  
Anatomy

Robert McCrea,

Neurobiology,

Physiology and

Pharmacology

Martha McClintock,  
Psychology

Howard Nusbaum,

Psychology

Joel Pokorny,

Ophthalmology and  
Visual Science

Steven Shevell, Psychology

Jean Paul Spire, Neurology

Vivianne Smith,

Ophthalmology and  
Visual SciencePhilip S. Ulinski,  
Organismal Biology and  
Anatomy***Associate Professors***

Kurt Hecox, Pediatrics

John Milton, Neurology

Jan Marino Ramirez,

Organismal Biology and  
Anatomy

Terry Regier, Psychology

Steven Small, Neurology

V. Leo Towle, Neurology

***Assistant Professors***

David Bradley, Psychology

Zhiyi Chi, Statistics

Melina Hale, Organismal  
Biology and AnatomyNicholas Hatsopoulos,  
Organismal Biology and  
AnatomyNaoum Issa, Neurobiology,  
Physiology and  
PharmacologyLeslie Kay, Psychology  
Vera Maljkovic, Psychology  
Partha Niyogi, Computer  
Science

**T**he 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.

### MASTER OF SCIENCE

Most students in the program are pursuing the Ph.D. However, students interested in obtaining an S.M. 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, nine elective courses 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 *computational neuroscience theme* illustrates how quantitative methodologies are used to understand neurons and behavior. The nine elective courses are typically started in the summer between the first and second years, and continue into the second year. At least two of the electives must involve laboratory rotations. Remaining electives can be chosen from 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 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 and may be used as electives. 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 on going 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 Neurobiology, Physiology and Pharmacology cluster within the Division of the Biological Sciences. The most recent admissions policies, including an on line application, can be viewed at <http://npp.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 generally due by January 5 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://cns.bsd.uchicago.edu>. 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.

## Courses

### **Neuroscience Theme**

*This three quarter sequence introduces the basic concepts that relate the structure and function of the nervous system to behavior.*

30000. Cellular Neurobiology  
(= NURB 31800)

*Staff*

This course is concerned with the structure and function of the nervous system at the cellular level. The cellular and subcellular components of neurons and their basic membrane and electrophysiological properties are described. Cellular and molecular aspects of interactions between neurons are studied. This leads to functional analyses of the mechanisms involved in the generation and modulation of behavior in selected model systems.

30100. Neuroethology  
*Margoliash*

This course is concerned with the structure and function of systems of neurons, and how these are related to behavior. Common patterns of organization are described from the anatomical, physiological, and behavioral perspectives of analysis. The comparative approach is emphasized throughout. Laboratories include exposure to instrumentation and electronics, and involve work with live animals. A central goal of the laboratory is to expose students to *in vivo* extra cellular electrophysiology in vertebrate preparations. Laboratories will be attended only on one day a week but may run well beyond the canonical period.

30200. Cognitive Neuroscience  
*Hatsopoulos*

This course is concerned with the relationship of the nervous system to higher order

behaviors such as perception and encoding, action, attention and learning and memory. Modern methods of imaging neural activity are introduced, and information theoretic methods for studying neural coding in individual neurons and populations of neurons are discussed.

### **Mathematics Theme**

*This three quarter sequence introduces mathematical and statistical ideas and techniques used in the analysis of brain mechanisms.*

32000. Mathematical and Statistical Methods for Neuroscience I

*Staff*

This quarter introduces mathematical ideas and techniques in a neuroscience context. Topics will include some coverage of matrices and complex variables; eigenvalue problems, spectral methods and Greens functions for differential equations; and some discussion of both deterministic and probabilistic modeling in the neurosciences.

32100. Mathematical and Statistical Methods for Neuroscience II

*Staff*

This quarter treats statistical methods important in understanding nervous system function. It includes basic concepts of mathematical probability, information theory, discrete Markov processes, and time series.

32200. Mathematical and Statistical Methods for Neuroscience III

*Staff*

This quarter covers more advanced topics including perturbation and bifurcation methods for the study of dynamical systems, symmetry methods and some group theory. A variety of applications to neuroscience will be described.

**Computational Neuroscience Theme**

*This three quarter sequence brings together the concepts from the neuroscience theme with the quantitative methods from the mathematical theme to discuss current issues in computational neuroscience.*

33000. Computational Neuroscience I: Single Neuron Computation

*Ullinski*

This course briefly reviews the historical development of computational neuroscience and discusses the functional properties of individual neurons. The electrotonic structure of neurons, functional properties of synapses, and voltage gated ion channels are discussed.

33100. Computational Neuroscience II: Vision

*Ullinski and Staff*

This course considers computational approaches to vision. It discusses the basic anatomy and physiology of the retina and central visual pathways, and then examines computational approaches to vision based on linear and non linear systems theory, and algorithms derived from computer vision.

33200. Computational Neuroscience III: Language

*Regier and Staff*

This course discusses computational approaches to human language. It examines

the learning, production, and comprehension of language, through neural network modeling of human linguistic behavior, and through brain imaging.

**Reading and Research Courses**

39900. Readings in Computational Neuroscience

*Staff*

Reading courses on various topics in computational neuroscience.

40100. Research in Computational Neuroscience

*Staff*

Research credit (varied units) for research undertaken by graduate students under the guidance of a faculty member of the Committee on Computational Neuroscience.

**Neural Engineering Courses Available through the Illinois Institute of Technology**

*These courses are offered on a semester basis.*

Neural Engineering I

Neural engineering II

Electronics for Neural Engineers

VLSI Technology for Neural Engineers



# COMMITTEE on DEVELOPMENTAL BIOLOGY

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***Chair***

Victoria E. Prince

***Professors***

Glyn Dawson, Pediatrics  
 Richard Fehon, Molecular Genetics & Cell Biology  
 Martin Gross, Pathology  
 Robert Haselkorn, Molecular Genetics & Cell Biology

Daphne Preuss, Molecular Genetics & Cell Biology  
 Robert L. Rosenfield, Pediatrics  
 Marsha Rosner, Ben May Institute for Cancer Research  
 Nancy B. Schwartz, Pediatrics

Neil H. Shubin, Organismal Biology & Anatomy  
 Harinder Singh, Molecular Genetics & Cell Biology  
 Ursula B. Storb, Molecular Genetics & Cell Biology

***Associate Professors***  
 Philip Ashton Rickhardt, Pathology  
 Edwin L. Ferguson, Molecular Genetics & Cell Biology  
 William Green, Neurobiology, Pharmacology & Physiology

Elizabeth Grove, Neurobiology, Pharmacology & Physiology  
 Robert K. Ho, Organismal Biology & Anatomy  
 Victoria E. Prince, Organismal Biology & Anatomy  
 Clifton Ragsdale, Neurobiology, Pharmacology & Physiology  
 Ilaria Rebay, Ben May Institute for Cancer Research  
 Manfred D.E. Ruddat, Ecology & Evolution

***Assistant Professors***

Iannis Aifantis, Medicine  
 John D. Crispino, Ben May Institute for Cancer Research  
 Wei Du, Ben May Institute for Cancer Research  
 Akira Imamoto, Ben May Institute for Cancer Research  
 Vladimir Kalinichenko, Medicine  
 Barbara Kee, Pathology  
 Christopher Lowe, Organismal Biology & Anatomy

Kay MacLeod, Ben May Institute for Cancer Research

Jocelyn Malamy, Molecular Genetics & Cell Biology  
 Elizabeth McNally, Medicine  
 Kathleen J. Millen, Human Genetics  
 Urs Schmidt Ott, Organismal Biology & Anatomy  
 Kamal Sharma, Neurobiology, Pharmacology & Physiology  
 Eric C. Svensson, Medicine  
 Yimin Zou, Neurobiology, Pharmacology & Physiology

***Emeritus Faculty***

Eugene Goldwasser, Biochemistry and Molecular Biology  
 Anthony Mahowald, Molecular Genetics & Cell Biology  
 Aron Moscona, Molecular Genetics & Cell Biology

## PROGRAM OF STUDY

**F**irst 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. 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 spends 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 a faculty examining 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 report to the Curriculum Committee on the student's dissertation research progress after the yearly meeting.

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.uchicago.edu>.

## 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.

## Courses

DevBio 35400. Advanced Developmental Biology. This course provides an overview of the fundamental questions of developmental biology, presenting both the classical embryological experiments that defined these questions, and the modern molecular and genetic experiments that have been employed to try to reach mechanistic answers to these questions. The first portion of the course will focus on the mechanism of axis formation in a variety of organisms; the second part of the course will explore selected topics in the field.

DevBio 35500. Developmental Genetics of Non vertebrate Model Systems. This course explores the use of genetics in three different model systems, *C. elegans*, *Drosophila melanogaster* and *Arabidopsis thaliana*, to elucidate developmental mechanisms. The class will focus on a series of interrelated topics: for each topic, introductory material presented by the lecturer will be followed by student led discussions of individual papers.

DevBio 35600. Vertebrate Developmental Genetics. This advanced level course combines lectures, student presentations, and discussion sections. It covers major topics in the developmental biology of vertebrate embryos (e.g., formation of the germ line, gastrulation, segmentation, nervous system development, limb patterning, organogenesis) The course makes extensive use of the current primary literature and emphasizes experimental approaches including embryology, genetics, and molecular genetics.

DevBio 35700. Developmental Genetics and Evolution. This course uses the developmental genetics of established invertebrate and vertebrate model systems as an entry point to explore the developmental basis of evolutionary change. Topics range from the evolution of gene regulation to the origin of novelties such as eyes and wings. We will study original research papers. The purpose of this course is to provide graduate students (and advanced undergraduates) with a developmental genetic perspective on evolutionary questions that have emerged in various disciplines including developmental biology, paleontology and phylogenetic systematics.

Dev Bio 35800. Developmental Neurobiology. Topics include neural induction, early patterning of the central nervous system, axon guidance and neuronal migration, the development of brain activity, and the mechanisms of plasticity that fine tune

brain function. Approaches will range from molecular to cellular to systems neurobiology. Focus will be on the vertebrate CNS but attention will be given to important lessons from invertebrate systems.

31000. Fundamentals in Molecular Biology The course covers nucleic acid structure and DNA topology, recombinant DNA technology, DNA replication, DNA damage, mutagenesis and repair, Transposons and site specific recombination, prokaryotic and eukaryotic transcription and its regulation, RNA structure, splicing and catalytic RNAs, protein synthesis, and chromatin.

31200. Molecular Biology I Nucleic acid structure; mechanisms of transcription and replication. Regulation of transcription in prokaryotes, and of DNA replication in prokaryotes and eukaryotes.

31300. Molecular Biology II Eukaryotic Gene Expression. Transcription and Posttranscriptional Regulation. Analysis of regulatory pathways and mechanisms involved in the control of eukaryotic gene activity.

31400. General Principles of Genetic Analysis

Coverage of the fundamental tools of genetic analysis as used to study biological phenomena. Topics include genetic exchange in prokaryotes and eukaryotes, analysis of gene function, and epigenetics.

31500. Genetic Mechanisms

Advanced coverage of genetic mechanisms involved in genome stability and rearrangement in lower and higher organisms. Topics include the genetics of mutagenesis, DNA repair, homologous and site specific recombination, transposition and chromosome segregation.

31600. Cell Biology

Eukaryotic protein traffic and related topics, including molecular motors and cytoskeletal dynamics, organelle architecture and biogenesis, protein translocation and sorting, compartmentalization in the secretory pathway, endocytosis and exocytosis, and mechanisms and regulation of membrane fusion.

31700. Advanced Cell Biology

Chromatin structure and its role in transcription communication between nucleus and cytoplasm, translation, protein folding and assembly, molecular chaperones, elements of signal transduction, homeostasis, growth control and the cell cycle, cytoarchitecture, cell adhesion and migration.



## DEPARTMENT of ECOLOGY and EVOLUTION

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*Chair*  
Chung I Wu

Leigh Van Valen  
Chung I Wu

*Emeritus Faculty*  
Stuart Altmann  
Janice B. Spofford

*Professors*  
Joy Bergelson  
Jerry Coyne  
Richard R Hudson  
Martin Kreitman  
Wen Hsiung Li  
Manyuan Long  
Thomas Nagylaki  
Trevor D. Price

*Associate Professors*  
Stephen Pruitt Jones  
Catherine Pfister  
Manfred D.E. Ruddat  
John Timothy Wootton

*Research Associate*  
Michael Z. Ludwig

*Assistant Professors*  
Priyanga Amarasekare  
Justin Borevitz  
Gregory Dwyer

**T**he 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 cosponsored 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 (1) submission of a written dissertation based on original research, which must be approved by the faculty adviser and dissertation committee; (2) presentation of a public seminar based on the dissertation research; (3) following the public seminar, successful performance during an oral examination by the dissertation committee and other relevant faculty; and, (4) 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 late December 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 e-mail to [Darwin@pondside.uchicago.edu](mailto:Darwin@pondside.uchicago.edu).

### Courses

30600. Molecular Evolutionary Genetics (=EVOL 30600)

*Wu*

Advanced topics in evolutionary genetics and molecular evolution. The main goal is to survey the frontiers and to develop research projects of the future.

30700. Computational Biology (=EVOL 30700)

*Li*

This course provides mathematical and statistical backgrounds and computational skills in computational biology. Topics will cover theory and methods for comparative analyses of DNA and protein sequence data; statistical tests of molecular clocks; methods of phylogenetic reconstruction and statistical tests of phylogenies; gene identification in DNA sequences; protein homology detection; and structure prediction methods using protein sequences.

30800. Current Topics in Evolutionary Genomics (=EVOL 30800)

*Li*

This course will cover statistical methods for analyzing genomic sequence data, comparative genomics, evolution of gene families, and evolution of genome structure and organization.

30900. Evolution and Medicine (=EVOL 30900, GNDR 26601)

*Van Valen and Stoller*

A seminar reading discussion course on medical implications of different areas in the evolutionary half of biology. Spring. L. Van Valen and M. Stoller.

31000. Evolutionary Processes (=BIOS 29306, CHSS 34800, EVOL31000)

*Van Valen*

Discussion, essays, and much reading on conceptual and empirical aspects of the evolutionary half of biology. Also a laboratory in the philosophy of science.

## 31200. Data Analysis in Ecology and Evolution (=EVOL 31200)

*Bergelson*

Covers the design and analysis of experiments, focusing on tests used commonly in evolutionary biology. Both parametric and nonparametric tests will be considered.

## 31300. Ecological Applications to Conservation Biology (=BIOS 23351, EVOL 31300)

*Bergelson, Nagylaki, Pfister*

Emphasizes quantitative methods and their use for applied problems in ecology, such as the design of nature reserves, the risk of extinction and the impact of harvesting.

Course material will be drawn from the primary literature and the course will involve lectures, computer modeling exercises, and discussion groups.

## 31400. Geographical Variation (=EVOL 31400)

*Kreitman, Nagylaki*

Theoretical and empirical aspects of geographical variation in population genetics. Theoretical topics will include projected polymorphism and clines maintained by migration and selection; random genetic drift in a cline; and spatial patterns under migration, mutation, and random genetic drift. Estimation from molecular gene frequency data of parameters that describe population structure and the relative contribution of random genetic drift and natural selection will be covered.

31500. Quantitative Genetics (=EVOL 31500)  
*Nagylaki*

Theoretical topics include basic population genetics; the decomposition of the variance and the correlation between relatives with random mating, inbreeding, and assortative mating; selection; mutation selection balance; and random genetic drift. Empirical examples from human genetics will be presented.

## 32900. Plant Development and Molecular Genetics (=BIOS 23299, MGCB 36100, DVBI 36100)

*Greenberg, Ruddat*

Growth, differentiation and development in plants at the organismal, cellular, and molecular level. The regulatory function of environmental factors, hormones and phytochrome on gene expression and the possible evolutionary relationships will be

studied. The molecular genetic advances in *Arabidopsis* and maize are a central feature of the course.

## 33500. Experimental Evolutionary Ecology (=EVOL 33500)

*Staff*

Students and instructors will propose simple research questions on any question of ecological or evolutionary interest. In addition to conducting a set number of class chosen experiments, the bulk of the class work will consist of statistically analyzing and interpreting the results. It is expected that the projects have the potential to produce publishable results.

## 34600. Current Issues in Evolution (=EVOL 34600)

*Van Valen*

A seminar on unresolved problems in the evolutionary half of biology.

## 34700. Evolution of Development (=EVOL 34700)

*Van Valen*

A seminar on developmental aspects of evolution and evolutionary aspects of development.

35000. Evolutionary Ecology (=EVOL 35000)  
*Staff*

An evolutionary approach to the study of ecological interactions. Topics include plant-animal interactions, life history evolution, host-parasite and host-mutualist interactions, competition, and predation.

## 35200. Paleobiology of Mammals (=EVOL 35200)

*Van Valen, Shubin*

Detailed treatment of mammalian evolution, including all recognized families, and its various evolutionary implications.

## 35600, 35700. Principles of Population Genetics I, II (=EVOL 35600, 35700)

*Hudson, Nagylaki, Wu*

Examines the basic theoretical principles of population genetics, and their application to the study of variation and evolution in natural populations. Topics include selection, mutation, random genetic drift, quantitative genetics, molecular evolution and variation, the evolution of selfish genetic systems, and human evolution. Two Quarter course.

35800. Classics of Evolutionary Genetics (=EVOL 35800)

*Long*

Major classic papers in evolutionary genetics that had great impact on the development of the field are reviewed.

35900. Evolution at the Genomic Level (=EVOL 35900)

*Kreitman, Long*

We focus on the newly proposed and solved problems related to evolution of genomes. Instructors will give a series of lectures, dealing with basic concepts and techniques used in the research of topics. Students will present and evaluate literatures.

36200. Current Topics in Evolutionary Biology (=EVOL 36200)

*Coyne*

Critical analysis of recent literature in evolutionary biology. Prerequisite: some knowledge of population genetics, evolutionary biology or consent of instructor.

36300. Speciation (=EVOL 36300)

*Coyne*

A review of the literature on the origin of species beginning with Darwin and continuing through contemporary work. Both theoretical and empirical studies will be covered, with special emphasis on the genetics of speciation.

37500. Sexual Selection (=EVOL 37500)

*Pruett Jones*

A discussion and critical analysis of sexual selection. The course will consist of lectures, reading and discussion.

40100. Grants, Publications, and Professional Issues (=EVOL 40100)

*Bergelson, Ho, Margulies, Mueller*

Covers professional topics in evolutionary biology, such as strategies in grant and article writing, construction and submission of professional articles for journals in the field, career alternatives and strategies, ethical issues, etc.

42500. Concepts in Ecology (=EVOL 42500)

*Bergelson, Pfister, Wootton*

Using a combination of lecture and student led discussion, this course will introduce students to the classical ecological literature as well as the latest work in each of several topics. The goal is to provide students with a solid framework upon which to build their own research programs.

42600. Community Ecology (=EVOL 42600)

*Wootton*

Advanced topics in multi species systems, and an introduction to basic theoretical approaches.

42700. Topics in Aquatic Ecology (=EVOL 42700)

*Pfister*

Theoretical and empirical topics especially relevant to the ecology of aquatic systems will be presented. Emphasis will be placed on features of aquatic systems that pose the theoretical and empirical challenges such as the prevalence of complex life histories, the potential for long distance dispersal, and the diverse controls of trophic structure.

42800. Population Ecology (=EVOL 42800)

*Pfister*

A lecture course on the empirical and theoretical approaches to the study of natural populations, including field methodologies and quantitative approaches. Includes computer assignments.

42900. Theoretical Ecology (=EVOL 42900)

*Amarasekare, Dyer*

An introduction to mathematical modelling in ecology. The course will begin with linear growth and Lotka Volterra models, and proceed to partial differential equations. The course's perspective will emphasize numerical computations and fitting models to data.

44000. Fundamentals of Molecular Evolution (=EVOL 44000, BIOS 23256)

*Kreitman, Nagylaki*

Covers major theories that form the foundation for understanding evolutionary forces governing molecular variation and divergence and genome organization. It explores the evolutionary assembly of genes, the origin of novel gene function, the population genetics of repetitive DNA variation, and the evolution of multi gene families.

44100. Molecular Methods in Ecology and Evolution (=EVOL 44100)

*Bergelson, Kreitman*

A laboratory course intended as an intense introduction to molecular methods applicable to research in organismal biology. The topics covered by the course will change from year to year.

45300. Models of Animal Behavior (=EVOL 45300)

*Pruett Jones*

Introduction to mathematical models of naturalistic behavior. Lectures, discussions and individual projects.

# COMMITTEE on EVOLUTIONARY BIOLOGY

<b>Chair</b>	Chung I Wu, Ecology and Evolution	Museum
David Jablonski		Lawrence R. Heaney, Field Museum
<b>Professors</b>	<b>Associate Professors</b>	Maureen Kearney, Field Museum
Joy Bergelson, Ecology and Evolution	Michael Coates, Organismal Biology and Anatomy	Robert Lacy, Brookfield Zoo
Jerry Coyne, Ecology and Evolution	Callum Ross, Organismal Biology and Anatomy	Scott Lidgard, Field Museum
Martin Feder, Organismal Biology and Anatomy	Catherine Pfister (E&E)	Elizabeth V. Lonsdorf, Lincoln Park Zoo
Michael J. Foote, Geophysical Sciences	Victoria Prince, Organismal Biology and Anatomy	Peter Makovicky, Field Museum
Richard R Hudson, Ecology and Evolution	Stephen Pruitt Jones, Ecology and Evolution	Susan W. Margulis, Lincoln Park Zoo
David Jablonski, Geophysical Sciences	John Timothy Wootton, Ecology and Evolution	Robert Martin, Field Museum
Susan M. Kidwell, Geophysical Sciences		Jennifer McElwain, Field Museum
Martin Kreitman, Ecology and Evolution	<b>Assistant Professors</b>	R. Michael Miller, Argonne National Laboratory
Michael LaBarbera, Organismal Biology and Anatomy	Priyanga Amarasekare, Ecology and Evolution	Gregory M. Mueller, Field Museum
Wen Hsiung Li, Ecology and Evolution	Boyce Kevin C., Geophysical Sciences	Bruce D. Patterson, Field Museum
R. Eric Lombard, Organismal Biology and Anatomy	Gregory Dwyer, Ecology and Evolution	Douglas Stotz, Field Museum
Manyuan Long, Ecology and Evolution	Bruce T. Lahn, Human Genetics	George B. Rabb, Brookfield Zoo
Martha McClintock, Human Development	Dario Maestripieri, Human Development	Olivier Rieppel, Field Museum
Salikoko Mufwene, Linguistics	Jill Mateo, Human Development	William Turnbull, Field Museum
Thomas Nagylaki, Ecology and Evolution	Urs Schmidt Ott, Organismal Biology and Anatomy	Janet Voight, Field Museum
Carole Ober, Human Genetics	Jonathan K. Pritchard, Human Genetics	Harold K. Voris, Field Museum
Trevor Price, Ecology and Evolution	Mark Webster, Geophysical Sciences	Peter J. Wagner III, Field Museum
Paul Sereno, Organismal Biology and Anatomy	<b>Lecturers</b>	Jun Wen, Field Museum
Neil Shubin, Organismal Biology and Anatomy	John M. Bates, Field Museum	Mark Westneat, Organismal Biology & Anatomy
Russell Tuttle, Anthropology	Rüdiger Bieler, Field Museum	
Leigh Van Valen, Ecology and Evolution	John R. Bolt, Field Museum	<b>Emeritus Faculty</b>
William Wimsatt, Philosophy	Paul Z. Goldstein, Field Museum	James A. Hopson, Organismal Biology and Anatomy
	Lance Grande, Field Museum	
	Shannon Hackett, Field Museum	

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, 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 acquire 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 (1) 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; and, (2) successfully completed a final oral examination covering the student's field of specialization, and (3) 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 late December deadline. The committee 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@pondside.uchicago.edu](mailto:Darwin@pondside.uchicago.edu).

**Courses****Required Courses**

38800. Introduction to Research in Evolutionary Biology  
*Field Museum Curators*  
 Introduction to Research at the Field Museum. This course meets once a week for a lecture by a curator at the Field Museum. A different curator lectures each week, presenting results of her/his current research on a range of topics in evolutionary biology, including phylogenetic systematics, molecular biology, paleontology, development, conservation biology and biodiversity, population biology, or biomechanics. Lectures are often followed by a tour of one of the world's major natural history collections of living or fossil birds, mammals, plants, insects, fishes, invertebrates, or amphibians and reptiles.

40100. Grants, Publications and Professional Issues

*Bergelson, Ho, Margulies, Mueller*

Covers professional topics in evolutionary biology, such as strategies in grant and article writing, construction and submission of professional articles for journals in the field, career alternatives and strategies, ethical issues, etc. Topics are decided on by enrolled students and faculty leading the seminar.

**Advanced Courses**

30300 Key Issues in Early Vertebrate Evolution. (=ORGB 31300)

*Coates*

The course addresses questions about the origin of vertebrates, the interrelationships of major gnathostome clades, and the fish tetrapod transition. Undergraduate level chordate biology required; familiarity with methods in systematic biology advantageous.

30400, 30500. Vertebrate Paleontology (=ORGB 31400, 31500)

*Coates, Shubin, Sereno*

Systematics, morphology, ecology, and evolution of fossil vertebrates. Open to undergraduates.

30600. Molecular Evolutionary Genetics (=ECEV 30600)

*Wu*

This course deals with advanced topics in evolutionary genetics and molecular evolution. The main goal is to survey the frontiers and to develop research projects of the future.

30700. Computational Biology (=ECEV 30700)

*Li*

This course provides mathematical and statistical backgrounds and computational skills in computational biology. Laboratory sessions are an integral part of the course, so students can have hands on practice of computer skills. Topics will cover theory and methods for comparative analysis of DNA and protein sequence data; statistical tests of molecular clocks; methods of phylogenetic reconstruction and statistical tests of phylogenies; gene identification in DNA sequences; protein homology detection; and structure prediction methods using protein sequences. Prerequisite: BIOS 18200; Math 15300; Stat 24400 24500 (or equivalent), or consent of instructor.

30800. Current Topics in Evolutionary Genomics (=ECEV 30800)

*Li*

This course will cover current topics in evolutionary genomics including comparative genomics, evolution of duplicate genes, evolution of genome structure and organization, evolution of protein protein interaction network, and evolution of gene expression. It will also review methods for data analyses. Some background in molecular evolution is required.

30900. Evolution and Medicine (=ECEV 30900, GNDR 26601)

*Van Valen and Stoller*

A seminar reading discussion course on medical implications of different areas in the evolutionary half of biology.

31000. Evolutionary Processes (=ECEV 31000, BIOS 29306)

*Van Valen*

Discussion, essays, and much reading on conceptual and empirical aspects of the evolutionary half of biology. Also a laboratory in the philosophy of science. Prerequisite: consent of instructor.

## 31100. Mammal Evolution (=BIOS 23260)

*Staff*

An introduction to the major features of mammalian evolution. The course will survey major groups of mammals, including both living and fossil taxa. We will focus on phylogeny, morphology, biogeography, and patterns of diversification and extinction, using illustrations from Field Museum's world class collections of fossil and living mammals. Transportation to and from the museum will be arranged as needed.

## 31200. Data Analysis in Ecology and Evolution (=ECEV 31200)

*Bergelson*

This course covers the design and analysis of experiments, focusing on tests used commonly in evolutionary biology. Both parametric and nonparametric tests will be considered.

## 31300. Ecological Applications to Conservation Biology (=ECEV 31300, BIOS 23351)

*Bergelson, Pfister*

We focus on the contribution of ecological theory to the understanding of current issues in conservation biology. The course emphasizes quantitative methods and their use for applied problems in ecology, such as the design of nature reserves, the risk of extinction and the impact of harvesting, the dynamics of species invasions, and the role of species interactions. Course material is drawn mostly from the current primary literature. Two Saturday field trips and computer modeling labs are in addition to scheduled class time.

## 31400. Geographical Variation

*(=ECEV 31400)**Kreitman, Nagylaki*

Theoretical and empirical aspects of geographical variation in population genetics will be treated. Theoretical topics will include protected polymorphism and clines maintained by migration and selection; random genetic drift in a cline; and spatial patterns under migration, mutation, and random genetic drift. Estimation from molecular gene frequency data of parameters that describe population structure and the relative contribution of random genetic drift and natural selection will be covered. Offered in even numbered years.

Prerequisite: basic population genetics.

## 31500. Quantitative Genetics (=ECEV 31500)

*Nagylaki*

Theoretical topics will include basic population genetics; the decomposition of the balance and the correlation between relatives with random mating, inbreeding, and assortative mating; selection; mutation selection balance; and random genetic drift. Empirical examples from human genetics will be presented. Offered in odd numbered years.

Prerequisite: basic population genetics.

## 31700. Macroevolution (=GEOS 31700)

*Jablonski*

Patterns and processes of evolution above the species level, in both recent and fossil organisms. A survey of the current literature, along with case studies. Prereq: consent of the instructor.

## 31800. Taphonomy (=GEOS 31800)

*Kidwell*

Research oriented lecture and seminar course on processes and patterns of fossilization, including rates and controls of soft tissue decomposition, hydraulic behavior of skeletal hard parts, differential preservation of biominerals, and live/dead interactions with consequences for paleontological and evolutionary analysis. Post mortem phenomena will be examined at the level of individual organisms and species, multi species assemblages, stratigraphic sequences, and larger geologic scales.

Prereq: GEOS 22300.

## 31900. Topics in Paleobiology

*(=GEOS 31900)**Boyce, Foote, Jablonski, Kidwell, LaBarbera, Webster*

Investigations in a seminar format of paleobiological and sedimentological topics of current interest to students and faculty. Previous subjects have included marine paleoecology, Precambrian paleobiology and evolution of early terrestrial ecosystems.

Prereq: consent of staff.

## 32000. Developmental Biopsychology

*(=PSYCH 31700)**McClintock*

An introduction to the biological and physiological analysis of behavior. Principles of neural and endocrine integration. A lecture course taught with a developmental emphasis, drawing from both the experimental and clinical literature.

32100. Diversity and Evolution of Arthropods. (=BIOS 23402)

*Sierwald*

This course will focus on arthropod evolution, with an emphasis on insects and spiders. Lectures will focus on facets of arthropod evolution, including theories of arthropod origins, the evolution of flight, and the evolution of metamorphosis.

Laboratories will focus on comparative examination of diverse arthropod groups, and students will be expected to achieve a general understanding of major arthropod groups.

32300. Introductory Paleontology  
(=BIOS 23255, GEOS 22300)

*Foote*

The focus of the 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, morphological analysis and interpretation, biostratigraphy, paleoecology, and macroevolution); labs are systematic, introducing major groups of fossil invertebrates.

32400. Invertebrate Paleobiology and Evolution (=GEOS 22400, 32400)

*Webster*

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. Field trips offer 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: topics covered include the link between morphology and genetics, microevolution, functional morphology, and the inference of past climates using fossils. PQ: Geosci 13100, 13200, (or equivalents for Biosci students).

32500. Evolutionary History of Terrestrial Ecosystems (=GEOS 32500)

*C. Boyce, P. Makovicky*

Seminar course covering the evolution of terrestrial ecosystems from their Paleozoic assembly through to the modern world. The fossil history of plant, vertebrate, invertebrate, and fungal lineages will be covered, as will the diversification of their ecological interactions. The influence of extinction events and important extrinsic factors, such as geography, climate, and atmospheric composition, will also be considered. The class will meet once a week. Grades will be based upon student presentations and a final paper. (Autumn)

32700. Philosophical Problems in the Biological Sciences (CHSS 37600, HIPS 22700, PHIL 32700)

*Wimsatt*

Main topic: reductionism and mechanism. We will begin by readings by philosophers on reduction. The classical model will be criticized and new models, based upon the practices of mechanistic explanation, will be offered. Related topics: complexity and organization, levels of organization, aggregativity and emergence, reductionistic model building heuristics, and model building in evolutionary biology will be covered. Following this, we will undertake an extended survey of the history of genetics, utilizing primary and secondary sources, and focusing on the period from 1868 through 1926, with selective discussion of the modern period. This discussion will illustrate the claims made in the first part of the course, and will in addition illustrate the superiority of mechanistic or realist approaches over operationalist or instrumentalist ones, the character of scientific change and reductive explanation, will focus on the productive use of models, especially false ones, as means to arrive at better theories. (Offered in even numbered years).

33000. Analytical Paleontology (=GEOS 330)

*Foote*

A course on quantitative analytical methods, stressing research applications in paleontology. Subjects include: basic probability theory; morphological analysis; computer intensive statistical methods such as the bootstrap; other non parametric approaches; time series analysis; and mathematical modeling, especially of branching and extinction processes. Prereq: GEOS 22300 or

equivalent; secondary school mathematics; elementary computer programming; elementary statistics; or consent of instructor.

33100. Field Course in Stratigraphy (=GEOS 24000)

*Staff*

This is a one month excursion to the north western United States and/or eastern Canada to examine the tectonic and stratigraphic evolution of the margin of North America from the Cambrian period to the present. The purpose of the course is to acquaint students with sedimentary and volcanic rocks deposited in a variety of environments and to examine the tectonic and stratigraphic evolution of this complicated region. The trip takes place in late August or early September with field vehicles and camping equipment provided. Prereq: GEOS 13100 13200 or equivalent.

33200. Animal Behavior (=BIOS 23250)

*Margulis*

*Spring*

33600. Vertebrate Development. (=DVBI 35600, ORGB 33600)

*Prince, Millen, Ho*

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 patterning, organogenesis). We make extensive use of the primary literature and emphasize experimental approaches (e.g. classical embryology, genetics, molecular genetics).

33700. Molecular Genetics and the Evolution of Animal Design (=ORGB 33700, BIOS 2XXXX)

*Schmitt Ott*

The purpose of this course is to provide graduate students and undergraduates with a developmental genetic perspective on evolutionary questions that have emerged in various disciplines including developmental biology, paleontology and phylogenetic systematics. Topics range from the evolution of gene regulation to the origin of novelties such as eyes and wings. These subjects will be introduced in lectures, but emphasis will be put on reading, presenting and discussing original research papers. Graduate students and undergraduates will be expected to collaborate in preparing paper

presentations. As an introductory text *From DNA to Diversity* by Carroll, Grenier and Weatherbee (2004; 2<sup>nd</sup> ed; Blackwell Science) is recommended.

33800. Development and Evolution (=ORGB 33800, BIOS 21259)

*Prince*

Over the last decade, genetic and molecular approaches in a few model systems (*Drosophila*, *C. elegans*, *Arabidopsis*, mouse, etc.) have led to a detailed understanding of several steps in pattern formation during the development of each respective organism. More recently, it has also become clear that most of the genes identified as playing an important role in development in one species have homologs in a variety of other organisms and that in many cases there are clearly conserved aspects of developmental and/or biochemical function for these homologous genes. The purpose of this course is to evaluate how our knowledge of developmental mechanisms in model organisms can help us understand the evolution of development. The course is aimed primarily at graduate students, but advanced undergraduates may enroll with permission of the instructors.

34200. Biological Fluid Mechanics (=ORGB 34200, BIOS 22242)

*LaBarbera*

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.

34300. Biomechanics of Organisms (=GEOS 34200, ORGB 34200, BIOS 22243)

*LaBarbera*

This course examines how organisms cope with their physical environment. It covers the properties of biological materials (bone, cartilage, tendon, shell, wood, cuticle, etc.), mechanical analysis of morphology, and principles of design optimization. Emphasis is placed on support systems of organisms. Mechanical properties of biomaterials are analyzed in relation to their underlying biochemical organization and biophysical properties. Students carry out self designed laboratory projects. There is a required laboratory.

## 34600. Current Issues in Evolution

(=ECEV 34600)

*Van Valen*

A seminar on unresolved problems in the evolutionary half of biology. Prerequisite: consent of instructor.

## 34700. Evolution of Development

(=ECEV 34700)

*Van Valen, Shubin*

A seminar on developmental aspects of evolution and evolutionary aspects of development. Prerequisite: consent of instructor.

## 35000. Evolutionary Ecology (=ECEV 35000)

*Wootton*

An evolutionary approach to the study of ecological interactions. Topics include plant-animal interactions, life history evolution, host-parasite and host-mutualist interactions, competition, and predation.

Appropriate for graduate students who have had little background in ecology.

## 35200. Paleobiology of Mammals (=ECEV 35200)

*Van Valen*

Detailed treatment of mammalian evolution, including all recognized families, and its various evolutionary implications.

Prerequisite: chordate biology or equivalent or consent of instructor. (Offered alternate years.)

## 35400. Systematic Biology (=BIOS 23403)

*Kearney*

Systematic biology encompasses such activities as discovering and classifying biological diversity, estimating the phylogenetic relationships among species or larger lineages, and estimating evolutionary processes. From the standpoint of the three schools of systematic biology (evolutionary, phenetic, and phylogenetic), the course will be devoted to assessing relatedness among taxa, estimating phylogenetic hypotheses, and evaluating alternatives for these hypotheses. We will also consider the central role of systematic biology in the biological sciences and use systematic hypotheses to test theories about evolutionary or biological processes.

## 35500. Advanced Systematic Biology

*Kearney*

## 35600, 35700. Principles of Population

Genetics I, II (=ECEV 35600, 35700)

*Hudson, Nagylaki, Wu*

Examines the basic theoretical principles of population genetics and their application to the study of variation and evolution in natural populations. Topics include selection, mutation, random genetic drift, quantitative genetics, molecular evolution and variation, the evolution of selfish genetic systems, and human evolution. Two Quarter Course.

## 35800. Classics of Evolutionary Genetics

(=ECEV 35800)

*Long*

Major classic papers in evolutionary genetics that had great impact on the development of the field are reviewed.

## 35900. Evolution at the Genomic Level

(=ECEV 35900)

*Kreitman, Long*

We focus on the newly proposed and solved problems related to evolution of genomes. Instructors will give a series of lectures, dealing with basic concepts and techniques used in the research of topics. Students will present and evaluate literatures.

## 36200. Current Topics in Evolutionary Biology (=ECEV 36200)

*Coyne*

Critical analysis of recent literature on empirical research in evolutionary biology. Prerequisite: some knowledge of population genetics, evolutionary biology or consent of instructor.

## 36300. Speciation (=ECEV 36300)

*Coyne*

A review of the literature on the origin of species beginning with Darwin and continuing through contemporary work. Both theoretical and empirical studies will be covered, with special emphasis on the genetics of speciation. Prerequisite: coursework in genetics and evolution.

## 36900. Biopsychology of Sex Differences

(=HUDV 30901 / PSYC 31600)

*Mateo*

This course will explore the biological basis of mammalian sex differences and reproductive behaviors. We will consider a variety of species, including humans. We will address the physiological, hormonal, ecological and social basis of sex differences. To get the most from this course, students should have some background in biology, preferably

from taking an introductory course in biology or biological psychology.

37000. Topics in Systematics and Biogeography (=ORG 37000)

*Sereno*

A graduate seminar which includes short lectures, one page summaries of readings, and class discussion. Topics include critical examination of current methods in systematics and historical biogeography, their limits, and applications to biological problems. The course assumes familiarity with the principles of systematics and historical biogeography and requires extensive readings from the current literature. Offered in even numbered years.

37100. Biopsychology of Attachment (=HUDV 34900)

*Maestripieri*

This course explores parent child attachment from a bio social perspective. It consists of two parts: Part I will focus on mother infant attachment and include discussion of such topics as neuroendocrinology of maternal behavior in animals and humans and mother infant bonding in primates and humans. Part II will focus on infant mother attachment in humans and include discussion of such topics as Bowlby's formulation of attachment theory, individual differences in attachment and the Strange Situation Test, internal working models attachment, cross cultural studies of attachment, attachment and adult romantic relationships, and attachment and psychopathology.

37200. Evolution of Parenting (=HUDV 34200)

*Maestripieri*

This course explores parental behavior in nonhuman animals and humans from a comparative and evolutionary perspective. Specific topics include parental care systems in invertebrates and vertebrates, variation in parental investment in relation to costs and benefits, parent offspring conflict, sex biased parental investment, birth sex ratios, attachment theory, and cross cultural patterns of parenting in humans.

37300. Primate Behavior (=HUDV 34300)

*Maestripieri*

This course explores the behavior and ecology of nonhuman primates. Specific topics include methods for the study of primate behavior, history of primate behavior research, socioecology, foraging, predation, affiliation, aggression, mating, parenting, development, communication, cognition, and evolution of human behavior. This course will involve visits to the Brookfield Zoo with observations of primate behavior.

37400. Evolutionary Social Psychology (HUDV 37800, PSYC 34700)

*Maestripieri*

This course explores human social behavior from the perspective of a controversial new discipline: evolutionary psychology. In this course we will read and discuss articles in which evolutionary theory has been applied to different aspects of human behavior and social life such as: developmental sex differences, cooperation and altruism, competition and aggression, physical attractiveness and mating strategies, incest avoidance and marriage, sexual coercion, parenting, parenting and child abuse, language and cognition, and psychological and personality disorders.

37500. Sexual Selection (=ECEV 37500)

*Pruett Jones*

A discussion and critical analysis of sexual selection. This course will consist of lectures, reading and discussion. Prerequisite: Common Core Biology, BIOS 248, or consent of instructor. (odd numbered years.)

37600, 37700, 37800 Graduate Workshop in Animal Behavior (HUDV 37500)

This graduate workshop involves weekly research seminars in animal behavior given by faculty members, post docs, and advanced graduate students from this and other institutions. The seminars are followed by discussion in which students have the opportunity to interact with the speaker, ask questions about the presentation, and share information about their own work. The purpose of this workshop is to expose graduate students to current comparative research in behavioral biology and meet some of the leading scientists in this field. Students must register for this course in the Autumn quarter and will receive credit in the Spring, at the end of the 3 quarter sequence.

38100. Evolution of the Hominoidea  
(=ANTH 38100)

*Tuttle*

A detailed consideration of the fossil record and phylogeny of the Hominoidea and collateral taxa of the Hominoidea based on studies of classic monographs, casts, and comparative primate osteology. (2 Crs.)

38200. Comparative Primate Morphology  
(=ANTH 38200)

*Tuttle*

Functional morphology of locomotor, alimentary, reproductive, and Springerian sensory systems in primates. Dissections will be performed on monkeys and apes. Prereq: consent of instructor. (2 Crs.)

38400. History and Theory of Human Evolution (=ANTH 38400)

*Tuttle*

A proseminar based on the classic theoretic writings, autobiographies, and biographies of C. Darwin, T.H. Huxley, A. Keith, H.F. Osborn, F.W. Jones, W.K. Gregory, D.J. Morton, R. Broom, D. Black, R. Dart, F. Weidenreich, J.T. Robinson, L. Leakey, W.E. LeGros Clark, A.H. Schultz, W.L. Straus, E.A. Hooton, S.L. Washburn, C.S. Coon, T. Dobzhansky, G. Simpson, and S.J. Gould.

38600. Apes and Human Evolution  
(=ANTH 38600)

*Tuttle*

A critical examination of the ways in which data on the behavior, morphology and genetics of apes have been used to elucidate human evolution, with particular emphasis on bipedalism, hunting, meat eating, tool behavior, food sharing, cognitive ability, language, self awareness, and sociability. Visits to local zoos, films, and demonstrations with casts of fossils and skeletons required.

38700. Primate Evolution. (=BIOS 23241)

*Martin, Robert*

A combined lecture and seminar course covering the comparative morphological and molecular evidence for evolution across the entire order Primates, including both basic data and theoretical issues.

40000. Evolutionary Conservation Biology

Graduate proseminar examining critical questions and issues in evolutionary conservation biology, from paleobiology of extinction and survivals to contemporary issues of hotspots, population genetics and ecology.

behavioral ecology of free and managed populations, and molecular evolution and systematic biology.

40900. Behavioral Ecology. (=HUDV 40900).  
*Mateo*

Graduate Seminar. We will meet once per week to discuss current topics in behavioral ecology, as selected by participating students.

41500. Topics in Stratigraphy and Biosedimentology (=GEOS 31500)  
*Kidwell*

Exploration of current topics in a seminar format, with readings drawn from source literature. Topics will be selected from the rapidly evolving fields of synthetic stratigraphy, basin analysis and animal sediment relations in their broadest sense. Emphasis will reflect the interests of the participants; past topics include paleobathymetry, geologic time scales, biostratigraphy, sequence stratigraphy, sea level models, and geology of continental margins. Prereq: GEOS 22200 and 22300 or equivalent.

42200. Seminar: Research in Behavioral Endocrinology (=HUDV 42200)  
*McClintock*

For students actively involved in research in behavioral endocrinology. Emphasis is on the current literature and on the analysis and the presentation of data. Prereq: Consent of instructor, active research in the area.

42500. Concepts in Ecology (=ECEV 42500)  
*Bergelson, Pfister, Wootton*

Using a combination of lecture and student led discussion, this course will introduce students to the classical ecological literature as well as the latest work in each of several topics. The goal is to provide students with a solid framework upon which to build their own research program.

42600. Community Ecology (=ECEV 42600)  
*Wootton*

Lectures cover advanced topics in multi species systems, and include an introduction to basic theoretical approaches.

42700. Topics in Aquatic Ecology (=ECEV 42700)  
*Pfister*

Theoretical and empirical topics especially relevant to the ecology of aquatic systems will be presented. Emphasis will be placed

on features of aquatic systems that pose the theoretical and empirical challenges such as the prevalence of complex life histories, the potential for long distance dispersal, and the diverse controls of trophic structure.

42800. Population Ecology (=ECEV 42800)  
*Pfister*

A lecture course on the empirical and theoretical approaches to the study of natural populations, including field methodologies and quantitative approaches. Includes computer assignments.

42900. Theoretical Ecology (=ECEV 42900)  
*Amaresekare, Dwyer*

An introduction to mathematical modeling in ecology. The course will begin with linear growth and Lotka Volterra models, and proceed to partial differential equations. The course's perspective will emphasize numerical computations and fitting models to data.

43000. Ecological Genetics of Plant/Animal Interactions (=ECEV 43000)  
*Bergelson, Dwyer*

This seminar covers empirical and theoretical issues in the study of coevolutionary interactions.

43100. Applications of Ecological Theory  
*Amarasekare*

This course focuses on applying ecological theory to empirical investigations. The emphasis is on reading the most recent articles on a topic of intense current interest, with an eye towards identifying areas in which crucial new contributions could be made. The themes discussed in the past include spatial dynamics, diversity stability relationships, and biodiversity and ecosystem functioning.

44000. Fundamentals of Molecular Evolution (=ECEV 44000)  
*Kreitman, Nagylaki*

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 governing molecular variation and divergence and genome organization. It explores the evolutionary assembly of genes, the origin of novel gene function, the population genetics of repetitive DNA variation, and the evolution of multi gene families. The course also 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. The course consists of lectures and computer laboratories.

44100. Molecular Methods in Ecology and Evolution (=ECEV 44100)  
*Bergelson, Kreitman*

This is a laboratory course intended as an intense introduction to molecular methods applicable to research in organismal biology. The topics covered by the course will change from year to year. Students will learn techniques for manipulating DNA, for identifying single base substitutions and tandem repeat length variation, and for carrying out large scale mapping experiments of a quantitative trait. Class enrollment will be limited to approximately 6-8 students.

45300. Models of Animal Behavior (=ECEV 45300)  
*Pruett Jones*

Introduction to mathematical models of naturalistic behavior. Lectures, discussions and individual projects. (even numbered years.)

45500. Biogeography (=ENST 25500, BIOS 23406)  
*Heaney, Patterson*

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 (the design and effectiveness of nature reserves).

45600. Paleobiogeography. (=ORG 35600)  
*Sereno*

This course concerns the development of historical biogeography as a discipline and the advent of more recent quantitative methods. Areas of special interest include the quality of fossil and geologic records, the definition of areas, the relationship of speciation and phylogeny to biogeography, and methods that search for congruence. The course is aimed at defining hypotheses open to test by empirical data or simulation.

48100. Advanced Problems in Paleoanthropology (=ANTH 48100)  
*Tuttle*  
 Tutorial museum, laboratory and field studies on the hominoid fossil record and contextual information relevant to its interpretation.

48500. Advanced Problems in Primate Locomotion and Comparative Morphology (=ANTH 48500)  
*Tuttle*  
 Seminar and/or laboratory study of the morphological and behavioral adaptations of selected primates and their implications for primate phylogeny.

49500. Teaching in Evolutionary Biology  
*Staff*  
 Under the supervision of University faculty, graduate students in the Evolutionary Biology may serve as teaching assistants for courses in the College and relevant Graduate Divisions. Students will be evaluated and mentored throughout the quarter by their faculty supervisor, and at the end of the quarter by enrolled students. Prerequisite: successful fulfillment of the BSD teaching requirement and consent of instructor.

49600. Graduate Readings in Evolutionary Biology at the Field Museum  
*Staff*  
 Directed individual reading courses supervised by CEB faculty members who are curators at the Field Museum. Prereq: consent of instructor.

49700. Graduate Readings in Evolutionary Biology  
*Staff*  
 Directed individual reading courses in evolutionary biology supervised by CEB faculty members. Prerequisite: consent of instructor.

49800. Graduate Research Off Campus  
*Staff*  
 Advanced research under the direction of the faculty of the Committee on Evolutionary Biology, undertaken away from the University of Chicago campus, approved by the Chair and the student's advisory committee.

49900. Graduate Research On Campus  
*Staff*  
 Advanced research under the direction of the faculty of the Committee on Evolutionary Biology. While any approved research problem may be pursued under this course number, special attention is called to the following research fields available in the Committee: population ecology and genetics, entomology, applied ecology, plant biology, systematics of fossil invertebrates, molluscs, problems in the systematics of arthropods, herpetology, mammalogy, ornithology, and ichthyology, theoretical biology, animal behavior, paleoecology, molecular evolution, functional morphology, evolution of development, community ecology and evolution, evolutionary paleobiology and macroevolution, and physiological ecology.



## COMMITTEE on GENETICS

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Douglas K. Bishop

**Professors**

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Nancy Jean Cox, Human Genetics

William B. Dobyns, Human Genetics

Rochelle Easton Esposito, Molecular Genetics & Cell Biology

Martin Feder, Organismal Biology & Anatomy

Robert Haselkorn, Molecular Genetics & Cell Biology

Richard R Hudson, Ecology & Evolution

Martin Kreitman, Ecology & Evolution

Michelle M. LeBeau, Medicine

Wen Hsiung Li, Ecology & Evolution

Manyuan Long, Ecology & Evolution

Terence E. Martin, Molecular Genetics & Cell Biology

Rima McLeod, Ophthalmology & Visual Science

Thomas Nagylaki, Ecology & Evolution

Carole Ober, Human Genetics

Olufunmilayo Olopade, Medicine

Brian J. Popko, Neurology

Daphne Preuss, Molecular Genetics & Cell Biology

Trevor Price, Ecology and Evolution

Samuel Refetoff, Medicine

Bernard Roizman, Molecular Genetics & Cell Biology

Lucia Rothman Denes, Molecular Genetics & Cell Biology

Janet D. Rowley, Medicine

James A. Shapiro, Biochemistry & Molecular Biology

Harinder Singh, Molecular Genetics & Cell Biology

Ursula B. Storb, Molecular Genetics & Cell Biology

Leigh Van Valen, Ecology & Evolution

Chung I Wu, Ecology & Evolution

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Anna DiRienzo, Human Genetics

Edwin L. Ferguson, Molecular Genetics & Cell Biology

Benjamin Click, Molecular Genetics & Cell Biology

Jean Greenberg, Molecular Genetics & Cell Biology

Robert Ho, Organismal Biology & Anatomy

Stephen J. Kron, Molecular Genetics & Cell Biology

Gayle K. Lamppa, Molecular Genetics & Cell Biology

Elizabeth M. McNally, Medicine

Mary Sara McPeek, Statistics

Laurens J. Mets, Molecular Genetics & Cell Biology

Victoria Prince, Organismal Biology & Anatomy

Carrie Rinker Schaeffer, Surgery

Aaron Turkewitz, Molecular Genetics & Cell Biology

**Assistant Professors**

Justin Borevitz, Ecology and Evolution

Judy Cho, Medicine

Wei Du, Ben May Institute for Cancer Research

Karen M. Frank, Pathology

Tong Chuan He, Surgery

Bruce T. Lahn, Human Genetics

Jocelyn Malamy, Molecular Genetics & Cell Biology

Kathleen J. Millen, Human Genetics

Jonathan K. Pritchard, Human Genetics

Jonathan P. Staley, Molecular Genetics & Cell Biology

Gene Webb, Medicine

Urs Schmidt Ott, Organismal Biology & Anatomy

**Lecturer**

Brian K. Kay, Argonne National Laboratory

**Emeritus Faculty**

Wolfgang Epstein, Molecular Genetics and Cell Biology

Anthony Mahowald, Molecular Genetics and Cell Biology

Mary Mahowald, Obstetrics and Gynecology

Alvin Markovitz, Biochemistry and Molecular Biology

Janice B. Spofford, Ecology and Evolution

Bernard Strauss, Molecular Genetics and Cell Biology

**T**he Committee on Genetics is a broad interdisciplinary degree granting program that brings together geneticists from fourteen academic departments of the University of Chicago and researchers from Argonne National Laboratory. The program is aimed at training Ph.D. scholars in advanced rationales and methods of genetic analysis for careers as independent scientists in basic and applied biomedical research and education. Opportunities are available to study diverse areas of genetics, including genomics, 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 subdisciplines, while specializing in one of them for their research career.

Each student is expected to take four core courses in major areas of genetics, including Genetic Analysis (MGCB 31400), Genetic Mechanisms (MGCB 31500), Molecular Biology I (MGCB 31200) or Fundamentals of Molecular Biology (MGCB 31000). In addition a fourth requirement is chosen from the following courses: Molecular Evolution (ECEV 44000), Population Genetics I (ECEV 35600), Human Variation and Disease (HGEN 46900) or Evolution at the Genomic Level (ECEV 35900). The remaining four courses are chosen as elective courses from a host of courses in the Biological Sciences Division and Department of Statistics. 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 genetic research at the University. The program sponsors a regular colloquium in genetics, an annual symposium on a chosen topic of modern genetics research, a biweekly journal club, and a biweekly genetic 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 on three written questions, given to the students two weeks prior to the exam. At the end of the second year a written research proposal is submitted and defended. 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.uchicago.edu>.

### *Courses*

Below are a list of both required courses (as mentioned above), and courses offered in the Committee on Genetics. For an updated version of course offerings, please visit our website at <http://cg.bsd.uchicago.edu/>

**MGCB 31400. General Genetic Analysis**  
Coverage of the fundamental tools of genetic analysis as used to study biological phenomena. Topics include genetic exchange in prokaryotes and eukaryotes, analysis of gene function, and epigenetics.

**MGCB 31500. Genetic Mechanisms**  
Advanced coverage of genetic mechanisms involved in genome stability and rearrangement in lower and higher organisms. Topics include the genetics of mutagenesis, DNA repair, homologous and site specific recombination, transposition and chromosome segregation.

**MGCB 31200. Molecular Biology I**

Nucleic acid structure; mechanisms of transcription and replication. Regulation of transcription in prokaryotes, and of DNA replication in prokaryotes and eukaryotes.

**MGCB 31000. Fundamentals in Molecular Biology**

The course covers nucleic acid structure and DNA topology, recombinant DNA technology, DNA replication, DNA damage, mutagenesis and repair, Transposons and site specific recombination, prokaryotic and eukaryotic transcription and its regulation, RNA structure, splicing and catalytic RNAs, protein synthesis, and chromatin.

**ECEV 44000. Molecular Evolution**

Covers major theories that form the foundation for understanding evolutionary forces governing molecular variation and divergence and genome organization. It explores the evolutionary assembly of genes, the origin of novel gene function, the population genetics of repetitive DNA variation, and the evolution of multi gene families.

**ECEV 35600. Population Genetics I**

Examines the basic theoretical principles of population genetics, and their application to the study of variation and evolution in natural populations. Topics include selection, mutation, random genetic drift, quantitative genetics, molecular evolution and variation, the evolution of selfish genetic systems, and human evolution.

**HGEN 46900. Human Variation and Disease**

This Course focuses on principles of population and evolutionary genetics and complex trait mapping as they apply to humans. It will include the discussion of genetic variation and disease mapping data.

**ECEV 35900. Evolution at the Genomic Level**

We focus on the newly proposed and solved problems related to evolution of genomes. Instructors will give a series of lectures, dealing with basic concepts and techniques used in the research of topics. Students will present and evaluate literatures.

**GENE 38000. Genomic & Proteomic****Approaches to Biological Questions**

Lectures with emphasis on concepts and experimental approaches in Genomics and Proteomics. Topics to include: Bioinformatic tools for DNA analysis and protein analysis, genomic tools for high throughput genetics, arrays for DNA & RNA detection, genome organization, comparative genomics, human evolution, current technologies for profiling proteomes, protein interaction networks, chemical genomics, and markers of disease.



## DEPARTMENT *of* HEALTH STUDIES

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***Chair***

Ronald A. Thisted

***Professors***

Willard G. Manning, Jr.

Ronald A. Thisted

***Associate Professors***

Diane S. Lauderdale

Paul Rathouz

***Assistant Professors***

Kathleen A. Cagney

Lawrence P. Casalino

James J. Dignam

Vanja M. Dukic

R. Tamara Konetzka

Lianne Kurina

***Emeritus Faculty***

John Christian Bailer

**T**he 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.

The department provides methodological and substantive training in biostatistics, epidemiology, and health services. Graduate level courses in these disciplines are offered, and are open to students in all divisions. The department offers the Master of Science for Clinical Professionals (MSCP) Program, which began in July of 1999. The MSCP provides specialized coursework in research methods needed to design and carry out investigations related to clinical medicine, epidemiology, and the delivery of health services. It is designed for professional enhancement for individuals who already have doctoral level expertise in medicine or related clinical disciplines.

### PROGRAM OF STUDY

Currently, the Department of Health Studies offers one graduate program, the Master of Science in Health Studies for Clinical Professionals. Additional graduate programs, including a Ph.D. program, are under development. Current information on graduate programs is available from the department's 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 (Introduction to Biostatistics) [Stat 22000 or equivalent can be substituted for this course], HSTD32400 (Applied Regression Analysis), HSTD 30900 (Principles of Epidemiology), HSTD 31001 (Epidemiologic Methods), HSTD 35100 (Introduction to Health Services Research), and at least one of the following courses: HSTD 32600 (Categorical Data Analysis), HSTD 32700 (Biostatistical Methods), HSTD 33300 (Longitudinal Data Analysis) or HSTD 33100 (Introduction to Survival Analysis).

## APPLICATION FOR ADMISSION

Applications for admission should be completed by December 28 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 write to the Manager of Educational Programs, Department of Health Studies, University of Chicago, 5841 South Maryland Avenue, MC2007, Chicago, IL 60637. Alternatively, information may be requested by e mail at [curriculum@health.bsd.uchicago.edu](mailto:curriculum@health.bsd.uchicago.edu). Additional information is available on the department website at <http://health.bsd.uchicago.edu>.

*Courses (Electives may not be offered every year.)*

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### Epidemiology

- 30500. Issues in Women's Health (GNDR 30500)
- 30900. Principles of Epidemiology (STAT 35000, PPHA 36400)
- 31001. Epidemiologic Methods (STAT 35700)

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### Biostatistics

- 32100. Introduction to Biostatistics
- 32400. Applied Regression Analysis (STAT 22400)
- 32600. Analysis of Categorical Data (STAT 22600)
- 32700. Biostatistical Methods (STAT 22700)
- 32800. Modern Data Analysis in Biostatistics

32901. Introduction to Clinical Trials (STAT 35201)  
 33000. Topics in Bayesian Statistics (STAT 31600)  
 33100. Introduction to Survival Analysis (STAT 35600)  
 33300. Longitudinal Data Analysis (STAT 36900)  
 43000. Bayesian Methods for Biostatistics (STAT 32300)

**Health Services Research/Outcomes**

35100. Introduction to Health Services Research (SSAD 46300)  
 35200. Demography of Aging and the Life Course (SSAD 49200, PPHA 36500, SOCI 30310, HUDV 35202)  
 35300. Long Term Care Policy and Financing (PPHA 42400)

35401. Topics in U.S. Health Economics Sociology and Policy (LAWS 97002, SOCI 50038, PPHA 35400)

37100. Cost Effectiveness Analysis

37900. Health Outcomes and Quality of Medical Care ( PPHA 37900, SSAD49300)

38000. Health Status Assessment: Measurement and Inference

45100. Applied Regression Using Small Area Variations (STAT 35400)

**Reading & Research Courses**

39000. M.S. Readings in Health Studies  
 39100. M.S. Research in Health Studies  
 49000. Ph.D. Readings in Health Studies  
 49100. Ph.D. Research in Health Studies



## DEPARTMENT of HUMAN GENETICS

**Chair**

Conrad Gilliam

**Professors**

Graeme Bell, Biochemistry and Molecular Biology  
 Nancy Jean Cox  
 William B. Dobyns  
 T. Conrad Gilliam  
 Richard Hudson, Ecology and Evolution  
 Michelle M. Le Beau, Medicine

**Carole Ober**

Janet D. Rowley, Medicine  
 Stuart Schwartz  
 Olufunmilayo Olopade, Medicine

**Associate Professors**

Anna Di Rienzo  
 Elizabeth M. McNally, Medicine  
 Mary Sara McPeek, Statistics  
 Marion Verp, Obstetrics and Gynecology

**Assistant Professors**

Soma Das  
 Yoav Gilad  
 Bruce T. Lahn  
 Kathleen J. Millen  
 Marcelo A. Nobrega  
 Jonathan Pritchard  
 Molly Przeworski  
 Abraham Palmer  
 Darrel J. Waggoner

**T**he Department of Human Genetics offers training in the 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, medical students, and undergraduate and graduate students in other departments. Programs for the Ph.D. degree place 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 detailed 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: Genetic Analysis (MGCB 31400), Human Genetics I (HGEN 47000) and Human Variation and Disease (HGEN 46900). And one of the following courses: Introductory Statistical Genetics (HGEN 47100), Genetic Mechanisms (MGCB 31500), Developmental Genetics of Non vertebrate Model Systems (DVBI 35500), Molecular Biology II (MGCB 31300), or Population Genetics I (ECEV 35600). 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 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. When possible, one quarter should be taught at the undergraduate level and one at the graduate level.

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.uchicago.edu>.

### Courses

Below are a list of both required courses (as mentioned above), and courses offered in the Department of Human Genetics. For an updated version of course offerings, please visit our website at <http://genes.uchicago.edu/>

#### MGCB 31400. Genetic Analysis

Coverage of the fundamental tools of genetics analysis as used to study biological phenomena. Topics include genetic exchange in prokaryotes and eukaryotes, analysis of gene function, and epigenetics.

#### HGEN 47000. Human Genetics I

This course covers classical and modern approaches to studying cytogenetic, Mendelian, and complex human diseases. Topics include chromosome biology, human gene discovery for single gene and complex

diseases, non Mendelian inheritance, mouse models of human disease, cancer genetics, and human population genetics. The format includes lectures and student presentations.

HGEN 46900. Human Variation and Disease  
This course focuses on principles of population and evolutionary genetics and complex trait mapping as they apply to humans. It will include the discussion of genetic variation and disease mapping data.

HGEN 47100. Introductory Statistical Genetics

This course focuses on genetic models for complex human disorders and quantitative traits. Topics covered also include linkage and linkage disequilibrium mapping, genetic models for complex traits, and the explicit and implicit assumptions of such models.

MGCB 31500. Genetic Mechanisms

Advanced coverage of genetic mechanisms involved in genome stability and rearrangement in lower and higher organisms. Topics include the genetics of mutagenesis, DNA repair, homologous and site specific recombination, transposition and chromosome segregation.

DVBI 35500. Developmental Genetics of Non vertebrate Model Systems

This course explores the use of genetics in three different model systems, *C. elegans*, *Drosophila melanogaster* and *Arabidopsis thaliana*, to elucidate developmental mechanisms. The class will focus on a series of interrelated topics: for each topic, introductory material presented by the lecturer will be followed by student led discussions of individual papers.

MGCB 31300. Molecular Biology II

Topics include genome organization and rearrangements, changes in chromatin structure during gene activation, tissue and developmental specific transcription regulators, oncogenes, post transcriptional regulation and specialized system of gene expression.

ECEV 35600. Population Genetics I

Examines the basic theoretical principles of population genetics, and their application to the study of variation and evolution in natural populations. Topics include selection, mutation, random genetic drift, quantitative genetics, molecular evolution and variation, the evolution of selfish genetic systems, and human evolution.



## COMMITTEE on MOLECULAR METABOLISM and NUTRITION

---

### *Acting Chair*

Matthew Brady, Medicine

### *Professors*

Graeme Bell, Medicine  
Eugene Chang, Medicine  
Murray Favus, Medicine  
Godfrey Getz, Pathology  
Deborah Nelson,  
Neurobiology,  
Pharmacology and  
Physiology  
Louis Philipson, Medicine  
Robert Rosenfield, Pediatrics  
Angelo Scanu, Medicine  
F. Gary Toback, Medicine  
Eve Van Cauter, Medicine  
Roy Weiss, Medicine

### *Associate Professors*

Marc Bissonnette, Medicine  
Deborah Burnet, Medicine  
David Ehrmann, Medicine  
Rebecca Lipton, Medicine  
Mark Musch, Medicine  
Catherine Reardon Alulis,  
Pathology  
Mindy Schwartz, Medicine  
Carol Semrad, Medicine  
Jerrold Turner, Pathology

### *Assistant Professor*

Matthew Brady, Medicine  
Ron Cohen, Medicine  
Diane Deplewski, Pediatrics  
Manami Hara, Medicine

Helen Kim, Obstetrics and  
Gynecology

Todd Kroll, Pathology  
Yan Chun Li, Medicine  
Michael Roe, Medicine  
Xiao Jian Sun, Medicine  
Gene Webb, Medicine  
Andrew Wolfe, Pediatrics

### *Instructor*

Colleen Buggs, Pediatrics  
Jaime Kim, Medicine  
Daniel Spergel, Pediatrics

The Committee on Molecular Metabolism and Biology 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. 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 a joint admissions committee, 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.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

Ph.D. requirements include: (1) the usual divisional requirements of 9 course credits consisting of basic science, nutrition and elective courses; (2) a preliminary exam consisting of an oral defense of a research proposal; (3) a dissertation based on original research; and (4) a final thesis examination.

### Courses

30000. The Making of the Pancreas (=MOLM 30000)

*Philipson and Staff*

A seminar course that takes a multidisciplinary approach to discuss state of the art methods in tissue engineering and transplantation.

30100. Directed Independent Research  
*Brady and Staff*

This course comprises a 10 week research lab rotation for first year Nutrition students. At least 2 rotations are required before a thesis lab can be chosen.

30200. Nutrition in Medicine (=MEDC 30200)

*Schwartz*

This is a clinically oriented course designed to emphasize the basics. The topics include: macro and micronutrients, prenatal nutrition, nutrition in childhood, nutritional assessment and nutrition in critical illness, obesity and nutrition and coronary artery disease.

30901. Molecular Basis of Metabolic Disease (=MPMM 30901, MOLM 30901)

*Philipson*

A reading course with in depth study of insulin secretion and action. Particular emphasis is placed on learning to read primary literature, give oral presentations of papers and writing of research proposals.

31900. Readings in Insulin Secretion and Signaling

*Brady and Staff*

A reading course with in depth study of insulin secretion and action. Particular emphasis is placed on learning to read primary literature, give oral presentations of papers and writing of research proposals.

35000. Nutritional Physiology I

*Brady and Staff*

Comprehensive review of nutritional physiology including metabolism of vitamins, minerals, protein, and energy. A special emphasis is placed on integrative system physiology.

36600. Molecular Nutrition (=PATH 36600)

*Reardon and Staff*

Consideration is given to those selected topics in nutrition in which modern molecular and cell biology provide a greater understanding of the regulation of these metabolic pathways. Prereq: Biochemistry.

37900. Nutrition Research (=Med 37900)

*Brady and Staff*

For medical students. Prereq: Consent of committee and instructor.

39900. Readings in Nutrition

*Staff*

Advanced readings in an area of nutritional research with a faculty mentor. Prereq: consent of instructor.

40100. Research in Molecular Metabolism and Nutrition

*Brady and Staff*

Comprises independent thesis research.

40200. Topics in Nutrition

*Wolfe and Staff*

This course is conducted as a seminar series. Students will broaden their exposure to nutrition related research through bi weekly faculty and student presentations of research data and primary literature. Attendance is mandatory for first and second year students.

61000. Scientific Basis of Nutrition (=MEDC 61000)

*Schwartz*

A fourth year medical school course that places emphasis on evidence based clinical assessment of nutrition. Prereq: consent of instructor.



## COMMITTEE on IMMUNOLOGY

---

### Chair

Albert Bendelac

### Professors

Barry G. Arnason,  
Neurology

Albert Bendelac, Pathology

Leslie J. DeGroot, Medicine

Yang Xin Fu, Pathology

Vinay Kumar, Pathology

Terence E. Martin,  
Molecular Genetics and  
Cell Biology

Rima McLeod,  
Ophthalmology and  
Visual Science

Avertano Noronha,  
Neurology

Marcus Peter, Ben May  
Institute for Cancer  
Research

Raymond P. Roos,  
Neurology

Hans Schreiber, Pathology

Harinder Singh, Molecular  
Genetics and Cell  
Biology

Ursula B. Storb, Molecular  
Genetics and Cell  
Biology

Martin Weigert, Pathology

### Associate Professors

Philip Ashton Rickardt,  
Pathology

Anita Chong, Surgery

Marcus Clark, Medicine

Aaron Dinner, Chemistry  
Institute for Cancer  
Research

Guido Franzoso, Ben May  
Institute for Cancer  
Research

Thomas Gajewski,  
Pathology

Kimm Hamann, Medicine

Stephen C. Meredith,  
Pathology

Michael Nishimura, Surgery

Anthony Reder, Neurology

Anne I. Sperling, Medicine

Koen van Besien, Medicine

Chyung Ru Wang,  
Pathology

### Assistant Professors

Clara Abraham, Medicine

Iannis Aifantis, Medicine

Maria Luisa Alegre,  
Medicine

John Crispino, Ben May  
Institute for Cancer  
Research

Karen Frank, Pathology

Jose Guevara, Surgery  
Bana Jabri, Pathology

Barbara Kee, Pathology  
Kay Macleod, Ben May  
Institute for Cancer  
Research

Jian Zhang, Medicine

The Committee on Immunology offers a graduate program of study leading to the Ph.D. 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 a joint admissions committee, 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 fall retreat where students and faculty present their research, and several focused group meetings.

#### Courses

30010. Immunopathology (=Biosci 25258, PATH 30010)

*Jabri, Ashton Rickardt*

This course is aimed at revisiting key immunological concepts in the context of diseases. Emphasis is placed on understanding the immunological basis of disease and the propositions of experimental approaches to test immunopathological models.

30800. Readings in Immunobiology  
*Bendelac and Staff*

Readings from the current literature in immunobiology, with discussion.

31500. Advanced Immunology I  
*Gajewski and Staff*

Advanced lecture/discussion course that explores the genetic and molecular basis of immune recognition by B and T lymphocytes.

32000. Advanced Immunology II  
*Clark and Staff*

Explores the molecular and biochemical mechanisms by which lymphocytes are activated in response to antigens.

35500 01. Selected Topics in Immunology  
*Guevara, Nishimura*

An advanced literature analysis/discussion course intended primarily for graduate students in immunology. Involves an in depth analysis of particular topics in immunology. Topics vary from year to year.

35500 02. Selected Topics in Immunology  
*Gajewski, Alegre, Sperling*

An advanced literature analysis/discussion course focusing on immunopathology including tumor and transplant immunology. Students are provided with problem sets after each lecture.

36000. Fundamental Issues in Immunology  
*Bendelac*

Advanced topics course exclusively based on primary literature. Topics rotate every year and may include Immunological Tolerance; Immunological Memory; Regulation of the Class of Immune Responses; Innate and Adaptive Immune Recognition; Lymphocyte Development.

40100. Research in Immunology  
*Bendelac and Staff*

40200. Experimental Immunology  
*Staff*

Centers around the Immunology Seminar Series and has two purposes. First: to provide background knowledge for the seminar given each week by an outside speaker or a member of the committee. Second: to allow the students an opportunity to develop skills in analyzing the literature in immunology.



## COMMITTEE on MEDICAL PHYSICS

### *Chair*

Maryellen L. Giger

### *Professors*

Robert N. Beck, Radiology  
 Kunio Doi, Radiology  
 Maryellen L. Giger,  
     Radiology  
 David Grdina, Radiation  
     and Cellular Oncology  
 Howard Halpern, Radiation  
     and Cellular Oncology  
 David N. Levin, Radiology  
 Charles E. Metz, Radiology  
 Lester S. Skaggs, Radiation  
     and Cellular Oncology  
 Carl J. Vyborny, Radiology

### *Associate Professors*

Chin Tu Chen, Radiology  
 Gregory Karczmar,  
     Radiology  
 Mary Martel, Radiation and  
     Cellular Oncology  
 Robert M. Nishikawa,  
     Radiology  
 Bill C. O'Brien Penney,  
     Radiology  
 Xiaochuan Pan, Radiology  
 Charles Pelizzari, Radiation  
     and Cellular Oncology  
 John Roeske, Radiation and  
     Cellular Oncology

### *Assistant Professors*

Samuel G. Armato III,  
     Radiology  
 Russell Hamilton, Radiation  
     and Cellular Oncology  
 Yulei Jiang, Radiology  
 Chien Min Kao, Radiology  
 Anthony Lujan, Radiation  
     and Cellular Oncology  
 Leon Myrianthopoulos,  
     Radiation and Cellular  
     Oncology  
 Chester Reft, Radiation and  
     Cellular Oncology  
 Hiroyuki Yoshida,  
     Radiology

### *Instructors*

Patrick La Rivière

**T**he 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.
- 4.7T MRI/MRS system.
- Electron paramagnetic resonance imaging spectrometers.
- Standard CT scanners.
- Helical CT scanners.
- Helical CT scanners with multiple 3D imaging workstations (for radiation treatment planning).
- Multidetector CT scanner.

Dual energy chest radiography system.  
Full field digital mammography systems  
PET scanner.  
Computer controlled dual energy linear accelerators with multileaf collimators, dynamic treatment capability and solid state megavoltage imagers.  
Computer controlled high dose rate remote afterloading brachytherapy system.  
Virtual reality display system.  
Computed radiography systems.  
High quality laser digitizers and printers.  
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](mailto:m_giger@uchicago.edu).

### *Courses*

MPHY 34200. Practicum in the Physics of Medical Imaging I

*Jiang, La Rivière, Karczmar*

This laboratory course is designed to enhance students understanding of the theories presented in the course Physics of Medical Imaging I and to acquaint students with the operation of a diagnostic radiology clinic. Students are expected to gain practical experience in the clinical use of diagnostic x ray generators, screen film combinations, digital acquisition systems and their image processing techniques, and in research on magnetic resonance imaging (MRI) and computer aided diagnosis (CAD).

MPHY 34300. Practicum in the Physics of Medical Imaging II

*O'Brien Penney, Pan, Pelizzari*

This laboratory course is designed to familiarize the medical physics student with certain equipment and procedures in diagnostic radiology, with emphasis on nuclear medicine, ultrasonic and x ray (helical) computed tomographic imaging. A special project will be part of the course requirements.

MPHY 34400. Practicum in the Physics of Radiation Therapy

*Reft and staff*

This course combines lectures and intensive hands on experiments. It includes an introduction to thermoluminescent, film and ionization chamber dosimetry, Monte Carlo radiation transport simulation and intensity modulated radiotherapy. Training in data

acquisition, error analysis, experimental techniques and the safe handling of sealed radioactive sources will be included. Prereq: MPHY 35100 or consent of instructor.

MPHY 34900. Mathematics for Medical Physics

*Giger, Metz, Pan*

This is a required course in the Graduate Programs in Medical Physics. This first quarter course surveys the mathematics necessary for the understanding of physical phenomena and applications in medical imaging and medical physics, which will be presented later to the students in their graduate coursework. The course covers linear algebra, Fourier analysis and transfer function analysis, Radon transforms, probability theory and stochastic processes, estimation theory, ROC analysis, and signal detection theory. Although each student is assumed to have been acquainted previously with at least some of these topics, no specific mathematical background beyond that of a strong undergraduate physics major is prerequisite.

MPHY 35000. Interactions of Ionizing Radiation with Matter

*Roeske, Armato*

Interaction of electromagnetic and particle radiation with matter. Special emphasis on energy absorption, detection, control, and production, and on their relation to medical applications. Prereq: Physics, 22700, 23700 or equivalent.

MPHY 35100. Physics of Radiation Therapy  
*Pelizzari and staff*

This course covers aspects of radiation physics necessary for understanding modern radiation therapy. Rigorous theoretical foundations of physical dose calculation for megavoltage energy photons and electrons, biological predictions of therapy outcomes, and brachytherapy are presented. Methods of modeling and implementing radiation therapy treatment planning, evaluation, and delivery are described. Emphasis is placed on current developments in the field including intensity modulated radiation therapy. The course is intended to provide comprehensive knowledge of radiation therapy physics enabling the student to grasp current research in the field. Prereq: MPHY 35000 or consent of instructor.

MPHY 35300. Medical Image Reconstruction  
*Chen, Pan*

Image reconstruction from projections, focusing on medical applications to X ray computed tomography (CT), positron emission tomography (PET), and single photon attenuation, scattered radiation involved in these imaging methods and their effects.

MPHY 35400. Health Physics  
*Pelizzari and Staff*

The problems of the protection of active workers and the general public from unnecessary and excessive exposure to penetrating radiation. Prereq: MPHY 35000, 35100.

MPHY 35600. Anatomical Structure of the Body  
*Giger and Staff*

Gross anatomy of the human body with correlation to medical images. In addition, radiographic, tomographic, radioisotope, ultrasound, and magnetic resonance images are used to present normal and pathological states of the anatomy. Designed to educate graduate and medical students with primary backgrounds in physics and engineering.

MPHY 35800. Biomedical Applications of Magnetic Resonance  
*Karczmar and Staff*

Introduction to the physics of magnetic resonance, magnetic resonance methodology, and the applications of these methods to a variety of biomedical problems, including determination of protein structure by MR, metabolic imaging, anatomic imaging, solid state imaging, electron spin resonance, measurement of blood flow and perfusion, and effects of contrast agents. Prereq: MPHY 38700 or consent of instructor.

MPHY 35900. Cancer and Radiation Biology  
*Grdina*

This course provides students with an overview of the biology of cancer and of the current methods used to diagnose and treat the disease. Lectures from faculty throughout the Biological Sciences Division include presentations on cancer incidence and mortality, cancer prevention, a molecular biology perspective, the role of genetic markers, the imaging of pathology, methods of treatment (radiation, chemotherapy) and prognosis, and the role of medical ethics and patient care. The course is primarily for medical physics students.

MPHY 37000. Advanced Computing for Imaging Applications  
*Chen, Pelizzari*

Introduces new computing concepts and current computer technologies, particularly the various uses of interpreted languages.

MPHY 37800. Basic Radiation Biology  
*Grdina and Staff*

A series of lectures related to the effects of ionizing radiation upon living cell, tissues, organs, organ systems, animals and man, either singly or in populations. The purpose is to acquaint medical students, BSD graduate students, and physicians with the nature and consequences of the interaction of ionizing radiations with living matter.

MPHY 38200. Transfer Function Analysis of Radiologic Imaging Systems  
*Metz*

Development of mathematical techniques useful in analyzing spatial resolution in radiography, nuclear medicine and computed tomography. Topics include: linear shift invariant system, Fourier series and Fourier transforms, image reconstruction in computed tomography and methodology for measuring system transfer functions. Prereq: MPHY 38600 or 38700; consent of instructor.

MPHY 38300. Analysis of Noise in Radiologic Imaging  
*Metz*

Development of mathematical techniques useful for analysis of statistical fluctuations in radiologic imaging, with applications in radiography and nuclear imaging. Topics include: probability, random variables, stochastic processes, power spectra, transfer of noise through linear shift invariant systems, and imaging processing. Prereq: MPHY 38600 and 38700 or consent of instructor.

MPHY 38600. Physics of Medical Imaging I  
*Nishikawa, La Riviere, Karczmar*

This is an introductory course to the basic elements of x ray imaging and magnetic resonance imaging and spectroscopy. Topics

covered on x ray imaging include x ray production, image formation, analog and digital detectors, physical measures of image quality, fluoroscopy, and computer aided diagnosis. Topics covered on magnetic resonance imaging include nuclear magnetic resonance, relaxation times, pulse sequences and spectroscopy.

MPHY 38700. Physics of Medical Imaging II  
*Pan, Kao, Chen, O'Brien, Penney*

The course covers the fundamentals of nuclear medicine, ultrasonic, and x ray computed tomographic imaging. Topics include: physics, mathematics, and statistics of image formation in SPECT, PET, conventional ultrasound, ultrasonic diffraction tomography, conventional and helical computed tomography. Functional imaging and compartmental analysis are also covered.

MPHY 39100. Physics of Mammography  
*Nishikawa and Staff*

This is an advanced course designed to give students an in depth understanding of the application of basic medical physics concepts and principles to the problem of breast cancer detection using mammography. While focusing on mammography, students will examine how image quality is affected by x ray generation and the acquisition and display of the image. Topics covered will include radiographic properties of breast tissue; image quality requirements for breast imaging; relationship between x ray equipment and image quality; dosimetry; risk/benefit analysis as applied to screening; digital mammography (hardware, image processing, and computer aided diagnosis). This course will be offered as a reading course with a weekly discussion on the assigned reading material.

MPHY 39300. Clinical Physics in Positron Emission Tomography (PET)  
*Chen and Staff*

This course is designed to provide in depth experience in the clinical physics of PET. It focuses on PET technology and PET applications. Students learn PET instrumentation and procedures for operation and calibration of PET systems, computer and networking facilities, quality assurance programs, major PET protocols, and data and image analysis methods.

MPHY 39400. Chemistry of Diagnostic Agents  
*Karczmar*

This course introduces the students to chemical and biochemical principles involved in the design, development and use of radio pharmaceuticals and contrast agents for medical applications in single photon emission computed tomography, positron emission tomography, magnetic resonance imaging and spectroscopy, computed tomography, and ultrasound.

MPHY 42000 Research in the Physics of Nuclear Medicine  
*Chen, Pan, Kao, La Riviere and staff*

Possible research topics include the development of methods to improve diagnostic accuracy; development of SPECT and PET; development of image reconstruction techniques; analysis and evaluation of imaging system components; and joint physical/clinical studies of new techniques in nuclear medicine. Prereq: Consent of instructor.

MPHY 42100. Research in the Physics of Diagnostic Radiology  
*Doi, Giger, Nishikawa, Metz, Yoshiida, Armato, Jiang and Staff*

Possible research topics include the development of methods to improve diagnostic accuracy and/or to reduce patient radiation exposure; development of computerized methods for the interpretation of image data; analysis and evaluation of imaging system components; and joint physical/clinical studies of new techniques in diagnostic radiology. Prereq: Consent of instructor.

MPHY 42200 Research in the Physics of Radiation Therapy  
*Pelizzari, Roeske, and staff*

Possible research topics include the development of methods to improve methods of radiation therapy; investigation of IMRT fields for dynamic dose delivery; megavolt age CT; 3D reconstruction of brachytherapy sources from CT localizer images and joint physical/clinical studies of new techniques in radiation therapy. Prereq: Consent of instructor.

MPHY 42300. Principles of Magnetic Resonance Imaging and Spectroscopy  
*Levin, Karczmar*

Reading course on the physical and mathematical principles of magnetic resonance image formation and post processing. Methods of acquiring localized biochemical spectra *in vivo* as well as spectroscopic imaging are also discussed. Prereq: Consent of instructor.



## COMMITTEE on MICROBIOLOGY

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<b>Chair</b> Olaf Schneewind	Olaf Schneewind, Microbiology	Kenneth Thompson, Clinical Pathology
<b>Professors</b> Joy Bergelson, Ecology & Evolution Robert Daum, Pediatrics Robert Haselkorn, Molecular Genetics & Cell Biology Bernard Roizman, Microbiology Raymond Roos, Neurology Lucia Rothman Denes, Molecular Genetics & Cell Biology	Malcolm Casadaban, Molecular Genetics & Cell Biology Jean Greenberg, Molecular Genetics & Cell Biology Tao Pan, Biochemistry & Molecular Biology Wei Jen Tang, Ben May Institute for Cancer Research	Aaron Turkewitz, Molecular Genetics & Cell Biology Chyung Ru Wang, Pathology
		<b>Assistant Professors</b> James Mastrianni, Neurology Dominique Missiakas, Microbiology Evgeny Pilipenko, Microbiology Glenn Randall, Microbiology

**T**he 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.

#### Courses

##### **PROGRAMMATIC CORE**

**MICR 33000. Molecular Genetic Analysis of Bacteriophage.**

Examines a series of bacteriophage that have been instrumental in our understanding of genetics and molecular biology, with an emphasis on their properties and the methods for which they are used in current and potential biological studies and in biotechnology. *Casadaban*.

**MICR 34000 Bacterial Pathogenesis.**

Molecular basis of bacterial pathogenesis of human, animal and plant bacteria, their infection strategies and molecular mechanisms of causing disease.

*Schneewind*.

**MICR 34200 Microbial Genomes.**

Examines the information available from complete bacterial genome sequences. It addresses the usefulness of sequence databases and bioinformatics for answering questions of functional and comparative genomics. The genome sequences serve as the basis for addressing topics in microbiology (e.g. metabolic diversity, intercellular communication, cellular differentiation, pathogenicity, vaccine development, and bacterial evolution).

*Shapiro*.

**MICR 34600 Eukaryotic Viruses.**

This course describes the viruses that infect animal and human cells, their structure and assembly pathways.

*Roizman, Pilipenko*.

**MICR 35900. Medical Microbiology**

*Schneewind*

Lecture and laboratory course on microbial pathogens that produce common and uncommon infectious diseases. The proper use of the laboratory to assist in diagnosing bacterial, fungal, and viral infections is emphasized.

**MICR 39000 Introduction to Experimental Microbiology.**

This seminar series with nine presentations by faculty invited from outside institutions during the Autumn and Winter Quarters. A required reading discussion session accompanies the seminar series.

*Schneewind*

**MICR 40000 Microbiology Data Club.**

All graduate students, postdoctoral fellows and honors undergraduate students of the Committee on Microbiology present their research in a central forum, once each year. This course provides a forum to ensure continued progress of graduate students in their thesis projects, interaction between Committee on Microbiology scientists and development of novel ideas and avenues of research.

*Schneewind*

##### **GENERAL BASIC SCIENCE CORE**

All students in the Committee on Microbiology are required to take the following two Basic Science Core courses as part of their Microbiology Core Sequence: Cell Biology I and Molecular Biology I (noted below with an \*). Two additional courses are to be taken as electives.

#### **Biochemistry**

**BCMB 30400 Proteins I: Protein Fundamentals**  
Covers the chemical and physical phenomena that define the structure and function of proteins. Topics discussed include 1) the covalent and non covalent interactions/forces that define the ideal and real conformations of polypeptides; 2) the basic principles of protein folding and assembly; 3) the topological and stereochemical aspects of protein structure and design; 4) concepts of molecular motion in proteins; and 5) the bases for molecular recognition, enzyme catalysis and regulation by proteins. Prereq: BCMB 30100, which may be taken concurrently, or equivalent.

*Piccirilli, Koide*

**BCMB 32300 Proteins II: Protein Molecular Structure and Function.**

Emphasizes the chemical and physical principles of protein structure with coordinated problem sets. Subject matter includes the physical biochemistry of proteins, analysis of protein structure and conformation, by such techniques as optical spectroscopy, NMR and x ray crystallography, ligand protein interactions, enzyme catalysis and protein engineering. Prereq: BCMB 30400.

*Moffat, Rock*

**Cell Biology**

**MGCB 31600\* Cell Biology I.**

Lecture/discussion course on fundamentals of protein synthesis and translocation, protein and membrane sorting and transport, organelle biogenesis, and the cytoskeleton.

*Turkewitz, Glick*

**MGCB 31700 Advanced Cell Biology.**

Chromatin structure and its role in transcription, communication between nucleus and cytoplasm, translation, protein folding and assembly, molecular chaperones, elements of signal transduction, homeostasis, growth control and the cell cycle, cytoarchitecture, cell adhesion and migration.

*Lamppa, Thinakaran*

**Genetics**

**GENE 31400 General Principles of Genetic Analysis.**

Coverage of the fundamental tools of genetic analysis as used to study biological phenomena. Topics include genetic exchanges in prokaryotes, eukaryotes, and their viruses and plasmids; principles of transformation; analysis of gene function.

*Lahn*

**GENE 31500 Genetic Mechanisms.**

Advanced coverage of genetic mechanisms involved in genome stability and rearrangement. Topics include genetics of transposons, site specific recombination, gene conversion, reciprocal crossing over, and plasmid and chromosome segregation.

*Esposito*

**Molecular Biology**

**MGCB 31000 Fundamentals in Molecular Biology.**

The course covers nucleic acid structure and DNA topology, recombinant DNA technology DNA replication, DNA damage, mutation and repair, transposons and site specific recombination. Prokaryotic and eukaryotic transcription and its regulation, RNA structure, splicing and catalytic RNAs, protein synthesis, and chromatin.

*Storb, Staley*

**MGCB 31200 \* Molecular Biology I.**

Nucleic acid structure; mechanisms of transcription, replication, and recombination and their regulation in prokaryotes and eukaryotes. Consent of instructor.

*Rothman, Denes*

**MGCB 31300 Molecular Biology II.**

Topics include transcription and post transcription, changes in chromatin structure during gene activation, tissue and developmental specific transcription regulators, and post transcriptional regulation of gene expression. Prereq: MGCB 31200 or consent of instructor.

*Singh*



# DEPARTMENT of MOLECULAR GENETICS and CELL BIOLOGY

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<i>Chair</i>	<i>Associate Professors</i>	<i>Assistant Professors</i>
Laurens J. Mets	Douglas K. Bishop, Radiation & Cellular Oncology	Jocelyn Malamy Jonathan P. Staley
<i>Professors</i>		
Rochelle Easton Esposito	Malcolm J. Casadaban	<i>Emeritus Faculty</i>
Richard Fehon	Kwen Sheng Chiang	Wolfgang Epstein
Robert Haselkorn	Edwin L. Ferguson	Anthony Mahowald
Robert Josephs	Benjamin Glick	Bernard S. Strauss
Terence E. Martin	Michael Glotzer	Edwin W. Taylor
Daphne Preuss	Jean Greenberg	
Bernard Roizman	Stephen J. Kron	
Lucia Rothman Denes	Gayle K. Lamppa	
Janet D. Rowley, Medicine	Laurens J. Mets	
Harinder Singh	Ilaria Rebay, Ben May	
Theodore L. Steck, Biochemistry & Molecular Biology	Institute for Cancer Research	
Ursula B. Storb	Aaron Turkewitz	

The Department of Molecular Genetics and Cell Biology offers training in the fields of molecular genetics, cell biology, and related disciplines for (1) students who plan to pursue research careers and teaching in the emerging areas of modern biology, (2) medical students, and (3) undergraduate and graduate students in other departments. Programs for the Ph.D. degree place great emphasis on sound preparation in genetics, cell biology, and molecular biology. For properly qualified advanced students, the department offers opportunities for research in genetics, cell biology, developmental biology, microbiology, plant molecular biology, and virology. Of special interest is the design of interdisciplinary programs that emphasize emerging areas of 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 knowledge of and proficiency in genetics and cell biology. 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 MGCB courses with approval of the curriculum committee. To fulfill the requirements for a Ph.D., nine graded courses are required. In the Department of Molecular Genetics and Cell Biology, a student must take one course in each of three areas during the first year: (1) genetics, (2) cell biology, and (3) molecular biology. 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. Four 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 two laboratory rotations before selecting an advisor and laboratory 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.

## ADMISSIONS

For information about applying to our graduate program, please visit our website at <http://molbio.uchicago.edu>.

### *Courses*

**31000. Fundamentals in Molecular Biology**  
The course covers nucleic acid structure and DNA topology, recombinant DNA technology, DNA replication, DNA damage, mutagenesis and repair, Transposons and site specific recombination, prokaryotic and eukaryotic transcription and its regulation, RNA structure, splicing and catalytic RNAs, protein synthesis, and chromatin.

**31200. Molecular Biology I\***  
Nucleic acid structure; mechanisms of transcription and replication. Regulation of transcription in prokaryotes, and of DNA replication in prokaryotes and eukaryotes.

**31300. Molecular Biology II\***  
Eukaryotic Gene Expression. Transcription and Posttranscriptional Regulation. Analysis of regulatory pathways and mechanisms involved in the control of eukaryotic gene activity.

**31400. General Principles of Genetic Analysis\***

Coverage of the fundamental tools of genetic analysis as used to study biological phenomena. Topics include genetic exchange in prokaryotes and eukaryotes, analysis of gene function, and epigenetics.

**31500. Genetic Mechanisms\***

Advanced coverage of genetic mechanisms involved in genome stability and rearrangement in lower and higher organisms. Topics include the genetics of mutagenesis, DNA repair, homologous and site specific recombination, transposition and chromosome segregation.

**31600. Cell Biology\***

Eukaryotic protein traffic and related topics, including molecular motors and cytoskeletal dynamics, organelle architecture and biogenesis, protein translocation and sorting, compartmentalization in the secretory pathway, endocytosis and exocytosis, and mechanisms and regulation of membrane fusion.

**31700. Advanced Cell Biology\***

Chromatin structure and its role in transcription communication between nucleus and cytoplasm, translation, protein folding and assembly, molecular chaperones, elements of signal transduction, homeostasis, growth control and the cell cycle, cytoarchitecture, cell adhesion and migration.

**31900. Introduction to Research**

Lectures on current research by departmental faculty and other invited speakers. A required course for all first year graduate students.

**34300. Principles and Practices of Electron Microscopy**

This course deals with the principles involved in obtaining electron micrographs of biological specimens. Preparation techniques and analytical procedures will be offered at an individualized level.

**34600. Viruses of Eukaryotes**

An advanced lecture course on viruses infecting animals and humans.

**35400. Advanced Developmental Biology**

This course provides an overview of the fundamental questions of developmental biology, presenting both the classical embryological experiments that defined these questions, and the modern molecular and genetic experiments that have been employed to try to reach mechanistic answers to these questions. The first portion of the course will focus on the mechanism of axis formation in a variety of organisms; the second part of the course will explore selected topics in the field.

**35500. Developmental Genetics of Non vertebrate Model Systems**

This course explores the use of genetics in three different model systems, *C. elegans*, *Drosophila melanogaster* and *Arabidopsis thaliana*, to elucidate developmental mechanisms. The class will focus on a series of interrelated topics: for each topic, introductory material presented by the lecturer will be followed by student led discussions of individual papers.

**35600. Vertebrate Developmental Genetics**

This advanced level course combines lectures, student presentations, and discussion sections. It covers major topics in the developmental biology of vertebrate embryos (e.g., formation of the germ line, gastrulation, segmentation, nervous system development, limb patterning, organogenesis). The course makes extensive use of the current primary literature and emphasizes experimental approaches including embryology, genetics, and molecular genetics.

**35700. Developmental Genetics and Evolution**

This course uses the developmental genetics of established invertebrate and vertebrate model systems as an entry point to explore the developmental basis of evolutionary change. Topics range from the evolution of gene regulation to the origin of novelties such as eyes and wings. We will study original research papers. The purpose of this course is to provide graduate students (and advanced undergraduates) with a developmental genetic perspective on evolutionary questions that have emerged in various disciplines including developmental biology, paleontology and phylogenetic systematics.

**35800. Developmental Neurobiology**

Topics include neural induction, early patterning of the central nervous system, axon guidance and neuronal migration, the development of brain activity, and the mechanisms of plasticity that fine tune brain function. Approaches will range from molecular to cellular to systems neurobiology. Focus will be on the vertebrate CNS but attention will be given to important lessons from invertebrate systems.

**38000. Genomic & Proteomic Approaches to Biological Questions**

Lectures with emphasis on concepts and experimental approaches in Genomics and Proteomics. Topics to include: Bioinformatic tools for DNA analysis and protein analysis, genomic tools for high throughput genetics, arrays for DNA & RNA detection, genome organization, comparative genomics, human evolution, current technologies for profiling proteomes, protein interaction networks, chemical genomics, and markers of disease.



## COMMITTEE on NEUROBIOLOGY

---

***Interim Chair***

Laurens J. Mets

***Professors***

Rochelle Easton Esposito  
 Robert Haselkorn  
 Robert Josephs  
 Terence E. Martin  
 Daphne Preuss  
 Bernard Roizman  
 Lucia Rothman Denes  
 Janet D. Rowley, Medicine  
 Olaf Schneewind  
 Harinder Singh  
 Theodore L. Steck,  
 Biochemistry &  
 Molecular Biology  
 Ursula B. Storb  
 Edwin W. Taylor

***Associate Professors***

Douglas K. Bishop,  
 Radiation & Cellular  
 Oncology  
 Malcolm J. Casadaban  
 Kwen Sheng Chiang  
 Edwin L. Ferguson  
 Benjamin Click  
 Stephen J. Kron  
 Gayle K. Lampka  
 Laurens J. Mets  
 Aaron Turkewitz

***Assistant Professors***

Jean Greenberg  
 Jocelyn Malamy  
 Evgeny Pilipenko  
 Jonathan P. Staley

***Emeritus Faculty***

Wolfgang Epstein  
 Bernard S. Strauss  
 Hewson H. Swift

***Research Associates  
 (Associate Professor)***

William J. Buikema  
 Piotr Gornicki

***Research Associates  
 (Instructor)***

Ana A. Kitazono  
 Brunella Taddeo

**T**he 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.

#### 31600. Vertebrate Neural Systems

*Ragsdale, Mason, and Issa*

This lab centered course teaches students the fundamental principles of mammalian neuroanatomy. Students learn the major structures and the basic circuitry of the CNS and PNS. Somatic, visual, auditory, vestibular and olfactory sensory systems are presented in particular depth. A highlight of this course is that students become practiced at recognizing the nuclear organization and cellular architecture of many regions of the neuroaxis in rodent, cat and primate brain. The connections between neural structures and basic neural circuitry are discussed. In the second half of the course, each functional system, including somatosensory, visual, auditory, vestibular, and motor systems is presented in more depth.

#### 31800. Cellular Neurobiology (=CPNS 30000, NPHP 31800)

*Lloyd*

Concerned with the structure and function of the nervous system at the cellular level. The cellular and subcellular components of neurons and their basic membrane and electrophysiological properties will be described. Cellular and molecular aspects of interactions between neurons will be studied. Leads to functional analyses of the mechanisms involved in the generation and modulation of behavior in selected model systems.

#### 31900. Molecular Mechanisms of Cell Signaling (=CPHY 31900)

*Tang*

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 in the course, with an emphasis on the structural basis of cell signaling. Offered alternate years.

#### 32200. Molecular Neurobiology (=NPHP 32200)

*Green and Popko*

Current research in the molecular biology of the nervous system, i.e., the structure and function of macromolecules that control, propagate, and elicit neural signaling. Topics covered include (1) structural elements of neurons and glia; (2) structure and function of the synapse; (3) aspects of the molecular basis of neural signaling; and (4) gene expression in neural systems. Lectures draw on current journal literature to present a state of the art background of the topic, the current questions being explored, as well as problems and aspects.

#### 32400. Synaptic Physiology

*Instructors: Daniel McGehee, Aaron Fox*

This course will examine the fundamental aspects of interneuronal communication. Students will learn the physiology of the synapse beginning with the molecular mechanics of neurotransmitter release followed by postsynaptic receptor structure and function. Various forms of synaptic plasticity will be discussed in relation to their relevance to animal behavior.

32500. Developmental neurobiology and brain plasticity.

*Grove, Zou and Issa*

Topics include neural induction, early patterning of the central nervous system, axon guidance and neuronal migration, the development of brain activity, and the mechanisms of plasticity that fine tune brain function. Approaches will range from molecular to cellular to systems neurobiology. Focus will be on the vertebrate CNS but attention will be given to important lessons from invertebrate systems.

32800. Neuropsychopharmacology II

*Vezina*

Effects of drugs on behavior; emphasis on the functional contribution of brain neurotransmitter systems.

39900. Readings in Neurobiology

*Staff*

Reading courses on various topics in neurobiology.

40100. Research in Neurobiology

*Staff*

Research credit (varied units) for research undertaken by graduate students under the guidance of a faculty member of the Committee on Neurobiology.

#### **Other Courses of Interest**

MGCB 31600. Cell Biology

*Turkewitz, Glick*

A lecture/discussion course on fundamentals of protein synthesis and translocation, protein and membrane sorting and transport, organelle biogenesis, and the cytoskeleton.

MGCB 31700. Advanced Cell Biology

*Lamppa*

Chromatin structure and its role in transcription, communication between nucleus and cytoplasm, translation, protein folding and assembly, molecular chaperones, elements of signal transduction, homeostasis, growth control and the cell cycle, cytoarchitecture, cell adhesion and migration.

CPNS 33000. Computational Neuroscience I: Single Neuron Computation

*Ullinski*

This course briefly reviews the historical development of computational neuroscience and discusses the functional properties of individual neurons. The electrotonic structure of neurons, functional properties of synapses, and voltage gated ion channels are discussed.

CPNS 33100. Computational Neuroscience II: Vision

*Ullinski and Staff*

This course considers computational approaches to vision. It discusses the basic anatomy and physiology of the retina and central visual pathways, and then examines computational approaches to vision based on linear and non linear systems theory, and algorithms derived from computer vision.

CPNS 33200. Computational

Neuroscience III: Language

*Regier and Staff*

This course discusses computational approaches to human language. It examines the learning, production, and comprehension of language, through neural network modeling of human linguistic behavior, and through brain imaging.

NPHP 33200. Excitable Membranes

and Ion Channels

*Nelson, Hanck*

A review of the voltage gated and ligand gated channels, including the functional role(s) of the channels in cell behavior and biophysical aspects of ion transport through channels.

NPHP 33400. Genetics in

Neuropsychopharmacology

*Zhuang*

This course focuses on diverse genetic approaches in pharmacology research. Topics are organized by genetic approaches including knockout, transgenic, knock in, tissue specific knockout, inducible strategies, forward genetics, pharmacogenomics and gene therapy. The selection of papers aims to cover different neurotransmitter systems and signaling pathways.

NPHP 34000. Neurodegenerative Disease

*Thinakaran*

The course will introduce students to the molecular and cellular mechanisms involved in a number of neurodegenerative diseases. This course will provide an overview of the fundamental concepts of neurodegeneration and focus on the recent advances in select disorders. The current literature on Alzheimer's disease, Parkinson's disease, Huntington's disease and motor neuron diseases will be discussed in greater detail. The primary focus of the course is to explore the mechanisms (such as protein misfolding) underlying neuronal dysfunction and death.

## DEPARTMENT of NEUROBIOLOGY, PHARMACOLOGY and PHYSIOLOGY

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<i>Interim Chair</i>	Marsha Rosner, Ben May Institute for Cancer Research	<i>Assistant Professors</i>
Mitchel L. Villereal	Eric A. Schwartz Sangram S. Sisodia Mitchel L. Villereal	Naoum Issa Kamal Sharma Xiaoxi Zhuang Yimin Zou
<i>Professors</i>		<i>Emeritus Faculty</i>
Fredric L. Coe, Medicine		Harry A. Fozzard, Medicine
Aaron Fox		Philip C. Hoffmann
Jay M. Goldberg		Lewis S. Seiden
Alfred Heller	<i>Associate Professors</i>	
Richard P. Kraig, Neurology	William Green Elizabeth Grove	
Alan Leff, Medicine	Un Jung Kang, Neurology	
Robert A. McCrea	Philip E. Lloyd	
Deborah Nelson	Peggy Mason	
H. Clive Palfrey	Clifton Ragsdale	
Robert L. Perlman, Pediatrics	Gopal Thinakaran	
	Paul Vezina, Psychiatry	

The Department of Neurobiology, Pharmacology and Physiology offers courses of study leading to a Ph.D. degree in pharmacology and cellular and molecular physiology. Major research areas are programs concentrating on the nervous system, including neurobiology, neuropharmacology, psychopharmacology, neurochemistry, and neurophysiology; renal and cardiovascular pharmacology and physiology; and cellular and membrane physiology and endocrinology. The pharmacology program also participates in a large research program concerned with the basis of drug abuse. The Drug Abuse Research training program supports a large research group exploring the problems of drug abuse from the molecular to the human behavioral level.

A total of nine (9) course credits are required. Students in pharmacology are required to select at least one course from the groups of courses in biochemistry, cell biology, molecular biology, and physiology. Students select two courses in pharmacology. Elective courses are offered in neurophysiology, membrane transport, ionic channels, control of cell growth, neuropharmacology, and psychopharmacology. Depending on interest and the individual program, a student may wish to include courses in advanced chemistry, biophysics, computer science, and similar fields.

### PRELIMINARY EXAMS

At the end of the second year, students will take a written preliminary examination which will cover the expected competency in cell biology, genetics, and molecular biology. Successful students will be admitted to candidacy for the Ph.D.

### THESIS PROPOSAL

At the end of the third year, a student is expected to submit a preliminary thesis proposal to his/her thesis committee.

## LABORATORY ROTATIONS

Students are required to complete two lab rotations (each of these two rotations provides 1/2 course credit).

## FREQUENCY OF THESIS COMMITTEE MEETINGS

Bi annual thesis committee meetings.

## ADMISSION TO GRADUATE PROGRAMS

New students to the Department of Neurobiology, Pharmacology and Physiology are admitted for matriculation in the Autumn Quarter of each year. Admissions decisions are made by April 1. All students are admitted with a fellowship which covers full tuition, fees, and a stipend.

### Courses

#### Biochemistry

BCMB 30400. Protein Fundamentals.

Autumn

*Piccirilli, Cord*

The physico chemical phenomena that define protein structure and function. Topics include 1) the interactions/forces that define polypeptide conformation; 2) the principles of protein folding, structure and design; and 3) the concepts of molecular motion, molecular recognition, and enzyme catalysis.

Prereq: BCMB 30001.

BCMB 30100. Basic Biochemistry and Molecular Biology. Autumn

*Meredith, Philipson*

The course is intended as an introduction to biochemistry and molecular biology for first year graduate students, first year medical students, and advanced undergraduates. It has three sections. The first is the structure and function of macromolecules (proteins, including enzymes, and nucleic acids) and supramolecular aggregates such as biological membranes. The second section is on cellular metabolism, emphasizing enzymatic mechanisms, cellular compartmentalization, and integration of metabolic systems. The third is the beginning of molecular biology of the gene, emphasizing DNA replication, transcription, and translation. Prereq: Two quarters of organic chemistry.

NPHP 31200. Signal Transduction and Cell Cycle Regulation (=CABI 31200, CPHY 31200). Spring

*Du, Lin*

Topics include receptor ligands, receptor

tyrosine kinases and phosphatases, G protein coupled receptors, signaling pathways, cytoplasmic protein kinases and phosphatases, receptor nucleus signaling, nuclear proto oncogenes, cell growth suppression, tumor suppressors, regulation of cell cycle progression, modulation of cell cycle progression and apoptosis.

NPHP 33600. Cell Signaling (=CPHY 33600).

Autumn

*Palfray*

Cells in the body communicate with each other by a variety of extracellular signals (e.g., hormones and neurotransmitters) that are disseminated locally or in the blood stream to distant targets. What happens when these signals are received by the target cells? The subject matter of this course considers the wide variety of intracellular mechanisms that, when activated, change cell behavior. Both general and specific aspects of intracellular signaling are covered in the course, the latter including detailed discussions of receptors, G proteins, cyclic nucleotides, calcium and calcium binding proteins, phosphoinositides, protein kinases, and phosphatases. C. Prereq: BIOS 20200 and 20181, or BIOS 20191.

#### Cell Biology

MGCB 31600. Cell Biology. Autumn

*Turkewitz, Glick*

Eukaryotic protein traffic and related topics, including molecular motors and cytoskeletal dynamics, organelle architecture and biogenesis, protein translocation and sorting, compartmentalization in the secretory pathway, endocytosis and exocytosis, and mechanisms and regulation of membrane fusion.

MGCB 31700. Advanced Cell Biology.

Winter

*Lamppa*

Chromatin structure and its role in transcription, communication between nucleus and cytoplasm, translation, protein folding and assembly, molecular chaperones, elements of signal transduction, homeostasis, growth control and the cell cycle, cytoarchitecture, cell adhesion and migration.

NPHP 31800. Cellular Neurobiology

(=NURB 31800). Autumn

*Lloyd*

The cell biology of neurons is considered, with emphasis on intracellular and intercellular communication and regulation. Simple neuronal systems, especially those of invertebrates, are analyzed from a functional viewpoint.

### **Molecular Biology**

MGCB 31000. Fundamentals in Molecular Biology. Winter

*Storb, Staley*

The course covers nucleic acid structure and DNA topology, recombinant DNA technology, DNA replication, DNA damage, mutagenesis and repair, Transposons and site specific recombination, prokaryotic and eukaryotic transcription and its regulation, RNA structure, splicing and catalytic RNAs, protein synthesis, and chromatin.

MGCB 31200. Molecular Biology I. Winter

*Rothman, Denes*

Nucleic acid structure; mechanisms of transcription, replication, and recombination and their regulation in prokaryotes and eukaryotes.

MGCB 31300. Molecular Biology II. Spring

*Singh, Staley*

Analysis of regulatory pathways and mechanisms involved in the control of eukaryotic gene activity.

### **Physiology**

NPHP 33200. Ionic Channels and Excitable Membranes (=CPHY 33200). Winter

*Nelson, Hank*

A review of the voltage gated and ligand gated channels, including the functional role(s) of the channels in cell behavior and biophysical aspects of ion transport through channels. Correlation is made between

known channel protein structure and channel functional characteristics, including gating, block and drug related changes in channel current kinetics.

NPHP 30300. Cell and Organ Physiology.

Autumn.

*Lloyd and Staff*

Membrane and cell physiology; muscle, cardiovascular, and gastrointestinal physiology.

NPHP 30400. Organ Physiology and Endocrinology. Winter.

*Chang and Staff*

Renal, respiratory, endocrine and reproductive physiology and the regulation of metabolism.

NURB 31600. Vertebrate Neural Systems.

Autumn

*Ragsdale and Staff*

This lab centered course teaches students the fundamental principles of mammalian neuroanatomy. Students learn the major structures and the basic circuitry of the CNS and PNS. Somatic, visual, auditory, vestibular and olfactory sensory systems are presented in particular depth. In addition, students select two courses in pharmacology.

### **Pharmacology**

MEDC 30777. Introduction to Pharmacology

*Innocenti*

The principles of drug action.

NPHP 32200. Molecular Neurobiology

(=NURB 32200)

*Green and McGehee*

Current research in the molecular biology of the nervous system, i.e., the structure and function of macromolecules that control, propagate, and elicit neural signaling. Topics covered include (1) structural elements of neurons and glia; (2) structure and function of the synapse; (3) aspects of the molecular basis of neural signaling; and (4) gene expression in neural systems. Lectures draw on current journal literature to present a state of the art background of the topic, the current questions being explored, as well as problems and aspects.

NPHP 32800. Neuropsychopharmacology II

*Vezina*

Effects of drugs on behavior; emphasis on the functional contribution of brain neurotransmitter systems.

**Other Courses offered by the Department of Neurobiology, Pharmacology and Physiology**

**32900. Perspectives in Drug Abuse**  
*deWit and Staff*

Opioids, psychomotor stimulants, alcohol, barbiturates, nicotine and hallucinogens, with regard to history, abuse liability, use pattern, neuropharmacology, psychopharmacology, and sequelae of use/abuse.

**33400. Genetics in Neuropharmacology**  
*Zhuang*

This course focuses on diverse genetic approaches in pharmacology research. Topics are organized by genetic approaches including knockout, transgenic, knock in, tissue specific knockout, inducible strategies, forward genetics, pharmacogenomics and gene therapy. The selection of papers aims to cover different neurotransmitter systems and signaling pathways.

**34000. Neurodegenerative Disease**  
*Thinakaran*

The course will introduce students to the

molecular and cellular mechanisms involved in a number of neurodegenerative diseases. This course will provide an overview of the fundamental concepts of neurodegeneration and focus on the recent advances in select disorders. The current literature on Alzheimer's disease, Parkinson's disease, Huntington's disease and motor neuron diseases will be discussed in greater detail. The primary focus of the course is to explore the mechanisms (such as protein misfolding) underlying neuronal dysfunction and death.

**38600. Readings in Neurobiology**  
*Schwartz*

**39900. Readings in Pharmacology**  
*Staff*

**40100. Research in Pharmacology**  
*Staff*

Research credit (varied units) for research undertaken by graduate students under the guidance of a faculty member of the Department of Neurobiology, Pharmacology and Physiology.



## DEPARTMENT of OPHTHALMOLOGY and VISUAL SCIENCE

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<i>Chair</i>	<i>Associate Professors of Clinical Ophthalmology and Visual Science</i>	<i>Assistant Professors of Clinical Ophthalmology and Visual Science</i>
J. Terry Ernest	Samir Patel Marianne Feitl Louise Sclafani	Ahmed Abdelsalam Veena Arun Kourous Rezaei Sanjay Rao
<i>Professors</i>		<i>Lecturer</i>
J. Terry Ernest Rima McLeod Joel M. Pokorny Vivianne Pokorny Steven K. Shevell		Mary Flynn Roberts

**T**he Department of Ophthalmology and Visual Science offers, for properly qualified advanced students, the opportunities for research in visual science. Students admitted to our graduate program must have appropriate and broad education in multiple disciplines of the natural sciences. Our students are encouraged to engage in study during their undergraduate years of one year each of chemistry, physics, calculus and biology, and to enroll in at least one course each in biochemistry, statistics and genetics.

Admission is based on transcripts, GRE scores, and letters of recommendation. Clinical work does not receive credit and although work towards a degree can be done concurrently with residency or fellowship training, it is separate and distinct from it. The curriculum is designed for individuals who are interested in a career in research in vision and ophthalmology.

### DEGREES

#### MASTER OF SCIENCE

While the Department of Ophthalmology and Visual Science offers a formal master's program, students are not generally admitted with the sole purpose of seeking the Master of Science degree unless they already have, or expect to receive a professional degree (M.D., O.D., D.O. or D.V.M.). Conferral of the degree of Master of Science is possible after the following have been achieved:

1. All candidates must have 18 courses from those in the department and in related departments in consultation with the candidate's thesis committee. Credit for 9 courses is given for the M.D. or Ph.D. degree. A minimum of three courses must be formal lecture course work and six courses must be 40000 level research.
2. The thesis will consist of a report of original work acceptable to and approved by the candidate's thesis committee. The thesis committee will include at least three members of the Department of Ophthalmology and Visual Sciences chosen by the student in consultation with the chairman of the student's advisory committee. The thesis should be of sufficient merit to warrant publication. The candidate must pass a final oral examination.

## DOCTOR OF PHILOSOPHY REQUIREMENTS

1. Six quarters of formal lecture course work during the first two years with a grade of B or better (P is not acceptable). These should include at least three courses in different areas of vision research and should not include more than two courses from one area or from faculty in a single laboratory (broadly defined). Credit for three quarters of course work will be given to candidates who hold the M.D., O.D., D.O. or D.V.M. degree (or are enrolled in the University's M.D./Ph.D. program).
2. Two statistics courses with a grade of B or better (P is not acceptable). The requirement is for one course at the introductory graduate level plus one additional statistics course (e.g. Psychology 37300, Statistics 23000, 24400 or 24500). Students may select other statistics courses or an advanced mathematics course as the second course if this would be more appropriate for their research, but only with prior approval of the faculty of the department.
3. Two neurobiology courses with a grade of B or better (P is acceptable only for M.D./Ph.D. students). For example, students may select Neurobiology 30005 plus Neurobiology 30018, or Neurobiology 30018 plus one of Neurobiology 30019 30021.
4. One computer science course (e.g. Computer Science 105 or 115) with a grade of C or better (P is acceptable).
5. Three quarters of research. Beginning in the second quarter, the student must register for research with one of the faculty who becomes the student's sponsor to complete a research project. The aim of this project is to present research which will be at the level of a minor research project. There will be a required laboratory report which includes the historical background, the research methods, results and discussion. There will be an oral defense of the research project to a committee of no fewer than three faculty of the department.
6. Divisional teaching requirement. The student must satisfy the teaching requirement of the Division of the Biological Sciences. At present, the division requires a student to be a teaching assistant in two courses. The teaching assistantships (100 credits each) will be taken for credit with pass/fail grades and must be passed to be admitted to candidacy for the Ph.D. degree.
7. The faculty of the department shall then evaluate the student. Based on course work, grades, the research project and the recommendation of the student's sponsor, the faculty will recommend the student for the Master of Science degree or to continue to study for the Doctor of Philosophy degree.
8. Doctor of Philosophy degree advisory committee. The Doctor of Philosophy degree advisory committee shall be composed of no fewer than four members (not including the outside reader), of whom three shall be members of the Department of Ophthalmology and Visual Science. The committee will include the student's sponsor and a chairman who will not be the student's sponsor. The student and the student's sponsor will choose the chairman. The chairman and the student will then choose the other members of the advisory committee. The advisory committee will be kept informed by the student of the progress of the research.
9. The student will present a proposal for the dissertation research to the advisory committee. At least six months must elapse between the proposal hearing and presentation of the dissertation for the final defense.
10. Final Doctor of Philosophy examination. At the time of the oral defense of the dissertation, a reader who shall be an expert in the area of the dissertation research shall be selected by the members of the advisory committee. The reader may come

from another department of the University or may come from outside the University. The candidate shall present the research to a public forum in a one hour colloquium format. The advisory committee and the reader will conduct the defense following the presentation. Following the defense, the advisory committee and the reader will meet in private to vote. Passing the examination normally requires unanimous approval by all members of the advisory committee and the reader but at the discretion of the chairman of the advisory committee, one dissenting vote may be allowed.

## GENERAL STUDENT SUPERVISION

1. Second year evaluation.
2. The role of the graduate student advisor (appointed by the chairman of the department) includes knowledge of University regulations to ensure that the student fulfills University and divisional requirements.
3. The role of the graduate student sponsor is to provide guidance and an environment conducive to superior research.
4. The chairman of the advisory committee will ensure that the student fulfills departmental requirements. The chairman of the advisory committee will not be the student's sponsor.
5. The Ph.D. advisory committee will have a major role at the proposal hearing and the final defense. The student has the obligation to keep the committee informed of the progress of the research.
6. The reader will assist the advisory committee at the final oral defense.

### Courses

The courses listed below are of particular interest to students pursuing the Ph.D. degree.

30100. Fundamentals of Ophthalmology  
*Ernest and Staff*

Introduces the principles and concepts of ophthalmology.

32000. Color Vision  
*Shevell*

Mechanisms and theories of color vision. Topics include basic physiological mechanisms underlying color vision, neural coding of color information, and results from human psychophysical experiments that relate to quantitative descriptions and theories of color perception.

33800. Visual Psychophysics  
*J. Pokorny, V. Pokorny*

Critical flicker fusion, two pulse resolution, normal color vision, luminosity function, and related areas. Limited to one student at any one time, by personal arrangement.

34300. Ocular Physiology  
*Ernest*

The general physiology of the eye with special emphasis on its vascular circulation. The

control of the choroidal blood flow by the autonomic nervous system will be contrasted with the autoregulation of the retinal blood flow.

39000. Vision

*J. Pokorny, V. Pokorny*

The visual process is analyzed, with emphasis on psychophysical data. Where appropriate, these data are correlated with the anatomy, photochemistry, and electrophysiology of the visual system. Topics include psychophysical methodology, dark adaptation, spatial factors, temporal factors, and color vision.

40000. Research in Ophthalmology and Visual Science

*Staff*

Opportunity for selected students to participate in laboratory and clinical research studies. By arrangement.

41200. Advanced Topics in Color Vision  
*J. Pokorny, V. Pokorny, Shevell*

Comprehensive coverage of experimental design, instrumentation, calibration, and modeling of both peripheral and central mechanisms of color vision. Open only to students actively engaged in color vision research. Prereq: Consent of instructor.



## DEPARTMENT of ORGANISMAL BIOLOGY and ANATOMY

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<i>Chair</i>	Elizabeth Grove, Neurobiology, Pharmacology & Physiology	<i>Lecturers</i>
Neil H. Shubin	Robert K. Ho Victoria E. Prince Clifton Ragsdale, Neurobiology, Pharmacology & Physiology	Kamla Ahluwalia Sathi Singh Mark Westneat John Zeller
<i>Professors</i>	Jan Marino Ramirez Callum Ross	<i>Emeritus Faculty</i>
Martin Feder Michael LaBarbera Raphael Lee, Surgery R. Eric Lombard Daniel Margoliash Paul Sereno Neil H. Shubin Ronald Singer Philip S. Ulinski		James A. Hopson Luis M.H. Larramendi Ruth Rhines Lorna P. Straus
<i>Associate Professors</i>	<i>Assistant Professors</i>	
Michael I. Coates Edwin L. Ferguson, Molecular Genetics & Cell Biology	Melina E. Hale Nicholas G. Hatsopoulos Christopher Lowe Urs C. Schmidt Ott	

**T**he Department of Organismal Biology and Anatomy provides graduate training in organismal biology. Organismal biology deals with the problems of how organisms work; how their structure is related to their function; how their structure develops through both evolutionary and developmental processes; and how their structure is related to their environments. It calls upon concepts and techniques from many disciplines of the biological sciences, including cell and molecular biology and neurobiology, and from the physical and engineering sciences.

*Research and training in the department focus on five 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:

1. 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.
2. 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.
3. The completion of a research project and the presentation of a dissertation satisfactory to the department faculty.
4. 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 late December 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 e-mail to [Darwin@pondside.uchicago.edu](mailto:Darwin@pondside.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.

30000, 30100. Human Morphology I, II  
*Ramirez, Ross, Sereno, Staff*

Diverse approaches are taken to examine human structure at both the gross and microscopic level. Functional, developmental, and evolutionary perspectives are emphasized in understanding the structure of the body. Lectures, laboratories, and readings will examine: (1) both human and non human vertebrate morphology and (2) general principles useful in the appreciation of structure in any organism. Open to undergraduates. Prereq: consent of instructor.

## 30200. Gross Anatomy

*Staff*

Functional anatomy and organogenesis of the human body, based on dissection, lectures, demonstrations and X ray studies. Specifically organized for the Medical Scientist Training Program, any graduate students and special cases are encouraged to apply. Prereq: consent of instructor.

## 30600 Neurobiology

*Krieg, Staff*

Combined neuroanatomy, neuropharmacology and neurophysiology.

## 31300 Key Issues In Early Vertebrate Evolution (=EVOL 30300)

*Coates*

The course addresses questions about the origin of vertebrates, the interrelationships of major gnathostome clades, and the fish tetrapod transition. Undergraduate level chordate biology required; familiarity with methods in systematic biology advantageous.

## 31400, 31500 Vertebrate Paleobiology (=EVOL 30400, 30500)

*Coates, Sereno, Shubin*

Systematics, morphology, ecology, and evolution of fossil vertebrates. Open to undergraduates.

## 32200 Scientific Illustration

*Abraczinskas*32500 Vertebrate Neural Systems  
*Ragsdale*

This lab centered course teaches students the fundamental principles of mammalian neuroanatomy. Students learn the major structures and the basic circuitry of the CNS and PNS. somatic, visual, auditory, vestibular and olfactory sensory systems are presented in particular depth. A highlight of

this course is that students become practiced at recognizing the nuclear organization and cellular architecture of many regions of brain in rodents, cats and primates.

## 33400 Advanced Dissection

*Staff*

Laboratory work on special topics in gross anatomy. Prereq: OBA 30100, 30200, or equivalent and consent of instructor.

## 33600. Vertebrate Development (=DVBI 35600, EVOL 33600)

*Prince, Millen, Ho*

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 patterning, organogenesis). We make extensive use of the primary literature and emphasize experimental approaches (e.g. classical embryology, genetics, molecular genetics).

## 33700. Molecular Genetics and the Evolution of Animal Design (=EVOL 33700, BIOS 2XXXX)

*Schmitt, Ott*

The purpose of this course is to provide graduate students and undergraduates with a developmental genetic perspective on evolutionary questions that have emerged in various disciplines including developmental biology, paleontology and phylogenetic systematics. Topics range from the evolution of gene regulation to the origin of novelties such as eyes and wings. These subjects will be introduced in lectures, but emphasis will be put on reading, presenting and discussing original research papers. Graduate students and undergraduates will be expected to collaborate in preparing paper presentations. As an introductory text *From DNA to Diversity* by Carroll, Grenier and Weatherbee (2004; 2nd ed; Blackwell Science) is recommended.

## 33800 Development And Evolution (=DVBI 35700, EVOL 33800)

*Prince*

Over the last decade, genetic and molecular approaches in a few model systems (*Drosophila*, *C. elegans*, *Arabidopsis*, mouse, etc.) have led to a detailed understanding of several steps in pattern formation during the development of each respective organism. More recently, it has also become clear that

most of the genes identified as playing an important role in development in one species have homologs in a variety of other organisms and that in many cases there are clearly conserved aspects of developmental and/or biochemical function for these homologous genes. The purpose of this course is to evaluate how our knowledge of developmental mechanisms in model organisms can help us understand the evolution of development.

33900 Early Neural Development (=ORGB 33900)  
*Prince*

34200 Biological Fluid Mechanics (=BIOS 22242, EVOL 34200)

*LaBarbera*

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.

34300 Biomechanics Of Organisms (=BIOS 22243, EVOL 34300)

*LaBarbera*

This course examines how organisms cope with their physical environment. It covers the properties of biological materials (bone, cartilage, tendon, shell, wood, cuticle, etc.), mechanical analysis of morphology, and principles of design optimization. Emphasis is placed on support systems of organisms. Mechanical properties of biomaterials are analyzed in relation to their underlying biochemical organization and biophysical properties. Students carry out self designed laboratory projects. There is a required laboratory.

34500 Computational Neuroscience I: Neurons (=BIOS 24221)

*Ullinski, Staff*

This course briefly reviews the historical development of computational neuroscience and discusses the functional properties of individual neurons. The electrotonic structure of neurons, functional properties of synapses, and voltage gated ion channels are discussed. PQ: Prior course in cellular neurobiology or consent of instructor required. Prior or concurrent registration in Math 200.

34600 Computational Neuroscience II: Vision (=BIOS 24222)

*Ullinski, Staff*

This course considers computational approaches to vision. It discusses the basic anatomy and physiology of the retina and central visual pathways and then examines computational approaches to vision based on linear and non linear systems theory, information theory and algorithms derived from computer vision. PQ: BIOS 24222 and a prior course in systems neurobiology, or consent of instructor, required. Prior or concurrent registration in MATH 20100 recommended.

34700 Computational Neuroscience III: Language (=BIOS 24223, PSYC 34400)

*T. Reger, Staff*

This course discusses computational approaches to human language. It examines the learning, production, and comprehension of language, through neural network modeling of human linguistic behavior, and through brain imaging. PQ: Consent of instructor.

35600 Paleobiogeography (=EVOL 45600)

*Sereno*

This course concerns the development of historical biogeography as a discipline and the advent of more recent quantitative methods. Areas of special interest include the quality of fossil and geologic records, the definition of areas, the relationship of speciation and phylogeny to biogeography, and methods that search for congruence. The course is aimed at defining hypotheses open to test by empirical data or simulation.

37000 Topics In Systematics And Biogeography (=EVOL 47000)

*Sereno*

A graduate seminar which includes short lectures, one page summaries of readings, and class discussion. Topics include critical examination of current methods in systematics and historical biogeography, their limits, and applications to biological problems. The course assumes familiarity with the principles of systematics and historical biogeography and requires extensive readings from the current literature.

## DEPARTMENT OF PATHOLOGY

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<i>Chair</i>	Anthony G. Montag	Zdenek Hruban
Vinay Kumar	Amy E. Noffsinger	Donald W. King
<i>Professors</i>	Wendy M. Recant	Kenneth C. Robbins, Medicine
Albert Bendelac	Kenneth David Thompson	Hyman Rochman
Richard DeMay	Jerrold R. Turner	Donald A. Rowley
Godfrey S. Getz	Chyung RuWang	Benjamin H. Spargo
Martin Gross	Ting Wa Wong	Francis H. Straus II
John Hart		Robert W. Wissler
Aliya Husain	<i>Assistant Professors</i>	
Thomas N. Krausz	Anthony Chang	<i>Research Associate</i> (Associate Professor)
Vinay Kumar	Karen M. Frank	Catherine Reardon Alulis
James L. Madara	Yang Xin Fu	
Jonathan Miller	Bana Jabri	<i>Senior Research Associate</i>
José Quintans	Hye Ran Jeon	Tapan Biswas
Hans Schreiber	Loren Joseph	
Jerome Taxy	Barbara Lynne Kee	<i>Research Associates</i> (Assistant Professor)
James W. Vardiman	Madeleine Kraus	Michael Hobert
Martin Weigert	Todd G. Kroll	
Robert Wollmann	Manuel F. Utset	Jun Sun
		Yonglian Sun
<i>Associate Professors</i>	<i>Clinical Associates</i>	Ping Yu
John Anastasi	Cyril Abrahams	Dapeng Zhou
Philip Ashton Rickardt	Basil Bradlow	
Beverly W. Baron	Jerome Dickstein	
Marcus Ramsay Clark, Medicine	Ward Reeves	<i>Research Associates</i> (Instructor)
Thomas F. Gajewski	Elizabeth Sengupta	Zhangguo Chen
Mark W. Lingen	<i>Emeritus Faculty</i>	Rebecca Lian
Ronald W. McLawhon	Cyril Abrahams	
Shane Meehan	James E. Bowman	
Stephen C. Meredith	Frank W. Fitch	
	Seymour Glagov	

**T**he Department of Pathology has joined with the Committee on Molecular Medicine to offer a new joint program, Molecular Pathogenesis and Molecular Medicine. This is a program of advanced study and research in experimental pathobiology, leading to the Ph.D. degree. 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 a joint admissions committee, 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.

## DOCTOR OF PHILOSOPHY

Ph.D. requirements include successful completion of the standard divisional requirement of nine course credits, among which are the three pathology core courses, successful completion of a qualifying examination, and preparation and defense of a dissertation based on original research.

### Courses

MPMM 30000. The Making of a Pancreas  
*Philipson, Solway*

This course surveys the several knowledge areas that would be required to generate and implant a biological artificial endocrine pancreas, including glucose regulation and diabetes, insulin synthesis and action, stem cell and beta cell biology, microvascular growth, tissue engineering, and immune protection. Students will write a final paper in the form of a grant proposal. In a 3 year cycle, this course is substituted with The Making of a Heart or The Making of an Intestine.

MPMM 30001. The Making of a Heart  
*Cai, Svensson*

This course will cover our current understanding of the molecular mechanisms regulating the formation and function of the heart and vascular systems. We will also explore how these basic mechanisms are altered in cardiovascular disease. Specific topics will include congenital heart disease, hypertension, atherosclerosis, cardiomyopathies, cardiac arrhythmias, and myocardial infarction.

MPMM 30010. Immunopathology (=Biosci 25258, IMMU 30010)  
*Jabri, Ashton, Rickardt*

This course is aimed at revisiting key immunological concepts in the context of diseases. Emphasis is placed on understanding the immunological basis of disease and the propositions of experimental approaches to test immunopathological models.

MPMM 30600. Signal Transduction and Disease  
*Dulin, Wickrema*

Topics include receptor ligands, membrane receptor tyrosine kinases and phosphatases, G proteins, proto oncogenes, signaling pathways, cytoplasmic protein kinases and phosphatases, transcription factors, receptor nucleus signaling, development and cancer, genetic dissection of signaling pathways, cell growth and cell proliferation, interplay of cell cycle regulators, cell cycle progression and apoptosis, and sensing of hypoxia and mechanical stimuli. The role of signaling in disease is a theme throughout the course.

MPMM 30800. Molecular Defense Mechanisms  
*Getz and Staff*

This course describes the basic mechanisms involved in defense against and pathogenesis of human diseases. Topics to be covered include inflammation, coagulation, complement, wound repair, infection and immunopathology. These are discussed in molecular terms insofar as that is possible. Prereq: Biochem. 30100 and 30200, or equivalent.

MPMM 30900. Molecular Mechanisms of Cancer Biology (=CABI 30900)  
*Le Beau, MacLeod, Maki*

An introduction to the molecular and cell physiological abnormalities of cancer cells. Topics include the normal roles of proto oncogenes and tumor suppressor genes and their dysfunction in cancer, mechanisms of oncogene activation, mechanisms of invasion and metastasis, and modalities of cancer therapy.

**MPMM 30901. Molecular Basis of Metabolic Disease (=MOLM 30901, MOMN 30901)**  
*Philipson*

A reading course with in depth study of insulin secretion and action. Particular emphasis is placed on learning to read primary literature, give oral presentations of papers and writing of research proposals

**MPMM 31201. Modern System Pathology**  
*Meredith, Turner Sotway and Staff*  
 This course provides in depth study of the disease processes that affect three major organ systems each year. In a 3 year cycle. Organ system groupings include: Cardiovascular/Respiratory/Gastrointestinal; Obesity/Reproduction/Endocrinology; and Kidneys/Neural Degeneration/Liver.

**MPMM 3200. Molecular Biology of Disease**  
*Meredith*

This course reviews a broad range of biochemical imbalances that contribute to disease, from hyperhomocysteinemia to nitric oxide dysregulation to prion accretion.

**MPMM 36600. Molecular Nutrition**  
 (=MCMN 36600)

*Reardon, Getz*

Consideration is given to those selected topics in nutrition in which modern molecular and cell biology provide a greater understanding of the regulation of these metabolic pathways. Prereq: Biochemistry.

**MPMM 39000. Major Human Diseases**

*Getz, Cho*

The objective of this course is to familiarize the student with the molecular pathogenesis of 5 major human diseases that span a wide spectrum of disease classes. Diseases addressed are: coronary artery disease and congestive heart failure; asthma; breast cancer; rheumatoid arthritis; and toxoplasmosis.

**MPMM 40100. Research in Pathology**

*Meredith*

Open to a limited number of qualified students and graduates in medicine.

**MPMM 40200. Readings in Pathology:**

**Selected readings in Pathology**

*Meredith and Staff*

Consent of instructor.

**MPMM 57500. Cell Growth, Injury Repair & Death (=MOLM 57500, ORGB 57500)**

*Lee, Hanmann*

This course reviews the various modes of cell injury that can occur, the basic molecular healing responses and pathways of metabolic survival or death. This course may be of interest to those interested in wound heal

ing, biological stress responses, molecular chaperones, radiobiology, biomechanics, biomedical engineering as well as trauma and critical care medicine.

**Medical School Courses**

**30100. Cellular Pathology and Immunology**  
*Meredith and Staff*

A survey of basic mechanisms underlying cellular pathology, including the following topics: inflammation and wound healing; the immune response and immunopathology (immunodeficiency, hypersensitivity and autoimmunity); neoplasia and carcinogenesis; and atherosclerosis and other vascular diseases.

**30210. Clinical Pathophysiology and Therapeutics I (CPP+T)**

*Husain, Stern and Murray*

This course provides a transition between the basic medical sciences and the clinical practice of medicine by demonstrating how the clinical manifestations of specific diseases correlate with current knowledge of the underlying structural (anatomical, histological, ultrastructural) and functional (pathophysiological) abnormalities. Applied therapeutics, previously a separate course, has been incorporated since 2004 into CPP with the intent of providing integrated learning of related topics. It is not the aim of this course to provide comprehensive coverage of the diseases which afflict each organ system, but to select within each system those diseases which are common, as well as those, though infrequent, which best illustrate the scientific basis of our current concepts of the nature of disease.

**30220. Clinical Pathophysiology and Therapeutics II (CPP+T)**

*Husain, Stern and Murray*

This is a continuation of Path 30210. Prereq: Path 30210.

**Elective**

**30300. Advanced Post Mortem**

**Histopathology**

*Gross, Martin*

Selected autopsy cases (slides plus clinical history) are distributed as unknowns in advance, and then discussed with the emphasis on differential diagnosis, pathophysiology, and clinical pathologic correlation. A senior T.A. will discuss the clinical aspects of each case.

Prereq: Med Bio (Path 30100) & Med Bio (Path 30200) or equivalent

## 30400. The Post Mortem Examination

*Taxy*

Course to consist of learning experiences in autopsy pathology. The students will attend the weekly gross autopsy conference, follow an autopsy through to completion, attend teaching seminars in forensic pathology and in problem based learning in autopsy pathology.

## 35600. Current Projects in Surgical Pathology

*Husain and Staff*

Working on a project or projects with a surgical pathology faculty member(s) and sitting in on conferences and sign out as wished for by student.

## 35700. Rotation in Surgical Pathology

*Husain and Staff*

Working up surgical pathology specimens, sitting in on sign out, under direction of pathology resident and attending many surgical pathology and specialty conferences and helping to teach gross surgical pathology to Jr. SWG. Clerks.

Prereq: Med Bio (Path 30100) & Med Bio (Path 30200) & Consent of Instructor / Visiting Students (from USMLE Accredited Medical Schools Only)

## 35800. Advanced Gynecological Pathology

*Montag.*

A tutorial course on Pathology of female reproductive tract with emphasis on neoplastic and preneoplastic conditions. Appropriate for students with an interest in Ob/Gyn or Pathology.

Prereq: Med Bio Sequence / Juniors & Seniors Only

## 37800. Tutorials in Neuropathology.

*Wollman*

This course is intended for those who are interested in careers in neurology, neuro surgery, or neuropathology. The entire spectrum of disease affecting CNS, PNS skeletal muscle is covered in a daily seminar format lasting 8-10 weeks. Students are assigned slides from cases for group review on a daily basis. Includes attendance at weekly autopsy brain cutting session.

Prereq: Med Bio (Path 30200) or equivalent from other medical school.

Experimental and Comparative Pathology

## 36200. Individual Tutorial Projects in Experimental and Comparative Pathology

*Kumar*

## 39000. Teaching of Pathology

*Kumar and Staff*

Teaching Assistant for Department of Pathology Med Bio Sequence 30100, 30220  
Prereq: Med Bio Sequence / Senior Only / Consent of Instructor.

## 46000. Path Experience: Off campus

*Kumar and Staff*

Seniors who have satisfactorily completed the first 3 years of medical studies. Applications must be approved in advance by the dean of students and department.



## CLINICAL DEPARTMENTS IN THE BIOLOGICAL SCIENCES

**F**aculty in the Division of the Biological Sciences participate in graduate medical education through the Pritzker School of Medicine, and maintain a vital clinical enterprise through the University of Chicago Hospitals and Health System. Thirteen clinical departments offer a wide variety of educational and research opportunities to students and treatment options to patients. In addition, two of these departments, described in the section on the Basic Biological Sciences, offer graduate programs leading to the Ph.D. degree: Ophthalmology and Visual Science and Radiology (Medical Physics). Brief descriptions of each of the clinical departments appear below. Additional details about our clinical departments and the Office of Medical Education can be found at our web site <http://pritzker.bsd.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), education, 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 training in critical care, pain management, and cardiac 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 AND COMMUNITY MEDICINE

The Department of Family and Community Medicine was established to provide an active academic and research practice that will focus its activities at MacNeal Hospital, a major teaching affiliate. Different from most departments of family medicine, the Department of Family Medicine at the University of Chicago will be unique in its urban focus, contributing in major ways to the MacNeal community. Joint recruitment of researchers with the Department of Health Studies will enhance the quality of community based research and provide epidemiology, ethics, and health outcomes research.

At the time of this publication, a search is underway to identify candidates for Chair of the department. Faculty recruitment and the building of an academic program will follow.

## DEPARTMENT OF MEDICINE

The Department of Medicine is staffed with over 200 full time members. The department's 12 sections cover every field of internal medicine of internal medicine. These sections include cardiology, dermatology, endocrinology, emergency medicine, gastroenterology, gerontology, general internal 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 clinical and in most cases, basic science 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, residents and post residency fellows. These programs offer instruction 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 department's faculty. 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 6532.

## DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

The Department of Obstetrics and Gynecology is located in the Chicago Lying in Hospital, which is an integral part of the University's health center complex. The hospital, which functions as a unit dedicated to the health care of women, has 63 beds. In addition, there are complete outpatient facilities for the care and study of mothers during pregnancy, and of women with gynecological complications.

The education activities of the department and the hospital are multi faceted and include instruction for medical and nursing students as well as for interns, residents, fellows and visiting observers. We encourage students, interns, and residents to pursue careers in academic obstetrics and gynecology.

Education in the broad field of obstetrics and gynecology is supported by active student participation under proper supervision. Instruction takes place at all levels of participation in the outpatient department, the labor and delivery area, operating rooms, the inpatient service, and the laboratories. Research opportunities are available in the areas of gynecology, gynecologic endocrinology and oncology, maternal fetal medicine, genetics, and ethics. Subspecialty fellowships are also available for endocrinology and maternal fetal medicine. For more information, please call (773) 702 6726.

## DEPARTMENT OF OPHTHALMOLOGY AND VISUAL SCIENCE

Please see the listing under Basic Biological Sciences.

## 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 health care. 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

There are approximately fifty full time faculty in the Department of Psychiatry, who teach and deliver inpatient, outpatient, consultation, and partial hospitalization services in behavioral medicine, mood and affective disorders, anxiety disorders, neuropsychiatric disorders, eating disorders, substance abuse, dementia, sleep disorders, electroconvulsive therapy, and schizophrenia. Primary and affiliated teaching, clinical, and research institutions besides the University of Chicago Hospitals and Clinics include MacNeal Hospital, Tinley Park Mental Health Center, Chicago Lakeshore Hospital, the Psychiatric Institute at the University of Illinois at Chicago, and Louis Weiss Memorial Hospital. Assessments may include 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 developmental disorders, behavioral and learning difficulties, parent infant development, attention deficit hyperactivity disorder, and obsessive compulsive disorder. Major research efforts are active in molecular biology and genetics, neuroscience, psychopharmacology, psychiatric rehabilitation, and neuroimaging.

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, psychologists, and social workers are linked to through <http://psychiatry.bsd.uchicago.edu/education/>.

For more information, please contact the Psychiatry Office of Education at (773) 702 0529 or the Chair of Psychiatry at (773) 834 2660, further contact information available at <http://psychiatry.bsd.uchicago.edu/welcome.html>.

## DEPARTMENT OF RADIATION AND CELLULAR ONCOLOGY

The Department of Radiation and Cellular Oncology presently is responsible for radiation oncology at LaGrange Treatment Pavilion, University of Illinois at Chicago, and the University of 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 on page 288.

## DEPARTMENT OF RADIOLOGY

Please see the Graduate Program in Medical Physics listing under Basic Biological Sciences.

## DEPARTMENT OF SURGERY

Faculty in the Department of Surgery are teachers and researchers in addition to their ongoing activities as clinicians involved in the diagnosis and surgical treatment of patients. Although the department no longer grants the Ph.D. degree, researchers in the department collaborate with members of other clinical and basic science departments within the Division of the Biological Sciences and would welcome students who wish to structure collaborative research of their own. In general, the basic sciences departments provide an academic home for Ph.D. students under these circumstances.

Examples of current research by faculty of the Department of Surgery include evaluation of the effect of new immunosuppressive regimens on human T cell immunity; studies of electrical injury and the processes of tissue growth, remodeling and repair; and research on the interaction of electric fields on cell membranes. Other areas of funded research include biomechanical studies of the knee; the effects of interruption and restoration of blood flow on various organs; cryopreservation of tissues; and the identification of genetic changes in colonic, pancreatic and gastric cancers.

Students pursuing the M.D./Ph.D. may be eligible for funded support through the Medical Scientists Training Program (MSTP) and should state their interest in MSTP sponsorship when making inquiries.

Students seeking affiliation with the Department of Surgery during their course of graduate study are encouraged to write to the Chair, Department of Surgery, University of Chicago, 5841 South Maryland, MC 5029, Chicago, IL 60637, telephone: (773) 702 0881, fax: (773) 702 2140.



## THE PRITZKER SCHOOL *of* MEDICINE

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**T**he University of Chicago School of Medicine was founded in 1924. In 1968, in recognition of the extraordinary support extended to the school by the Pritzker family of Chicago, the name was changed to the Pritzker School of Medicine. The School, through its M.D. and combined M.D./Ph.D. programs, offers a rigorous course of study designed to prepare its students for distinguished careers in biomedical research, teaching, public service, and the practice of medicine within the context of a strong foundation in the basic and the clinical sciences. The art of medicine as well as application of the fruits of modern biomedical technology and research combine in the medical curriculum to enable the graduate physician to manage human disease and suffering competently and creatively as well as to continue the lifelong learning process established during the medical student years. The school encourages students to explore innovative programs of study which may combine medicine with other disciplines such as law, business, public policy, and the humanities.

The Pritzker School of Medicine is unique in that it is part of the Division of the Biological Sciences. This situation offers opportunities for interdisciplinary research and collaboration between the basic sciences and clinical staffs and for faculty to teach in both the division and the medical school. Students and faculty also enjoy easy access to the rest of the campus and its programs of study. This is not the case at many other institutions, where the medical school is often separated, sometimes by many miles, from the university proper. The combination of basic research scientists and physicians in the division provides doctoral and medical students with the opportunity for access to an unparalleled array of biomedical scientists as teachers and mentors.

The University of Chicago medical center is a leader in research on and treatment of problems such as cancer, diabetes, lung disease, heart disease, urological disorders, and diseases of the intestinal tract. Within the center there are now over one hundred specialty clinics. Medical care of the highest quality is provided for over 300,000 patients seen each year. New discoveries and techniques that Chicago scientists develop quickly find their way into clinical practice.

The University of Chicago Hospitals currently have over 600 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).

The Hospitals are the major provider of health care for the immediate neighborhood. They also meet community needs through shared service agreements, referral relationships with physicians and hospitals, and continuing medical education classes for five community 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 Hospitals for treatment. The medical center includes the National Cancer Research Center; the National Diabetes Research and Training Center; the National Clinical Nutrition Research Unit; the Special Center for Research in Arteriosclerosis; the Joseph P. Kennedy, Jr. Mental Retardation Research

Center; the Clinical Pharmacology Center; and the Research Center for Studies of Drug Dependence and Abuse. It is also the site of two additional national clinical research units and has widely recognized research programs on digestive diseases, the biology of sickle cell disease, cell biology of cardiac and skeletal muscle, transplantation biology, lipoproteins 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.

The University of Chicago Hospitals serve as teaching hospitals for the Pritzker School of Medicine. The University's record in producing medical academicians is particularly striking. Surveys conducted by the Association of American Medical Colleges over the last several years consistently show Chicago among the top three in the nation as a producer of teachers in the biological sciences, including medicine.

## COMBINED M.D./PH.D. PROGRAMS IN THE DIVISION OF THE BIOLOGICAL SCIENCES

There are within the division several opportunities for medical students to combine their M.D. training with education toward a Ph.D. in one of the degree granting units (see section on the Basic Sciences). The division is a major trainer of academic physicians. Each year, a large proportion of the graduating medical school class also has the Ph.D. (typically 15 to 20 percent). Among the many opportunities for combining graduate education with medical studies is the Medical Scientist Training Program supported by the National Institute for General Medical Sciences of the NIH and the Growth and Development Training Grant is supported by The National Institute of Child Health and Human Development.

### MEDICAL SCIENTIST TRAINING PROGRAM

The Medical Scientist Training Program (MSTP) is a special, structured program leading to both Ph.D. and M.D. degrees. Eight to fourteen students are selected each year to matriculate directly into the program. Most trainees require eight years to complete both degrees.

The program is designed for students who wish to prepare themselves for careers in academic medicine. It combines the breadth of an excellent medical education with the depth of a rigorous graduate program in basic science. Graduate studies are normally pursued in the departments and committees of the biological sciences. Consideration may be given to students wishing to do research in areas in the physical sciences (chemistry, mathematics, and physics) and in the humanities and social sciences (economics and public policy).

#### *Pritzker Requirements*

The Medical Scientist Training Program seeks students with strong academic records and commitment to biomedical investigation. Interest and potential in medical science and in basic research (as evaluated from personal statements, research summaries, and letters of recommendation) are important criteria for selection by the MSTP admissions committee. While specific admissions requirements are kept to a minimum, successful applicants generally have extensive experience in undergraduate research or independent study. Eligibility for the MSTP requires U.S. citizenship or permanent resident status.

During the student's time in the program he or she is supported by the MSTP training grant, departmental or committee training grants and divisional support. Awards are usually made for twelve month periods with renewal of support dependent on satisfactory progress in the program. Trainees are required to pursue MSTP studies on a full time basis. Trainee support includes full tuition, student health and medical insurance fees, the stipend provided by the training grant and a supplement provided by the University. Support for additional years to complete the Ph.D., beyond the years of training grant support, is from other sources such as research grants of the student's sponsor.

Qualified students interested in this training program will complete the MSTP application included with the supplementary materials for the Pritzker School of Medicine. Letters of support from research sponsors should be provided if these have not already been supplied for the Pritzker application. Students admitted to the program begin their academic program in the summer quarter. MSTP students participate in general orientation activities with their entering medical school class in the week before the fall quarter begins. For further information about the MSTP, M.D./Ph.D. program, or the Medical School, write to: Medical Scientist Training Program, The University of Chicago, Office of Medical Education, Division of the Biological Sciences and the Pritzker School of Medicine, 924 East 57th Street, Suite 104, Chicago, IL 60637 5416.

#### **GROWTH AND DEVELOPMENT TRAINING PROGRAM**

The Growth and Development Training Program (GDTP) offers students the opportunity to pursue both an M.D. and Ph.D. degree. This long standing program just received the first NICHD Mentor Award for Excellence in Research Training. Entry into the program is available for students who have completed two years (or rarely one) 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. The special opportunities offered by the GDTP also attract students from other medical schools. Students do their thesis work at Chicago and then transfer to the Pritzker School of Medicine for their last two years of medical school. A wide variety of Ph.D. degree granting units are 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.

### **PROGRAM IN MEDICINE, ARTS AND THE SOCIAL SCIENCES**

The Program in Medicine, Arts and the Social Sciences provides a unique opportunity for medical students to pursue a doctoral degree at the University of Chicago. The program is based on the premise that highly selected potential leaders who will be trained in medicine 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.

For further information about this program write to: [admissions@pritzker.bsd.uchicago.edu](mailto:admissions@pritzker.bsd.uchicago.edu). The academic possibilities of the program depend on each applicant's creativity and special interests. Doctoral studies may be pursued in the schools of divinity or public policy, in the Departments of Anthropology, Economics, History, Philosophy, Political Science, Psychology or Sociology, or in the Committees on Social Thought or the Conceptual and Historical Studies of Science. Research may also be conducted through the Center for Health Administration Studies, the Morris Fishbein Center for the Study of the History and Science of Medicine, or the MacLean Center for Clinical Medical Ethics. In each of these academic areas there are faculty who are concerned with the mission of the program. 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.





# THE DIVISION *of the* PHYSICAL SCIENCES

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ROBERT FEFFERMAN  
*Dean*

MICHAEL J. FOOTE  
*Associate Dean*

RICHARD HEFLEY  
*Dean of Students*

**T**he 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, 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 (see page 390).

## 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 received.

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 (see page 352). The Department of Computer Science offers a professional master's program to students who seek employment in the computer industry (see page 339). 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 (see page 327). Finally, the Division, together with the Harris School, offers a Masters degree in Environmental Science and Policy (see page 398).

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 (1) the candidate has begun investigation for a dissertation; (2) the candidate's department recommends admission to candidacy (following satisfactory completion of individual examination requirements); and (3) 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: (1) 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 (2) 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*

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*Director*  
Johnathan L. Rosner

**T**he 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 master's 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 master's 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: [mspsd@uchicago.edu](mailto:mspsd@uchicago.edu).



# DEPARTMENT of ASTRONOMY and ASTROPHYSICS

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<i>Chair</i>	Donald Q. Lamb, Jr.	<i>Assistant Professors</i>
Angela Olinto	Stephan Meyer	Alexei Khokhlov
	Patrick E. Palmer	Andrey Kravtsov
<i>Professors</i>	Robert Rosner	Clement Pryke
John Carlstrom	Noel M. Swerdlow	
Kyle Cudworth	Simon P. Swordy, Physics	
Scott Dodelson	James W. Truran, Jr.	
Joshua A. Frieman	Michael Turner	
Doyal A. Harper, Jr.	Donald G. York	
Edward Kibblewhite		<i>Emeritus Faculty</i>
Edward W. Kolb		Takeshi Oka, Chemistry
Arieh Königl		Peter O. Vandervoort
Richard G. Kron		
	<i>Associate Professors</i>	
	Wayne Hu	
	Stephen Kent	
	Angela Olinto	

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 on line at <https://gradapplication.uchicago.edu/intro/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 Astronomy 30100 30700; and either Physics 33000 (Mathematical Methods of Physics) and Physics 32200 (Advanced Electrodynamics and Optics); or Physics

34100 and 34200 (Quantum Mechanics); or Chemistry 36100 and 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 Astronomy 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 Astronomy 30900, and at least eight elective courses. Four of the electives must normally be chosen from among a list that includes the upper 3x level courses in Astronomy as well as several appropriate Physics courses. The remaining electives typically are 3x level or 4x 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 4x 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 3x level research course, (Astronomy 37100) students work closely with members of the faculty on problems of current research. The research courses at the 4x 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 3x 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 3x 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 3x 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. A student 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 Observatory, and the NASA Ames Research Center.

### *Courses*

#### **0100. Astrophysics I**

Introduction to stars (physical and observational), hydrodynamics of self gravitating fluids, statistical mechanics and equations of state, energy transport, astrophysical nuclear reactions, stellar models, advanced topics.

#### **30200. Astrophysics II**

Star formation, main sequence evolution, post main sequence evolution, degenerate stars, and super novae.

#### **30300. Astrophysics III**

Interstellar medium, collisionless systems, distribution of stars in the solar neighborhood, stellar kinematics/dynamics, observations of galactic large scale structure, theory of galactic structure and evolution.

#### **30400. Astrophysics IV**

The observed universe, the universe at high redshift, early universe microwave background radiation, relativistic homogeneous isotropic cosmologies, evo

lution of structure in the universe, primordial nucleosynthesis.

#### **30500. Radiative Processes in Astrophysics**

Fundamentals of radiative transfer, theory of stellar atmospheres, basic theory of radiation fields, continuum emission processes, atomic and molecular emission, plasma effects.

#### **30600. Radiation Measurements in Astrophysics**

Radiation as a random process, optical coherence, and signal analysis in spatial and temporal domains, along with the detection and measurement of radiation with astronomical instruments.

#### **30700. Preparation for Summer Research Project**

Students work with faculty members to select their research project topic and study the published literature related to it.

#### **30800. Summer Research Project**

Research project pursued

during the summer between a student's first and second years of graduate school.

#### **30900. Research Project Seminar**

Students present a seminar series based on their summer research projects.

#### **31300. Extragalactic Studies**

Interpretation of observations of galaxies, quasars, and intergalactic material. The structure of selected individual objects is discussed as well as the contents of the universe as a whole. (Offered biannually.)

#### **31500. Dynamics I (Fluids)**

Principles of hydrodynamics and hydromagnetics. Equilibrium and stability of fluid systems in astrophysics. Waves. Shocks. Turbulence. (Offered biannually.)

#### **31600. Dynamics II (Particle Systems)**

Dynamics of collisionless plasmas and stellar systems. Stochastic processes and kinetic equations. Dynamics of galaxies and star clusters. Astrophysical plasmas.

(Offered biannually.)	34000. Statistical Methods in Astrophysics An exploration of the variety of statistical methods used in modern astrophysics. (Offered biannually.)	41300. Topics in Stellar Astronomy
32000. Relativistic Astrophysics Special and General relativity and the experimental tests, with applications to astrophysical problems such as super massive stars, black holes, relativistic star clusters, and gravitational radiation. (Offered biannually.)	36100. Interstellar Matter Physics of the Interstellar Gas. Emission nebulae. H I regions. Interstellar grains and molecules. Cosmic rays and the inter stellar magnetic field. (Offered biannually.)	41400. Advanced Stellar Dynamics
32100. Cosmology Study of physical cosmology with emphasis on the standard big bang model and its observational and experimental tests. (Offered biannually.)	37100. Pre Candidacy Research	41500. Astrophysical Jets
33000. Computational Astrophysics Basic computational methods useful for astrophysics, supplemented by specific examples drawn primarily from astrophysics. Starting with basics (e.g., precision, errors and error analysis) and basic computational methods (differentiation, integration/quadrature, Monte Carlo, numerical linear algebra), and then discussing solution of problems posed in terms of ordinary and partial differential equations.	37200. Readings in Astronomy and Astrophysics 38x00. Topics in History of Astronomy (numbers vary within the 38000 series)	42200. Early Universe Cosmology 42700. Atomic Structure and Spectra 43000. Plasma Astrophysics 43300. Accretion Disks 44200. Topics in Astrophysical Fluid Dynamics 45100. High Resolution Imaging 45200. Primer on the SDSS 47100. Evolution of Galaxies 47200. Star Clusters 47300. Distant Galaxies 49400. Postcandidacy Research in Astrophysics
<b>Courses numbered 40000 48000 are lecture or seminar courses taught from time to time in specialized or advanced topics in fields in which members of the department are working. Admission to any of these is by permission of the instructor.</b>		
<b>Typical courses include:</b>		



# DEPARTMENT of CHEMISTRY

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<i>Chair</i>	<i>Emeritus Faculty</i>
Michael D. Hopkins	Norbert F. Scherer
<i>Professors</i>	Steven J. Sibener
Brice Bosnich	Hisashi Yamamoto
Laurie Jeanne Butler	Luping Yu
Karl F. Freed	
Philippe M. Guyot Sionnest	
Robert Haselkorn,	
Molecular Genetics &	
Cell Biology	
Gregory Hillhouse	Biochemistry &
Michael D. Hopkins	Molecular Biology
Richard F. Jordan	Rustum F. Ismagilov
Stephen Kent, Biochemistry	
& Molecular Biology	
Donald H. Levy	<i>Assistant Professors</i>
Milan Mrksich	Aaron Dinner
James R. Norris, Jr.	Chuan He
	Sergey A. Kozmin
	David Mazzotti

**T**he 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 33100, 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 Chemistry 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 six 30000 level courses (excluding Chemistry 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:

1. 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.
2. The department will recommend formal admission to candidacy as soon as the student has (1) satisfied the basic examination requirement, (2) satisfied the course requirements, (3) passed the candidacy examination, and (4) demonstrated satisfactory progress in research.
3. 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.

#### *Courses*

30100. Advanced Inorganic Chemistry  
Group Theory and its applications in inorganic chemistry are developed. These concepts are used in survey

ing the chemistry of inorganic compounds from the standpoint of quantum chemistry, chemical bonding principles, and the relationship between structure and reactivity.

30200. Synthesis and Physical Methods in Inorganic Chemistry  
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.

#### 30400. Organometallic Chemistry

The preparation and properties of organometallic compounds, notably those of the transition elements, their reactions, and the concepts of homogeneous catalysis are discussed.

#### 30600. Chemistry of the Elements

The descriptive chemistries of the main group elements and the transition metals are surveyed from a synthetic perspective, and reaction chemistry of inorganic molecules is systematically developed.

#### 30700. Metal Catalysis in Polymer Synthesis

This course focuses on the application of metal catalysts in polymer synthesis. The scope, mechanisms, stereocontrol aspects, and applications of Ziegler Natta, metallocene/single site, ring opening metathesis, ATRP, and other metal catalyzed/mediated polymerization reactions are discussed. Key underlying concepts from organometallic chemistry and polymer science are introduced as appropriate, and the properties and applications of important polymers produced by metal catalysis are discussed.

#### 30900. Bioinorganic Chemistry.

This course focuses on the 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.

#### 31100. Supramolecular Chemistry.

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.

#### 32100. Physical Organic Chemistry I

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.

#### 32200. Organic Synthesis and Structure

Close consideration of the mechanism, applicability and limitations of the major reactions in organic synthesis, and of stereochemical control in synthesis.

#### 32300. Tactics of Organic Synthesis

Dissection of the most important syntheses of complex natural and unnatural product. Synthesis planning and methodology. The logic of synthesis.

#### 32400. Physical Organic Chemistry II

Topics include the mechanisms and fundamental theories of free radicals and related free radical reactions, biradical and carbene chemistry, and pericyclic and photochemical reactions.

#### 32500. Bioorganic Chemistry

Relates chemical phenomena with biological activities.

Covers 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.

#### 32600. Protein Fundamentals

The focus of this course is on the physico chemical phenomena that define protein structure and function. Topics include (1) the interactions/forces that define polypeptide conformation; (2) the principles of protein folding, structure, and design; and (3) the concepts of molecular recognition and enzyme catalysts.

#### 32900. Polymer Chemistry

This course introduces a broad range of polymerization reactions and discusses their mechanism 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.

#### 33000. Complex Chemical Systems

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 importance in the development and function of living systems are discussed.

**33100. New Synthetic****Reactions and Catalysts**

This course presents recent highlights of new synthetic reactions and catalysts for efficient organic synthesis. Mechanistic details as well as future possibilities will be discussed.

**35000. Introduction to Research**

Individual laboratory or the theoretical work under the supervision of a staff member. The student must make arrangements with a staff member, who will assign and supervise the work.

**36100. Wave Mechanics and Spectroscopy**

The introductory concepts, general principles, and applications of wave mechanics to spectroscopy are presented. The course includes introductory quantum mechanics at the graduate level.

**36200. Quantum Mechanics**

A formal development of quantum mechanics, including operators, matrix mechanics, and perturbation methods. The theory is applied to the description of the electronic structure of atoms and molecules.

**36300. Statistical Mechanics**

The general theory of statistical mechanics is applied to thermodynamics. Various perfect systems, some special distributions, and selected topics are examined.

**36400. Chemical****Thermodynamics**

The thermodynamics of equilibrium systems is discussed.

**36500. Chemical Dynamics**

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.

**36800. Advanced Computational Chemistry**

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 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.

**36900. Materials Chemistry**

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.

**38700. Biophysical Chemistry**

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.

**40000. Research in Related Departments and Institutes**  
Programs must be approved in advance by both the chair of the Department of Chemistry and the chief executive officer of the department or institute in which the research is to be done.

**4xx00. Research**

A specific 40000 number is assigned to each member of the faculty. Students doing research with a specific faculty member will normally register for the specific assigned course number.

## DEPARTMENT *of* COMPUTER SCIENCE

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<i>Chair</i>	Michael J. O Donnell	Robert Findler
David B. MacQueen	L. Ridgway Scott	Robert C. Kirby
<i>Professors</i>	Janos Simon	Gina Anne Levow
Yali Amit, Statistics	Robert I. Soare	Svetlozar Nestorov
Laszlo Babai	Rick L. Stevens	
Todd Dupont	<i>Associate Professors</i>	<i>Adjunct faculty</i>
Lance Fortnow	Partha Niyogi	Mark Shacklette (adjunct professor)
Ian Foster	John Reppy	Andrew R Siegel (adjunct professor)
John Goldsmith, Linguistics	Anne Rogers	Geraldine Brady (adjunct assistant professor)
Stuart A. Kurtz		
David B. MacQueen	<i>Assistant Professors</i>	
Ketan Mulmuley	Pedro Felzenszwalb	

**T**he 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 theoretical computer science, artificial intelligence, the theory, technology, and practice of programming, databases and data mining, networks and distributed systems, scientific computing, computational mathematics. We also have growing efforts in other applied computing research, such as bioinformatics, medical informatics, scientific data management, and mathematical and computational models of sound.

*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. It should be emphasized that all other areas of computer science, listed below, have strong theoretical components represented among our faculty.

*Artificial intelligence.* We use language, vision, and learning as the organizing themes driving work in artificial intelligence.

*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.

*Databases, data mining, visualization.*

*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.

*Computational mathematics, scientific computing;* mathematical, algorithmic, language and systems aspects of numerical computing; parallel and high performance computing.

*Interdisciplinary research.* We collaborate with faculty in many other disciplines, including mathematics, statistics, economics, linguistics, psychology, biological sciences, high energy physics, astrophysics, geophysics, 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.

\*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.

\*A graduate research curriculum leading to the Ph.D. degree and preparing students to perform advanced basic research in computer science either in industry or academia. Substantial college 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 773 834 3388. You may email any questions to [questions@cs.uchicago.edu](mailto: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:

(a) 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 core courses by the end of the Winter quarter of their first year of study and the electives 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.

(b) 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:

(c) Pass the Candidacy exam;

(d) Pass the Foreign Language Competency exam (reading a technical paper in an approved foreign language, with the use of a dictionary);

(e) 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.

Applicants who expect to specialize in theoretical computer science or computational mathematics 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. Much of a typical undergraduate curriculum in computer science, such as courses in programming languages, data structures, operating systems and algorithms, is necessary background to specialize in programming languages and systems. Other applicants will also find such courses very useful background.

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. The department also works with other University departments to make campus wide teaching seminars available to its students.

## 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 work stations); wireless connections; substantial amounts of personal file storage, backed up nightly for reliability and accessible transparently from all departmental computers; printer service on several PostScript laser printers; 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.

There are two AccessGrid nodes on campus and the University is a node on the Illinois I WIRE ultra high speed optical fiber grid connecting a number of research facilities, including Northwestern University and ANL. The department also participates in the PlanetLab international networking and distributed computing laboratory.

## 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

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<i>Chair</i>	Michael C. LaBarbera,	<i>Assistant Professors</i>
David B. Rowley	Organismal Biology & Anatomy	Charles Boyce
<i>Professors</i>	Douglas R. MacAyeal	Gidon Eshel
Alfred T. Anderson	Raymond T. Pierrehumbert	Munir Humayun
David Archer	Frank Richter	Pamela Martin
Bruce A. Buffett	David B. Rowley	Synte L. Peacock
Michael J. Foote	Joseph V. Smith	<i>Emeritus Faculty</i>
John E. Frederick	Ramesh C. Srivastava	Robert N. Clayton
Mark Ghiorso		Ole J. Kleppa, Chemistry
Lawrence Grossman	<i>Associate Professors</i>	
David Jablonski	Dion L. Heinz	<i>Visiting Professor</i>
Susan M. Kidwell	Noboru Nakamura	Ho Kwang Mao

## PROGRAM OF GRADUATE STUDY

### OVERVIEW AND PHILOSOPHY.

The department serves graduate students who seek the Ph.D. in earth, planetary, geological and environmental disciplines of physical and chemical sciences, the mathematical and computational disciplines of informational science, and the paleoclimatological, paleoceanographic, 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.

Areas of study. Research, classroom teaching and seminar activity in the program reflects 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 bio geochemical 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 them 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 students 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.

The typical time taken to achieve the Ph.D. is four years. 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 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 20000's) classes listed under the department's offerings, and appropriate courses offered by other departments of the university.

30000. Reading and Research in the Geophysical Sciences  
*Staff*  
Prereq: Admission to graduate status.

30100. Reading and Research in the Geophysical Sciences for the Master's Degree  
*Staff*

An essay or formal thesis will be required. Prereq: Admission to graduate status.

30200. Research in the Geophysical Sciences  
*Staff*

This course introduces the faculty's current research themes/areas to incoming graduate students. Lectures are presented by individual faculty on either 1) a general survey of a research area, or 2) a specialized topic of interest. Evaluation of the class is by a paper topic, chosen by the student by agreement with a particular

faculty member, who will advise. The paper should consist of the development of an in depth understanding of the topic selected. Class presentations (20 minutes) that present the general findings on that subject in a comprehensible manner are required. The grade is based on an overall evaluation of the oral and written presentations.

30300. Thermodynamics and Phase Change  
*Heinz*

Develops basic concepts of homogeneous and heterogeneous phase equilibrium. Emphasis is on evaluation of thermodynamic data, reactions among thermodynamic quantities, and calculation of simple equilibria. Prereq: Undergraduate physical chemistry or consent of instructor.

30700. General Petrology  
*Anderson*

Density, rheology and vis-

cosity, thermal and chemical diffusivity of magmas and rocks including the effects of effervescence, temperature (geothermometry), pressure (geobarometry), crystallization (phase equilibria), composition (water content and solubility) and natural porosity. Neutral buoyancy in volcanology and planetary differentiation. Surface tension and wetting properties of magmas, brine, sulfide melts, carbonate melts and fluids. Applications to bubble and crystal nucleation, premelting and frost heaving, melt/liquid extraction. Convection in brine and melt. Volcanic eruptions, bubble nucleation and growth, disruption (fracture) of magma. Oxidation, oxygen fugacity, Eh and pH of natural brines (at elevated P and T), diagenesis, fluid inclusions, ore deposition.

30800. Radiogenic Isotope Geochemistry.  
*Staff*

The principles and applications of radiogenic isotopes in geochemistry and cosmochemistry; topics include principles of radioactive decay; origin of the elements; use of radioactive elements in geochronology; chemical fractionation; long lived radionuclides; short lived radionuclides; extinct radionuclides; radioactive heat production in planets; use of radiogenic isotopes as tracers; mantle geochemistry of Sr, Nd, Os, Pb systems; coremantle interaction.

Prereq: GeoSci 31000 or consent of instructor.

#### 31000. Cosmochemistry

*Grossman*

Chemical, mineralogical, and petrographic classifications of meteorites. Topics include: abundances of the elements, origin of the elements and stellar evolution, the interstellar medium and formation of the solar nebula, condensation of the solar system, chemical fractionations in meteorites and planets, age of the solar system, extinct radionuclides in meteorites, isotope anomalies. Prereq: Consent of instructor.

#### 31100. Geochemistry

*Staff*

Chemical composition of the Earth, and its core, mantle and crust. Distribution of siderophile elements, rare earths elements, etc.; stable isotopes; noble gases and volatile elements. Prereq: Physical chemistry.

#### 31200. Mineral Physics

*Heinz*

The application of physics at the microscopic level to geologic and geophysical problems. Topics: vibrational, electric and transport prop-

erties of minerals. Prereq: 2 yrs. math beyond calculus; 1 year physical chemistry or 1 year of both physics and chemistry; general geology, general geophysics and mineralogy, petrology or equivalent; or consent of instructor.

#### 31300. Earth's Mantle: Structure, Composition and Dynamics

*Buffett, Heinz*

Seminar course to discuss classic and current papers on the Structure, Composition and Dynamics of the Earth's mantle. Topics will include boundary layers, heat transfer, geotherms, compositional constraints, phase changes, high pressure phases, melting and melt production, and melt migration.

#### 31400. Stratigraphic Analysis

*Kidwell*

Historical review of basic concepts and methods, leading to current frontiers and controversies in basin and global scale analysis of the sedimentary rock record. Prereq: GeoSci 22200 or equivalent; consent of instructor.

#### 31415. Quantitative Methods for Biology, Ecology, and Paleontology

*Eshel*

Math and statistics course at the introductory graduate/upper level under grad level, specifically for life science students. Prereq: background in linear algebra and calculus will be helpful.

#### 31500. Topics in Stratigraphy and Biosedimentology (=EVOL 41500)

*Kidwell*

Seminar course using the

primary literature and/or a field problem. Topic selected from the rapidly evolving fields of sequence stratigraphy, basin analysis, and animal sediment relationships. Prereq: GeoSci 22200 and 22300 or equivalent.

#### 31700. Macroevolution (=EVOL 31700)

*Jablonski*

Patterns and processes of evolution above the species level, in both recent and fossil organism. A survey of the current literature, along with case studies. Prereq: Consent of the instructor.

#### 31800. Taphonomy (=EVOL 31800)

*Kidwell*

Lecture and research course on patterns and processes of fossilization, including rates and controls of soft tissue decomposition, post mortem behavior of skeletal hard parts, concentration and burial of remains, scales of time averaging, and the net spatial and compositional fidelity of (paleo)biologic information, including trends across environments and evolutionary time. Offered alternate years.

Prereq: Consent of instructor.

#### 31900. Topics in Paleobiology (=EVOL 31900)

*Jablonski, Kidwell, LaBarbera, Foote*

In this seminar we investigate paleobiological and historical geological topics of current interest to students and faculty. Previous subjects include benthic paleoecology, the Pleistocene, and arthropod paleobiology. Prereq: Consent of instructor.

GEOS 32400 Invertebrate Paleobiology and Evolution. (=GEOS 22400, EVOL 23400, BIOS 23261)

*Webster*

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. Field trips offer 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: topics covered include the link between morphology and genetics, microevolution, functional morphology, and the inference of past climates using fossils. Prereq: GEOS 13100, 13200, or completion of Biological Sciences general education requirements.

32500. Evolutionary History of Terrestrial Ecosystems (=EVOL 32500)

*Boyce, Makovicky*

Seminar course covering the evolution of terrestrial ecosystems from their Paleozoic assembly through to the modern world. The fossil history of the plant, vertebrate, and fungal line

ages will be covered, as will the diversification of their ecological interactions. The influence of extinction events and important extrinsic factors, such as geography, climate, and atmospheric composition, will also be considered. The class will meet once a week. Grades will be based upon student presentations and a final paper. Prereq: GEOS 132200 or equivalent, or by permission of instructor.

33000. Analytical Paleobiology (=EVOL 33000)

*Foote*

Quantitative analytical methods, stressing research applications in paleontology. Topics: basic probability theory; morphological analysis; computer intensive statistical methods; other nonparametric approaches; time series analysis; and mathematical modeling, especially of branching and extinction processes.

33200. Global Tectonics

*Rowley*

The spatial and temporal development of tectonic and plate tectonic activity of the globe will be reviewed.

Prereq: Consent of instructor.

33400. The Intelligibility of Matter and the

Measurement of Time: From the Big Bang to the Shroud of Turin

*Dauphas*

Inadequacies of tools and methods long relegated the question of ages to myths. It is not until the twentieth century that geo and cosmochronology became part of the scientific enterprise. The themes that will be covered during this course are as follows. Cosmology and the age of the universe (Big Bang theory will be treated in a Newtonian perspective

and some of the methods used for constraining cosmological parameters will be presented). The age of the Milky Way (main sequence lifetimes in globular clusters and U/Th ages of old stars). The duration of nucleosynthesis (galactic chemical evolution and its application to cosmochronology). The age of the solar system (condensation of refractory inclusions and the definition of time zero). The duration of planetary differentiation and the age of the Earth (extinct and extant chronometers).

Timescales for building a habitable planet (the late heavy bombardment, the origin of the atmosphere, the emergence of life, and continent extraction). Dating mountains (absolute ages, exposure ages, and thermochronology). The climate record (dating layers in sediments and ice cores). The DNA clock (timing of the last divergence between chimpanzees and us and comparison with the fossil record). Dating recent artifacts (the Shroud of Turin). All aspects will be treated quantitatively and notions in geology, physics, and mathematics are a prerequisite.

33700. Present and Paleoclimatology

*Staff*

A review of the earth's present atmospheric and oceanic circulation and an examination of the possibilities of reconstructing climates of the geologic past. Prereq: Consent of instructor.

34200. Biomechanics (=EVOL 34200, ORGB 34300, BIOS 22243)

*LaBarbera*

Properties of biological materials, mechanical analysis of morphology, and prin

ciples of design optimization, with appropriate examples from zoology, botany and paleontology. Lectures concentrate on solid mechanics in odd numbered years. Prereq: undergraduate chemistry and physics, consent of instructor.

**34400. Analytical Techniques Steele**

Theory and practice of analytical techniques. Prereq: Consent of instructor.

**34600. Chemical Information in the Sedimentary and Fossil Records**

*Boyce, Martin*

Explores the range of biological and environmental information that can be preserved in the chemical composition of fossils and sedimentary rocks, including topics such as elemental proxies for environmental conditions, metabolic and climate controlled isotopic fractionations, and the preservation of organic chemistry and biomarkers. The course will review the range of analytical approaches available and their technical requirements and emphasize the different types of paleobiological and climatological questions that can be addressed. Both lecture and discussion components will be involved and students will engage in lab projects with the goal of fostering the addition of such studies to their own research.

**35100. Fundamentals of Fluid Mechanics**

*Nakamura*

This course provides an introduction to concepts and phenomenology of fluid mechanics of newtonian fluids. Classroom demonstrations are coupled with analytical treatment of equations

of motion and their approximations. Topics include (1) pressure and stress, (2) Bernoulli's theorem, (3) vorticity and turbulence, (4) surface and internal waves, (5) effects of rotation and gravity on stability, (6) spin up. The lectures are supplemented by problem sets. Commands of vector calculus are highly desirable. Prereq: Classical mechanics and vector calculus.

**35200. Geophysical Fluid Dynamics**

*Nakamura*

Theoretical foundation for understanding the large scale flow patterns in the Earth's atmosphere and ocean. Topics include: The governing equations for fluids on a rotating sphere under gravity; basic conservation properties; linear wave dynamics and geostrophic adjustment; quasigeostrophic dynamics with Ekman friction; effects of isolated mountains on the general circulation of the atmosphere; two layer model of baroclinic instability and implications to storm organization; wind driven ocean circulation. Prereq: One quarter of fluid mechanics in any discipline, or consent of instructor.

**35300. Dynamics of Viscous Fluids**

*MacAyeal*

This course deals with the thermomechanical properties and behavior of ideal viscous fluids, with applications in special areas of geophysical fluid dynamics, including glaciology and mantle convection. Topics to be covered include: constitutive descriptions of ideal and non ideal fluids, compressible and incompressible

fluids, coulomb failure laws, plastic approximations, kinematics of flow fields, strain and strain rate tensors, equations governing the balance of momentum and energy, stress tensor, Navier Stokes equations, Stokesian flows, non Newtonian constitutive laws and laminar/turbulent transitions. Special cases of fluid flow will be examined, including irrotational and incompressible flow, Bernoulli's theorem for inviscid fluids, jets, wakes and flow past rigid boundaries. Special boundary conditions will be examined, including both dynamic and kinematic. Geophysical applications for 2005 will sample the basics of glaciological flow systems, including classical Nye Vialov ice sheet flow, ice shelf flow and basal sliding. Readings will include chapters from G.K. Batchelor's *An Introduction to Fluid Dynamics* and occasional classical journal articles in glaciology. Prereq: consent of instructor.

**35400. Topics in Geophysical Fluid Dynamics**

*Nakamura*

This course teaches science and art of numerical modeling at an elementary level. Classroom discussions on mathematical principles will be supplemented by a series of actual coding assignments. (Command of a programming language is assumed this is not a course on programming.) It is our goal that at the end of the course each student will have coded a working copy of shallow water model on a rotating sphere (and do science with it). Prereq: Calculus, working knowl-

edge of Fourier Transform and of a programming language (C, Fortran, IDL, etc.), access to a computer with a compiler and runtime environment. No previous experience in fluid dynamics is necessary, although this course alone does not make you a fluid dynamicist.

35500. Topics in Atmospheric Science  
*Pierrehumbert*

Topics of current interest in atmospheric science, with a particular emphasis on issues arising in recent publications. Topics covered have included: tropical circulations, cloud climate feedbacks, and dynamics of the stratosphere. Prereq: Permission of the instructor.

35800. Dynamics of the Stratosphere  
*Nakamura*

Focus on the vertical structure of the Earth's atmosphere due to compressibility and radiative heating, and its consequences on the dynamics, particularly of the stratosphere. Emphasis is placed more on the underlying physics than on the mere phenomenology of the stratosphere. Prereq: GeoSci 35200 or equivalent, or consent of instructor.

36400. Advanced Topics in Chemical Oceanography.  
*Archer, Peacock, Martin*

This course builds on topics covered in Chemical Oceanography. The course continues the emphasis on understanding the role of the ocean in the global carbon cycle and the modification of chemical signals by ocean circulation, biology, and physical chemistry. We will read classic papers as well as recently published advances, contrasting the generaliza-

tions and simplifications often used in simple calculations with the more complex reality exposed by regional studies. We will construct simple box models and compare these results to output from more complex general circulation models. Prereq: chemical oceanography and consent of instructor.

36800. Radar Meteorology  
*Srivastava*

Principles of pulsed microwave radar coherent and incoherent; scattering of electromagnetic waves by hydrometeors; use of radar in the observation of meteorological phenomena. Prereq: Consent of instructor.

37550. Late Quaternary Paleoenvironment and Geomorphology of New Zealand.  
*MacAyeal*

This 2 week field course will consider glacial geomorphology in general (through textbook readings) and the particular alpine glacial environments of south island New Zealand in particular (through selected papers) to develop an practical understanding of glacial geology and how glacial geology is used to examine paleoclimate. Field trips to classical exposures and examples of landforms will be conducted over a 2 week period in late November to early December of 2004. The principal field work will constitute examining exposures and examples along an E/W transect of the South Island through Mt. Cook National Park, where current glaciers are retreating from Little Ice Age and Younger Dryas advances. Possible aerial examination will be done by fixed wing

aircraft, but the bulk of the travel will be done by foot and automobile. Some of the travel and accommodation will be subsidized, some will not. Students will be expected to produce a detailed field guide and journal at the completion of the course using photographs, field survey and references from the literature. An effort will be made to create a field guide that can be used in a future field course for the Department of Geophysical Sciences. Field Trip. Prereq: admission to graduate status and permission of instructor.

37551. Field Glaciology.  
*MacAyeal*

The techniques and practices of field glaciology will be taught through practice and application in Antarctica. Students will be expected to read a basic text in glaciology and then specialize in one or more sub disciplines of modern field technique, including ice sheet sounding radar techniques, iceberg drift measurement, ice sheet seismology, snow stratigraphy and accumulation measure, and the design and deployment of wireless instrument technology for ice sheet remote sensing. Field Trip. Prereq: admission to graduate status and permission of instructor.

37300. Radiation Transfer Theory  
*Frederick*

Develops the theory of radiation emission, absorption, and scattering by planetary atmospheres. Emphasis on the derivation and solution of the radiative transfer equation for plane parallel, horizontally homogeneous atmospheres. Prereq: Advanced undergraduate

level knowledge of electro magnetic theory, atomic structure, and differential equations.

39100. Advanced Radiation Sources

*Smith*

Theory and practice of new techniques and research applications in the physical and biological science that

profit from the advanced x ray and neutron sources, especially the Advanced Photon Source and Intense Pulsed Neutron Source at Argonne National Laboratory. Prereq: By arrangement with instructor. If necessary, remedial reading will be assigned.

40000. Reading and

Research in the Geophysical Sciences

*Staff*

Prereq: Admission to Ph.D. candidacy.

49900. Post Ph.D. Research: GeoSci

*Staff*

Prereq: Admission to Ph.D. candidacy.



## DEPARTMENT OF MATHEMATICS

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*Chair*

Kevin D. Corlette

*Professors*

Jonathan L. Alperin

Laszlo Babai, Computer Science

Walter L. Baily

Alexander A. Beilinson

Spencer J. Bloch

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

Carlos E. Kenig

Mark Kisin

Robert Kottwitz

J. Peter May

Matam P. Murthy

Nikolai Nadirashvili

Raghavan Narasimhan

Madhav Vithal Nori

Niels O. Nygaard

Paul J. Sally

Wilhelm Schlag

L. Ridgway Scott, Computer Science

Paul Seidel

Robert I. Soare, Computer Science

Sidney Webster

Shmuel Weinberger

*Associate Professors*

Denis Hirschfeldt

Leonid Ryzhik

*Assistant Professors*

Daniel Biss

Fausto Cattaneo

Laura De Marco

Jesper Grodal

Bruno Klingler

Roger Lee

Mihnea Popa

Juan Souto

Chrysoula Tsogka

Vadim Vologodsky

*Instructors*

Miklos Abert

Uri Bader

James M. Borger

Alexander Bufetov

Kevin Costello

Hongjie Dong

Thomas Fiore

Christopher Hruska

Matthew Kirr

Caroline Klivans

Kevin McGerty

Joseph Miletí

Antonio Montalban

Robert Pollack

Wolfgang Staubach

Sinan Unver

Nathalie Wahl

*Emeritus Faculty*

Leo P. Kadanoff, Physics

Norman Lebovitz

Melvin G. Rothenberg

Izaak Wirsup

**T**he 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 (Mathematics 32500, 32600, 32700), analysis (Mathematics 31200, 31300, 31400), and topology (Mathematics 31700, 31800, 31900). 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; and (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, Mathematics 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 30100, 30200, 30300; Chemistry 36100, 36200, 36300; Economics 30500, 30600, 30700; Geophysical Sciences 35100, 35200, 35300; Physics 31500, 32300, 32400.

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 C/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.

*Courses in Financial Mathematics*

*The Subject code for the following courses*

is FINM. They are listed in the Time Schedules under Financial Mathematics.

32000. Numerical Methods I  
*Lee, Roger*

33000. Differential Equations  
*Lee, Roger*

33300. Statistical Inference and Applications to Trading  
*Zhang*

34500. Stochastic Calculus I  
*Mykland*

34600. Stochastic Calculus II  
*Mykland*

35000. Topics in Economics

36600. Fixed Income Derivatives I

*Balasanov, Gwo and Renedo*

36700. Portfolio Theory and Risk Management

*Stanescu and Zerolis*

36800. Fixed Income Derivatives II

*Balasanov, Gwo and Renedo*

36900. Portfolio Theory and Risk Management II

*Frye and Lee*

37300. Foreign Exchange  
*Karzler and Weithers*

37400. Advanced Option Pricing

*Mosevich and Nelken*

30000. Set Theory I  
*Hirschfeldt*

MATH 30000 is a course on axiomatic set theory.

Topics include the axioms of Zermelo Frankel (ZF) set theory; ordinals and cardinals; infinitary combinatorics; Von Neumann rank and reflection principles; absoluteness; inner models; Goedel's Constructible sets (L); and the consistency of the Axiom of Choice (AC) and the Generalized

*Continuum Hypothesis (GCH).*

Prereq: Consent of instructor.

30100. Set Theory II  
*Hirschfeldt*

MATH 30100 deals with models of set theory; Cohen's method of forcing and the independence of AC and CH; Martin's axiom and the unprovability of Souslin's Hypothesis; Solovay's model in which every set of reals is Lebesgue Measurable; larger cardinals (measurable cardinals, elementary embeddings, and compactness); the axiom of determinateness; and possibly some descriptive set theory.

Prereq: Consent of instructor.

30200. Computability Theory I (Ident to CMSC 38000)  
*Soare*

Math 30200 begins with models for defining computable functions such as the recursive functions and those computable by a Turing machine. Topics include the Kleene normal form theorem for representing computable functions and computably enumerable (c.e.) sets; the enumeration and s-m-n theorem, unsolvable problems, classification of c.e. sets, the Kleene arithmetic hierarchy, coding of information from one set to another, various degrees for measuring noncomputability, many one, truth table, and Turning degree. The course also includes the Kleene recursion theorem and its applications, other fixed point theorems such as the Arslanov completeness criterion, elementary properties of Turning degrees,

generic sets, and the construction of various non-c.e. degrees by oracle Kleene Post constructions.

Prereq: Math 25500 or consent of instructor.

30300. Computability Theory II (Ident to CMSC 38100)  
*Soare*

Math 30300 develops the deeper properties of computability and the classification of relative computability on sets and (Turing) degrees. It begins with the finite injury priority method of Friedberg and Muchnik, continues with the infinite injury priority method of Sacks, and minimal pair of computably enumerable (c.e.) degrees method by Lachlan. It introduces the tree method of Lachlan for classifying more difficult priority constructions, and it works out many properties of the c.e. degrees and the algebraic structure of the c.e. sets. It presents results on the relationship between a c.e. set and the degree of information it encodes such as the high maximal set theorem of Martin.

Prereq: Math 30200.

30400. Model Theory III  
*Hirschfeldt*

This course will cover the basics of stability theory, at the level of Buechler's Essential Stability Theory. Topics will include Morley rank, the Baldwin Lachlan Theorem, an introduction to geometrical stability theory, and the fundamentals of the study of stable theories.

Prereq: Math 31000.

30606. Topics in Logic  
*Montalban, Antonio*

30800. Intuitionistic Logic and Constructive Mathematics

*Hirschfeldt*

An introduction to constructivism in mathematics, with particular emphasis on logical aspects. Topics include deduction systems for intuitionistic logic, Kripke semantics, relationships between classical and intuitionistic logic, intuitionistic arithmetic, principles employed in constructive mathematics, constructive real numbers, and constructive analysis. Prereq: Math 27700 or equivalent logic course.

30900. Model Theory I Completeness and compactness; elimination of quantifiers; omission of types; elementary chains; homogeneous models; two cardinal theorems by Vaught, Chang, and Keisler; categories and functors; inverse systems of compact Hausdorff spaces; applications of model theory to algebra. Prereq: Math 25500 or Math 27900, or consent of instructor.

31000. Model Theory II Saturated models; categoricity in power; Cantor Bendixson and Morley derivatives; Morley and Baldwin Lachlan theorems on categoricity; rank in model theory; uniqueness of prime models and existence of saturated models; indiscernibles; ultraproducts; differential fields of characteristic zero. Prereq: Math 30900.

31200. Analysis I Measure and Integration

*Kenig*

Measure theory, including Lebesgue and Hausdorff

measures, integration, convergence theorems, the Radon Nikodym theorem, and differentiation theory. Normed linear spaces,  $L_p$  spaces, completeness, duality, and the Riesz representation theorem. Fourier series, the Poisson summation formula, and the boundedness of the Hilbert transform. Prereq: Math 26200, 27000, 27200, and 27400.

31300. Analysis II Functional Analysis

*Constantin*

Frechet spaces, spaces of smooth functions, weak topologies and weak convergence, distributions and Fourier analysis, including mollifiers, convolution, the Paley Wiener theorem, and local solvability of constant coefficient PDE. Sobolev spaces and the embedding theorems. Operator theory, including compact and bounded operators, integral operators, spectral theory and Fredholm operators. Applications to the representation theory of compact groups (the Peter Weyl theorem) and an introduction to the calculus of variations. Prereq: Math 31200.

31400. Analysis III Complex Variables

*Webster*

A review of the basic theory of one complex variable: Cauchy's theorem, the Cauchy Riemann equations, power series expansions, the maximum modulus principle, classification of singularities, and the residue theorem. Normal families, conformal mapping and the Riemann mapping theorem. Prescribing zeros and poles of meromorphic functions.

Harmonic functions and the Dirichlet problem.

Introduction to Riemann surfaces. Negative curvature and Picard's Big Theorem. According to the inclinations of the instructor, further topics may include: holomorphic functions of several variables (e.g. Hartogs Theorem), a deeper study of Riemann surfaces, the uniformization theorem, the Dirichlet problem in higher dimensions, differential equations in a complex domain and the Riemann Hilbert problem, Hardy spaces. Prereq: Math 31300.

31700. Topology And Geometry I Smooth Manifolds

*Narasimhan*

Definition of manifolds, tangent and cotangent bundles, vector bundles. Inverse and implicit function theorems, transversality, Sard's theorem and the Whitney embedding theorem. Vector fields and flows, Frobenius theorem, differential forms and the associated formalism of pullback, wedge product, integration, etc. Cohomology via differential forms, and computational tools, e.g. the Poincaré lemma and the Mayer Vietoris sequence. The degree of a map between compact oriented manifolds. Lie groups and Lie algebras. Prereq: Math 26100, 26200, 26300.

31800. Topology And Geometry II Differential Geometry

*Weinberger*

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 structure of a manifold (positive versus negative curvature). The Gauss Bonnet theorem and possibly the Hodge Theorem. Prereq: Math 31700.

**31900. Topology And Geometry III Basic Homology**

*Nori*

The fundamental group, covering space theory and Van Kampen's theorem (with a discussion of free and amalgamated products of groups). CW complexes, higher homotopy groups, cellular and singular cohomology, the Eilenberg Steenrod axioms, computational tools including Mayer Vietoris, cup products, Poincaré duality, and the Lefschetz fixed point theorem. Homotopy exact sequence of a fibration and the Hurewicz isomorphism theorem. Remarks on characteristic classes. Prereq: Math 31800.

32000, 32100, 32200.

**Mathematical and Statistical Methods for the Neuro Sciences I, II, III**

*Cowan*

This three quarter sequence is for students interested in computational and theoretical neuroscience. It introduces various mathematical and statistical ideas and techniques used in the analysis of brain mechanisms. The first quarter introduces mathematical ideas and techniques in a neuroscience context. Topics

include some coverage of matrices and complex variables; eigenvalue problems, spectral methods, and Green's functions for differential equations; and some discussion of both deterministic and probabilistic modeling in the neurosciences. The second quarter treats statistical methods that are important in understanding nervous system function. It includes basic concepts of mathematical probability; and information theory, discrete Markov processes, and time series. The third quarter covers more advanced topics that include perturbation and bifurcation methods for the study of dynamical systems, symmetry, methods, and some group theory. A variety of applications to neuroscience are described. Prereq: Students must have completed the equivalent of one year of college calculus and a course in linear algebra such as MATH 25000 and preferably a course in differential equations such as MATH 27300, and at least one course in neurobiology such as BIOS 14106 or 24236, or NURB 31800.

**32500. Algebra I Group Theory**

*Alperin*

Group theory. Linear groups, semisimple algebras and modules, and group representations. Prereq: Math 25400, 25500, 25600.

**32600. Algebra II Commutative Rings and Homology**

*Kisin*

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. Discussion of the dictionary between commutative algebra and algebraic geometry. Other possible topics include: Kähler 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. Prereq: Math 32500.

**32700. Algebra III Topics in Algebra**

*May*

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. Prereq: Math 32600.

**Math 33406. Applied Analysis II**

*Ryzhik, Leonid*

34100, 34200, 34300.

**Geometric Literacy**

*Fab and Weinberger*

This ongoing course might be subtitled: what every good geometer should know. The topics will intersperse more elementary background with topics close to current research, and should be understandable to second year students. The individual modules (2.5 weeks each) might be logically interrelated, but we will try to maintain a modular structure so that people who are willing to

assume certain results as black boxes will be able to follow more advanced modules before formally learning all the prerequisites. This years topics might include: basics of symplectic geometry, harmonic maps in geometry, pseudo Anosov homeomorphisms and Thurston's compactification of Teichmuller space, algebraic geometry for non algebraic geometers. Prereq: First year graduate sequence.

35205. TBA  
*Bloch*

35305. Finite Simple Groups  
*Glauberman, George*  
Simple linear groups.  
Simple permutation groups, geometries associated to simple groups.  
Prereq: 32500 32700.

35405. Algebraic Number Theory  
*Nori*

This is a first course on the subject treating (a) Finiteness of Class Number and Dirichlet's Unit Theorem (b) Dedekind zeta function, residue at  $s=1$ , functional equation (c) Artin's Reciprocity Law: local and global class field theory. This last topic will be based on Weil's book Basic Number Theory .

35505. Seminar of Topics in Analysis  
*Kenig*

We will discuss various topics in Analysis. Among them are pseudodifferential operators and inverse problems; free boundary problems and Liouville theorems for non linear parabolic equations.

36000, 36100, 36200.  
Topology Proseminar  
*May*

As a regular feature of the graduate mathematics program, there are informal proseminars that are devoted primarily to topics in algebraic topology and, recently, category theory, but are often concerned with topics that are of interest to people in such neighboring fields as algebraic geometry, geometric topology, and group theory. The proseminar is run by Professor May and other faculty members, who often talk on requested topics. In 2004/05, the 1:30-2:50 Tuesday and Thursday time slots were devoted primarily to talks in algebraic topology given by graduate students. The 3:00-4:00 Tuesday time slot was primarily devoted to proseminal talks in which the speakers at the 4:30-5:30 topology seminar gave informal talks on relevant background material. The 3:00-4:00 Thursday time slot was devoted primarily to talks in category theory.

36506. Topics in Lie groups and Representation Theory  
*Ginzburg*

SUMMARY. We begin with the standard Lie theory relating Lie groups with Lie algebras.

We then discuss in detail representation theory and topology of construct all irreducible finite dimensional representations and prove Weyl character formula.

36606. Differential Operations and their Applications  
*Ginzburg*

SUMMARY. We will first survey some parts of the theory of algebraic D modules. Most of the course will

be devoted to various concrete applications of differential operators in Algebra and Algebraic Geometry. In particular, I plan to discuss twisted differential operators, proof of the Riemann-Roch theorem for curves (based on differential operators), the concept of quantum Hamiltonian reduction and BRST, and possibly some calculations of Hochschild and Cyclic homology for the rings of differential operators.

No prior knowledge regarding differential operators is required, but some familiarity with basic complex Algebraic Geometry would be helpful.

36705. Fukaya Categories  
*Seidel*

This will be an introduction to homotopy associative structures and their role in symplectic topology (as pioneered by Fukaya and Kontsevich). I hope to find a reasonable balance between (1) algebra; (2) simple geometric and combinatorial examples; and (3) the more substantial geometric and analytic issues that arise in symplectic applications. Prereq: First year graduate courses (part of).

36706. Topics in Several Complex Variables  
*Narasimhan*

36806. Harmonic Analysis  
*Schlag*

This will be an advanced class in harmonic analysis. We will discuss the proof of Carleson's theorem due to Lacey and Thiele, as well as more advanced aspects of Calderon-Zygmund theory. Restriction theorems of the Fourier transform to hypersurfaces will also be discussed.

cussed. Other topics will be selected as time permits.

Prereq: Basic real and Fourier analysis. Some familiarity with Calderon Zygmund theory will be expected.

**36906. Partial Differential Equations**

*Schlag*

This will be an introductory class to the theory of the wave equation. We will start with Burger's equation and the formation of shocks. The concept of hyperbolicity will be introduced. We will discuss the basic energy inequality for the linear equation, and solve quasi linear equations by means of these estimates for sufficiently regular data locally in time. We will introduce the concept of nullforms and discuss the Klainerman Sobolev estimate and its applications to long time existence for small data. We will also discuss other estimates for nullforms and their applications, as well as Strichartz estimates.

**37006. Topology for Manifolds V**

*Weinberger*

Abstract: This course is a continuation of the previous four courses with the same title, but it does not assume their content as a prerequisite. Although the exact details will depend on developments that take place during the quarter, I expect there to be three main parts: IT (imprecise thoughts: topology in categories of discontinuous functions) RT (random thoughts: theorems that are generically true, and also examples constructed by the probabilistic method) and POT (problems of topology: short expositions of specific problems of current research interest, and problems that no one is studying, not for lack of interest, but more for lack of technique).

POT (problems of topology: short expositions of specific problems of current research interest, and problems that no one is studying, not for lack of interest, but more for lack of technique).

**Math 37106. TBA**

*Bloch, Spencer*

**Math 37206. Topology of Manifolds VI**

*Weinberger, Shmuel*

Abstract: This course is a continuation of the previous four courses with the same title, but it does not assume their content as a prerequisite. Although the exact details will depend on developments that take place during the quarter, I expect there to be three main parts: IT (imprecise thoughts: topology in categories of discontinuous functions) RT (random thoughts: theorems that are generically true, and also examples constructed by the probabilistic method) and POT (problems of topology: short expositions of specific problems of current research interest, and problems that no one is studying, not for lack of interest, but more for lack of technique).

**37500. Algorithms In Finite Groups (Ident to: CMSC 36500)**

*Babai*

We shall consider the asymptotic complexity of some of the basic problems of computational group theory. The two classes of groups highlighted will be permutation groups and matrix groups. The course will demonstrate the relevance of a delightful 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. We shall go in some depth into the theory of permutation groups, combining 19th century style combinatorial approaches with techniques relying on CFSG. Prereq: Linear algebra, finite fields, a first course in group theory (Jordan Holder and Sylow theorems), elements of probability theory (Chebyshev's inequality). All other requisite subjects will be reviewed in class before used. No prior knowledge of the theory of algorithms is required.

**38105. Applied Analysis**

I: Reaction Diffusion

Equations

*Berestycki*

**38206. Intro to Algebraic Geometry**

*Popa*

The course will be devoted to the basic theory of affine and projective algebraic varieties. We'll cover the fundamental definitions and the relationship with commutative algebra, the notions of dimension, degree, smoothness, Hilbert polynomial, intersection multiplicity. A large number of examples will be discussed, including quadrics, Grassmannians, generic determinantal varieties, projections, and blow ups.

38300. Numerical Solutions to PDEs (Ident to: CMSC 38300)

*Dupont*

This course covers the basic mathematical theory behind numerical solution of partial differential equations. The course will investigate the convergence properties of finite element, finite difference and other discretization methods for solving partial differential equations. A brief introduction to Sobolev spaces and polynomial approximation theory will be given. Special emphasis on error estimators, adaptivity and optimal order solvers for linear systems arising from PDEs. Special topics include (from time to time) PDEs of fluid mechanics, max norm error estimates, and Banach space operator interpolation techniques. Prereq: Consent of instructor.

38500. Applied Mathematics Literacy

*Scott*

This ongoing course, analogous to Geometric Literacy, might be subtitled: "some things every good applied mathematician should know. The topics will intersperse elementary background with topics in current research, and will be understandable by second year math grad students. The individual modules (hopefully 3 weeks long, but

maybe 2 5 weeks each) will allow people to re start if interest or focus diverges. Topics for fall 2003 will include:

models for fluids from Newton to Rivlin and Eriksen (existence, uniqueness, computational algorithms);

models for economic equilibrium based on Monge Ampere type equations  
Guest lectures by experts on particular subjects will be featured.

Prereq: None, but Analysis I or equivalent would be useful.

39000, 39100. Mathematical Neuroscience I,II

*Cowan*

The topics to be covered will range from the modeling of single neuron behavior, to the dynamics of large scale brain activity. Various applications of dynamical systems theory will be introduced, as well as a variety of mathematical methods for analyzing such systems. Winter Spring. Prereq: MATH 27000, 27300, and 27500 and one course in neurobiology or computational neuroscience.

40205. Introduction to Lie algebras

*Ginzburg*

SUMMARY. This is a course on the basics of Lie algebras accessible to first year grad students.

We begin with nilpotent and

solvable Lie algebras, and prove Engel and Lie theorems. The rest of the course is mostly devoted to the structure of semisimple Lie algebras, i.e., Cartan subalgebras, the Killing form, root system, etc. The course is completed by some standard results on finite dimensional representations of semisimple Lie algebras: highest weight classification of irreducible finite dimensional representations, complete reducibility, etc.

47000, 47100, 47200.

Geometric Langlands Seminar

*Beilinson and Drinfeld*

This seminar is devoted not only to the Geometric Langlands theory but also to related subjects (including topics in algebraic geometry, algebra and representation theory). We will try to learn some modern homological algebra (Kontsevich's A infinity categories) and some forgotten parts of D module theory (e.g. the microlocal approach).

#### Graduate Courses in Reading and Research

*Faculty members in the Department of Mathematics will offer courses in reading and research on an individual basis, according to the research interests of the student.*



# DEPARTMENT of PHYSICS

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<b>Chair</b>	Stephan Meyer, Astronomy & Astrophysics	<b>Associate Professors</b>
Robert M. Wald	Dietrich Müller	Woowon Kang
<b>Professors</b>	Sidney R. Nagel	<b>Assistant Professors</b>
Isaac D. Abella	Mark J. Oreglia	Sean Michael Carroll
Edward C. Blucher	James E. Pilcher	Cheng Chin
John Eric Carlstrom,	Thomas F. Rosenbaum	Philippe Cluzel
Astronomy & Astrophysics	Jonathan L. Rosner	Juan I. Collar
Dean Eastman	Robert Rosner, Astronomy & Astrophysics	Ilya Gruzberg
Henry J. Frisch	Guy Savard	Savdeep Sethi
Robert P. Geroch	Melvyn J. Shochet	Scott Wakely
Philippe M. Guyot Sionnest,	Simon P. Swordy	Wendy Zhang
Chemistry	Michael Turner, Astronomy & Astrophysics	<b>Emeritus Faculty</b>
Jeffrey A. Harvey	Carlos E.M. Wagner	Albert V. Crewe
Eric Isaacs	Yau Wai Wah	James W. Cronin
Heinrich Martin Jaeger	Robert M. Wald	Peter G.O. Freund
Kwang Je Kim	Paul B. Wiegmann	Roger H. Hildebrand
Young Kee Kim	Bruce Winstein	Leo P. Kadanoff
David Kutasov	Thomas A. Witten	Riccardo Levi Setti
Kathryn Levin		Yoichiro Nambu
Zheng Tian Lu		Reinhard Oehme
Emil J. Martinec		Eugene Parker
Gene F. Mazenko		John P. Schiffer
Frank S. Merritt		S. Courtney Wright

**T**he 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 world wide. 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 five and a half 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 June and must be passed within two years of the time of matriculation.
2. Fulfill the experimental physics requirement by completing Advanced Experimental Physics (Physics 33400) or a Special Experimental Project (Physics 33500).
3. Pass four post candidacy advanced graduate courses devoted to the broad physics research areas of (A) Condensed Matter Physics, (B) Particle Physics and (C) Large Scale Physics (i.e. Astrophysics and/or Cosmology related). The four courses selected must include at least one from each category.
4. Pass two other advanced (40000 level) courses either in physics or in a field related to the student's Ph.D. research.
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. Five of the nine courses must be Physics 31600, 33000, 34100, 34200, and 32200.
2. Complete the Experimental Physics requirement (Physics 33400 or 33500).

## 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 classwork 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 and the James Franck Institute. 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. The research institutes are connected to the Kersten Physics Teaching Center by an enclosed bridge.

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 T<sub>c</sub> superconductivity, non linear dynamics, low temperature, disordered and amorphous systems, the dynamics of glasses, fluid dynamics, surface and interface phenomena, non linear 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 labora-

tory, 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.

A new interdisciplinary research institute, called the Institute for Biophysical Dynamics, has been formed at Chicago. It 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 we expect to develop rapidly over the next few years, with a bi directional impact. Initial 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 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 an application and detailed information about departmental degree requirements, financial aid, and faculty research interests, e mail [physics@uchicago.edu](mailto: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 more information.

**Courses**

*The following nine introductory graduate courses are normally taken in the first year.*

31600. Advanced Classical Mechanics  
 32200. 32300. Advanced Electrodynamics and Optics I, II  
 33000. Mathematical Methods of Physics I  
 34100. 34200. Quantum Mechanics I, II  
 35200. Statistical Mechanics  
 33400/33500. Advanced Experimental Physics (required for masters and Ph.D. degrees)

*The following courses are among those normally taken in the second and third years:*

**Category A (Condensed Matter Physics).**

36100. Introduction to Solid State Physics  
 36600. Advanced Solid State Physics  
 36700. Soft Condensed Matter

**Category B (Particle Physics).**

36300. Introduction to Particle Physics  
 44300 or 44400. Introduction to Quantum Field Theory

**Category C (Large Scale Physics).**

36400. General Relativity  
 37100. Introduction to Cosmology  
 37200. Space Physics and Astrophysics  
*A total of four courses with at least one from each category above is required for the Ph.D.*

*Each year the department also offers six to eight advanced (40000 level) courses dealing with special topics relating to the fundamental research of individual faculty members.*



## DEPARTMENT *of* STATISTICS

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***Chair***

Stephen M. Stigler

***Stephen M. Stigler***

Ronald Thisted, Health Studies

***Assistant Professors***

Marc Coram

***Professors***

Yali Amit

Steven P. Lalley

Peter McCullagh

Per Mykland

Michael Leonard Stein

Kirk Wolter

Mathias Drton

Dan Liviu Nicolae

Wei Biao Wu

***Associate Professors***

Mary Sara McPeek

Michael J. Wichura

**T**he 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 such fields 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. However, 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 towards survey methods, medical statistics and finance, or towards 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, and four electives. A master's paper is normally required.

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 S, 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 doctors degree 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 such areas 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. Students from the department in recent years have, as a result, been coauthors on scientific papers in such areas 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 encouraged 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 consultative 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

Application forms for admission and other information about the department and University can be obtained from <http://galton.uchicago.edu/admissions/>.

## FACILITIES

The department is housed in several adjacent floors of Eckhart Hall. Each student is assigned a desk in one of several offices. 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 upon 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 Graduate School of Business and in the research programs in economics, sociology, and education associated with NORC (formerly the National Opinion Research Center).

### Courses

*Courses in the first list are offered each year and are intended mainly for undergraduates and for graduate students from disciplines other than statistics.*

0000. Elementary Statistics

22000. Statistical Methods and Their Applications

22200. Linear Models and Experimental Design

22400. Applied Regression Analysis

22600. Analysis of Qualitative Data

24200. Applied Probability and Stochastic Models

23400, 23500 Statistical Models and Methods I, II

24400, 24500, 24600.

Statistical Theory and Methods

25100. Introduction to Mathematical Probability

26700. History of Statistics  
Development of probability theory and its use in science to quantify uncertainty in observational data and as a conceptual framework for scientific theories.

*Courses in the second list are offered each year or in alternate years and are intended, primarily but not exclusively, for graduate students in statistics.*

30100, 30200. Mathematical Statistics

The mathematical structure of statistics; parameter estimation, efficiency, confidence sets, tests of hypotheses, Bayesian analysis, decision theory and asymptotic methods.

30400. Distribution Theory  
Deriving, characterizing, displaying and approximating distributions. Computer based algebra; Edgeworth, saddlepoint, and Laplace

approximations.  
30700. Numerical Computation  
Numerical algorithms, particularly in linear systems.

31200. Introduction to Stochastic Processes I  
Branching processes, recurrent events, renewal theory, random walk, Markov chains, Poisson and birth and death processes.

31300. Introduction to Stochastic Processes II  
Continuation of 31200, focusing on continuous time Markov chains, and martingales.

33100. Sample Surveys  
Random sampling methods; stratification, cluster sampling, ratio estimation; methods for dealing with non response and partial response.

34300. Applied Linear Statistical Methods  
The theory, methods and applications of fitting and interpreting multiple regression models.

34500. Design and Analysis of Experiments  
Linear models in experimental design: blocking, randomization, fractionation and confounding, fixed and random effects; analysis of designed experiments.

34700. Generalized Linear Models symmetric functions, Edgeworth and saddlepoint approximations

32200. Applied Bayesian Data Analysis

32300. Analysis of Incomplete Data

33200. Survey Topics

33400. Applied Forecasting

33500. Time Series Analysis

33900. Spatial Statistics

34600. Multivariate Methodology and Data Analysis

34900. Applied Nonparametric Statistics

35000. Fundamentals of Epidemiology  
Exponential family models and variance functions; logistic regression, log linear models. Quasi likelihood, least squares and partially linear models.

36700. History of Statistics  
Development of probability theory and its use in science to quantify uncertainty in observational data and as a conceptual framework for scientific theories.

38100 38300. Measure Theoretic Probability  
A rigorous treatment of probability including a development of measure theory: existence theorems, integration and expectation, characteristic functions, limit laws, Radon Nikodym derivatives, conditional probabilities, martingales, Brownian Motion.

39000, 39100. Stochastic Calculus and Finance I, II  
An introduction to probability theory and stochastic calculus integrated with the use of those tools for valuing and hedging derivative securities.

44100. Consulting in Statistics  
*The third list includes advanced or specialized courses that have been taught in the past years. Each year a selection similar to these are offered, depending on the current interests of the faculty and students.*

30500. Theoretical Statistics  
The foundations of statistical inference; the likelihood principle, sufficiency and conditionality principles, Bayesian and frequency based inferences.

31400. Tensor Methods in Statistics  
Multivariate moments and cumulants, set partitions and M bias inversion, k statistics and 35100. Advanced Epidemiology.

35500. Statistical Genetics  
Mapping of human disease genes and genetic markers; statistical and computational problems in the analysis of big pedigrees with complex genetic models.

35600. Introduction to Survival Analysis

35700. Resampling Methods  
Bootstrapping, jackknifing and cross validation; comparison to analytic techniques; applications.

36300. Topics in Likelihood Theory

36500. Statistical Decision Theory 36900. Robust Estimation  
The theory of M estimators and linear functions of order statistics; history of robust inference, rejection of outliers, influence functions.

37500. Topics in Bayesian Analysis

37700. Simulation Methods  
Random number generation, sampling from special distributions, Monte Carlo integration techniques, importance weighting, Gibbs sampling.

37800. Statistical Computation

37900. Computer Vision

38500. Advanced Probability: Stochastic Calculus

38600. Advanced Probability: Weak Convergence

38900. Probability and Finance

39200. Spectral Methods in Statistics  
Fourier theory, computation, and applications to spectroscopy and imaging. Wavelets.

39300. Reading Fisher

39500. Nonparametric Regression and Classification

39600. Inference for Dependent Processes

39900. Master's Seminar

45100. Workshop in Statistics	47000. Conceptual Issues in Inference (50 unit course)	49400. Workshop in Statistics and Finance
45500. Statistical Genetics (50 unit course)	47800. Statistical Algorithms (50 unit course)	49500. Nonparametric Regression (50 unit course)
45600. Workshop in Genetics	48800. Workshop on Shrinking Interval Asymptotics	49700. The Craft of Research (50 unit course)
46100. Asymptotics in Inference (50 unit course)	49200. Wavelets (50 unit course)	
46300. Topics in Statistical Inference (50 unit course)	49300. Workshop in Financial Engineering	



# THE ENRICO FERMI INSTITUTE

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<b>Director</b>	Stephan Meyer, Astronomy & Astrophysics	<b>Associate Professors</b>
James E. Pilcher	Dietrich Müller, Physics	Edward Blucher, Physics
<b>Professors</b>	Sidney Nagel, Physics	Wayne Hu, Astronomy & Astrophysics
John Eric Carlstrom, Astronomy & Astrophysics	Mark J. Oreglia, Physics	Angela V. Olinto, Astronomy & Astrophysics
Henry J. Frisch, Physics	James E. Pilcher, Physics	Carlos E.M. Wagner, Physics
Robert P. Geroch, Physics	Jonathan L. Rosner, Physics	
Lawrence Grossman, Geophysical Sciences	Robert Rosner, Astronomy & Astrophysics	
Jeffrey A. Harvey, Physics	Guy Savard, Physics	<b>Assistant Professors</b>
Edward James Kibblewhite, Astronomy & Astrophysics	Melvyn J. Shochet, Physics	Sean Michael Carroll, Physics
Kwang Je Kim, Physics	Simon P. Swordy, Physics	Juan Collar, Physics
Young Kee Kim, Physics	James Wellington Truran, Jr., Astronomy & Astrophysics	Clement Pryke, Astronomy & Astrophysics
Edward W. Kolb, Astronomy & Astrophysics	Michael Turner, Astronomy & Astrophysics	Savdeep Sethi, Physics
Arieh Königl, Astronomy & Astrophysics	Yau Wai Wah, Physics	<b>Emeritus Faculty</b>
David Kutasov, Physics	Robert M. Wald, Physics	Robert N. Clayton, Geophysical Sciences
Donald Quincy Lamb, Jr., Astronomy & Astrophysics	Paul B. Wiegmann, Physics	Albert V. Crewe, Physics
Joseph D. Lykken, Physics	Bruce Winstein, Physics	James W. Cronin, Physics
Emil J. Martinec, Physics	Donald G. York, Astronomy & Astrophysics	Roger H. Hildebrand, Physics
Frank S. Merritt, Physics		Leo P. Kadanoff, Physics
		Riccardo Levi Setti, Physics
		Yoichiro Nambu, Physics
		Takeshi Oka, Chemistry

**F**ounded 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 is currently in residence as Professor Emeritus. Early research at the institute 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 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 institute's faculty hold one or more joint appointments in the Departments of Astronomy & Astrophysics, Chemistry, Geophysical Sciences, Mathematics, or Physics. The scientific staff of the institute 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 interna

tional 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 institute.

Institute faculty and scientific and technical staff occupy part of the University's Research Institutes Building, the High Energy Physics Building, the Laboratory for Astrophysics Space Research, and the Astronomy and 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 institute 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

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<b>Director</b>	Gene F. Mazenko, Physics	<b>Assistant Professors</b>
Steven J. Sibener	Sidney R. Nagel, Physics	Philippe Cluzel, Physics
<b>Professors</b>	Stuart A. Rice, Chemistry	Aaron Dinner, Chemistry
Laurie Jeanne Butler, Chemistry	Thomas F. Rosenbaum, Physics	Ilya Gruzberg, Physics
Todd Dupont, Computer Science	Norbert F. Scherer, Chemistry	David Mazzotti, Chemistry
Dean Eastman, Physics	Steven J. Sibener, Chemistry	Wendy Wei Zhang, Physics
Karl F. Freed, Chemistry	Paul B. Wiegmann, Physics	<b>Emeritus Faculty</b>
David George Grier, Physics	Thomas Adams Witten, Physics	R. Stephen Berry, Chemistry
Philippe M. Guyot Sionnest, Chemistry	Luping Yu, Chemistry	Leo P. Kadanoff, Physics
Heinrich Martin Jaeger, Physics	<b>Associate Professors</b>	Ole J. Kleppa, Chemistry
Kathryn Levin, Physics	Dion L. Heinz, Geophysical Sciences	John C. Light, Chemistry
Donald H. Levy, Chemistry	Woowon Kang, Physics	

The James Franck Institute is an interdisciplinary association of scientists with primary interests in the study of physical chemistry, condensed matter physics, and materials chemistry. It is the paradigmatic interdisciplinary research institute in the U.S. fostering forefront research at the boundaries between these disciplines. Much of the theoretical and experimental research in the institute concerns the physics and chemistry of solids and liquids with emphasis on statistical physics, chemical dynamics, nanoscience materials chemistry, nonequilibrium phenomena, quantum phase transitions, chemical kinetics, molecular beams, surface phenomena, polymer chemistry and physics, biophysics, and dynamical systems. The institute exists for the dual purposes of providing an environment in which scientists of varied disciplines will interact and aid each other's research, and of extending to predoctoral and postdoctoral research students an opportunity to study and do research in an interdisciplinary laboratory. Much of the work in progress utilizes specialized general facilities operated by the institute. These include a low temperature laboratory, a materials preparation laboratory, X ray diffraction and analytical chemistry laboratories, scanning probe and electron microscopes, an image processing center, and extensive shop and computer facilities. Formal courses are not offered by the institute but frequent colloquia and seminars are held for the discussion of current research and of various scientific topics of interest.

# INSTITUTE for BIOPHYSICAL DYNAMICS

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## *Director*

Stephen B. H. Kent

## *Professors*

David G. Grier, Physics  
 Stephen Kent, Biochemistry and Molecular Biology  
 Anthony A. Kossiakoff, Biochemistry and Molecular Biology

Keith Moffat, Biochemistry and Molecular Biology  
 Milan Mrksich, Chemistry  
 James R. Norris, Jr., Chemistry  
 Daphne Preuss, Molecular Genetics and Cell Biology  
 Norbert Scherer, Chemistry  
 L. Ridgway Scott, Computer Science, Mathematics

## *Professors*

Ka Yee C. Lee, Chemistry  
 Tobin R. Sosnick, Biochemistry and Molecular Biology

## *Assistant Professors*

Philippe Cluzel, Physics  
 Aaron Dinner, Chemistry

**E**xiting frontiers in scientific research lie at the interface between the physical and biological sciences, outside the traditional boundaries of existing scientific disciplines. It is the purpose of the Institute for Biophysical Dynamics (IBD) to create a stimulating environment in order to foster novel research at this important interface. Critical examination of a biological system as basic as a single mammalian cell raises questions so complex that they can not 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 understanding at the molecular level of the structure, diversity and function of biological entities within the cell.

The University of Chicago has established the Institute for Biophysical Dynamics to meet these challenges with a new approach to scientific research. The Institute will bring together experimentalists, theoreticians, and computational scientists to forge a scientific culture of open exchange of ideas and of collaboration across disciplines and among laboratories. The Institute is leading the establishment of training programs to involve undergraduate, graduate, and postdoctoral students in this new cross disciplinary 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 GRADUATE SCHOOL *of* BUSINESS

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**F**ounded in 1898, Chicago GSB 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, Graduate School of Business faculty have made significant contributions in the areas of finance, the economics of regulation, and decision making. For more than a century, Chicago GSB has been known as an innovator in business education and a creator of ideas.

In autumn 2004 the new Chicago GSB Hyde Park Center opened. This new facility brought together all of the GSB's previously existing Hyde Park campus buildings into one 415,000 square foot space. Located at 5807 South Woodlawn Avenue, the center is designed around how teachers want to teach and how students want to learn. With the opening of the Chicago GSB Hyde Park Center, the GSB can lay claim to the best business school facilities in the world. Chicago GSB 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 Graduate 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. Although the Graduate School of Business 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 the Graduate School of Business. 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 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's innovative Leadership Effectiveness and Development (LEAD) program provides a common educational experience within a curriculum that has always offered exceptional flexibility. This required noncredit course for full time program students strengthens general management skills through a cohort experience and experiential learning. Course content is driven largely by students drawing on the expertise of consultants, professional organizations, and faculty members to develop interactive workshops in areas of diversity, self awareness, communication and presentation skills, and ethical decision making. Class activities in autumn quarter revolve around student cohorts that 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 Associate Dean for Enrollment Management, The University of Chicago Graduate School of Business, 5807 South Woodlawn Avenue, Chicago, Illinois 60637, phone: 773.702.7369, e mail: [admissions@ChicagoGSB.edu](mailto:admissions@ChicagoGSB.edu).

## THE INTERNATIONAL MBA PROGRAM

The University of Chicago Graduate 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 GSB 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 Full Time 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 Graduate School of Business, 5807 South Woodlawn Avenue, Chicago, Illinois 60637, or phone 773.702.4499.

## 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 1,100 students, representing more than four hundred employers, 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, with students completing one or two courses per quarter. The program can be completed 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, the Graduate School of Business 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 one half years. Some students fly in from as far away as California, Florida, New York, Texas, and Washington DC for weekly classes. The Weekend MBA Program follows in the Chicago 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 the Graduate School of Business. The school began its PhD program, 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 Graduate School of Business, 5807 South Woodlawn Avenue, Chicago, Illinois 60637, and are available online at [ChicagoGSB.edu/phd](http://ChicagoGSB.edu/phd).

## JOINT DEGREE PROGRAMS

The Graduate School of Business 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, Latin American, and East Asian area study centers; and International Relations and Business. 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 Graduate School of Business, 5807 South Woodlawn Avenue, Chicago, Illinois 60637. For all other joint programs, write to the director of admissions of the Graduate School of Business 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, a group of approximately eighty five students is admitted to this intensive twenty month program of study. 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; thus, all classes are taken together as a group. In addition, each member of the class is assigned to a study group of about five members, and

this group meets outside of class to complete assignments, review class material, and prepare in general for the upcoming class. Each study group, by design, includes members who have a variety of professional and educational experiences.

Although the format is different, the Executive MBA Program, like all Chicago 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.

For further information about the program, contact the director of the Executive MBA Program North America, The University of Chicago Graduate School of Business, 450 North Cityfront Plaza Drive, Chicago, Illinois 60611, phone: 312.464.8750, e mail: [xp@ChicagoGSB.edu](mailto:xp@ChicagoGSB.edu); the director of the Executive MBA Program Europe, The University of Chicago Graduate School of Business, Woolgate Exchange, 25 Basinghall Street, London EC2V 5HA United Kingdom, phone: 44.(0)20.7643.2210, e mail: [europe.inquiries@ChicagoGSB.edu](mailto:europe.inquiries@ChicagoGSB.edu); or the director of the Executive MBA Program Asia, The University of Chicago Graduate School of Business, 101 Penang Road, Singapore 238466, phone: 011.65.6835.6482, e mail: [asia.inquiries@ChicagoGSB.edu](mailto:asia.inquiries@ChicagoGSB.edu).



## THE LAW SCHOOL

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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—the conviction that ideas matter, that they are worth discussing, and that legal education should devote itself to learning for learning's sake. Learning the law 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 students 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 non profit 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, and the Appellate Advocacy Clinic. In these programs, students engage in supervised practice, including the representation of clients in court.

A significant fraction of the faculty represents 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

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## 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 an inter departmental 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 policy relevant 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, 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.

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. 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 practicums, 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:

the concentration (optional), which exposes 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 of the 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 at the School and throughout campus. The Harris School houses two research centers, the Center for Human Potential and Public Policy and the Cultural Policy Center, both of which perform innovative, policy oriented research on such compelling issues as the ways in which policy is influenced by governments, cultural institutions, and policy makers; and the creation of effective social policy geared towards children.

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 Social Program Evaluation  
Center for the Study of Race, Politics and Culture  
Center for Urban Research and Policy Studies  
Center on Aging, Health and Society  
Center on Demographics and Economics of Aging  
Chapin Hall Center for Children  
Economic Research Center  
National Opinion Research Center (NORC)  
Ogburn/Stouffer Center for the Study of Social Organizations  
Program on International Politics, Economics and Security  
Program on International Security Policy (PISP)  
Population Research Center

## STUDENT BODY

The Harris School is strongly committed to supporting a student body that includes a diversity of cultural and ethnic backgrounds, educational and work experiences, and professional aims. The current student body is comprised of students who received undergraduate degrees in such fields as American studies, economics, education, engineering, environmental studies, international relations, philosophy, political science, psychology, and sociology. In academic year 2004-2005, 62 percent of Harris School students were female; 26 percent were American minorities; and 19 percent were international students representing 14 countries; the age of our students ranged from 21 to 51. Over 230 master's students and 27 Ph.D. students were enrolled in the School last year.

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; the Education Policy Group; Chicago Environmental Policy Group (CEPA); the Child and Family Policy Group; the Urban Policy Group; the Minorities in Public Policy Studies (MIPPS); Women in Public Policy (WIPP); 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, the 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

Official GRE or GMAT scores, or LSAT scores (if a joint M.P.P./J.D. applicant)

TOEFL scores (international applicants only use institution code 1832); or

IETLS scores

\$50.00 nonrefundable application fee

The Committee on Admission and Aid will not review your application until we receive all required materials. We highly recommend that you submit all documents in one package to avoid delays in processing your application.

To apply on line or to request an application, visit the School's web site at [harrischool.uchicago.edu](http://harrischool.uchicago.edu). You may also request an application by contacting the Office of Admission at (773) 702 8401 or, via e mail, at [HarrisSchool@uchicago.edu](mailto:HarrisSchool@uchicago.edu).



## THE PRITZKER SCHOOL *of* MEDICINE

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Information about the School of Medicine can be found with the Division of the Biological Sciences; see page 235.



## THE SCHOOL *of* SOCIAL SERVICE ADMINISTRATION

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### 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 non profit 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. 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 are research associates and assistants on many of the center's projects and are active participants in seminars and discussions.

### CENTER FOR HEALTH ADMINISTRATION STUDIES

The Center for Health Administration Studies (CHAS) conducts multidisciplinary research on health policy and politics and the socio economic dimensions of health. The Center currently conducts significant projects on 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 is also launching a new initiative about how the caregiving experience varies across different care recipient groups (caregiving for the mentally ill, elderly and children with chronic illness, for example) and over time. CHAS also supports workshops and symposia at the University of Chicago, and dissemination of health policy research.

## 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 web site at <http://www.ssa.uchicago.edu>.



# THE DIVINITY SCHOOL

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## PROGRAMS OF STUDY

**T**he 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 (SC 30100, 30200, and 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.

The Divinity School is organized into three faculty committees which support the School's degree programs: Constructive Studies in Religion (Religious Ethics, Philosophy of Religion, Theology); Historical Studies in Religion (Biblical Studies, History of Christianity, History of Judaism, and History of Islam); and Religion and the Human Sciences (History of Religions, Anthropology and Sociology of Religion, Religion and Literature). In addition to responsibility for the administration of the curriculum of these areas, the faculty annually offer a small number of courses designed to serve specific program requirements, e.g., the sequence The Study of Religion for the A.M. program, the sequences Ministry and the Public Church and the Arts of Ministry for the M.Div. program, and reading courses for Ph.D. exam preparation and dissertation research. According to personal interests and academic specializations, faculty members of the School may teach in one or more of these areas.

The academic year at Chicago is divided into four quarters of approximately three months each, but the Divinity School offers formal courses only in the autumn, winter, and spring quarters. Because the Divinity School is one of the academic units of the University of Chicago, its students have available to them, in addition to courses offered in the Divinity School, a wide range of courses in other divisions and schools that are related to their areas of study. The Divinity School encourages all students to make use of these offerings in view of their specific research interests.

## THE GRAHAM SCHOOL *of* GENERAL STUDIES

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The Graham School of General Studies has a long tradition of excellence in graduate education and outreach. Building on this tradition, it houses three master degree programs: The Master of Liberal Arts program, Master of Public Health Threat Preparedness, and the Master of Arts in Teaching Elementary Education. It also offers two graduate level non degree educational opportunities: the Graduate Student at Large and Returning Scholar programs. Through these programs, students become a part of the University of Chicago's graduate academic community and pursue courses of study best suited to their needs.

### THE MASTER OF LIBERAL ARTS (MLA) PROGRAM

The Master of Liberal Arts (MLA) 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 highly motivated 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 PUBLIC HEALTH

The Master of Public Health in Threat Preparedness 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, bio statistics, 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 ELEMENTARY EDUCATION (MAT)

The Master of Arts in Teaching, offered in conjunction with the Chicago Urban Teacher Education Program (Chicago UTEP), prepares successful teacher leaders for challenging urban elementary schools. The five quarter MAT program is open to graduates of the College who have successfully completed the Foundations of Education sequence. Chicago UTEP reverses the way traditional teacher education programs are organized by involving MAT candidates in two half year internships in two public schools while they pursue coursework in education and learning the theory. In addition to Master's degrees and Illinois K-9 teaching certification, Chicago UTEP graduates receive assistance in finding a position in a University affiliated Chicago Public School and two years of support through their induction program the New Teachers Network.

## THE RETURNING SCHOLAR (RS) PROGRAM

The Returning Scholar (RS) 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. Registration for some courses may require the approval of the department or instructor. 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 (GSAL) program is designed for 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 would be appropriate. Full academic credit is given and copies of transcripts may be requested when needed. 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 of Chicago, 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 enrolled in institutions not having formal exchange or traveling scholar programs with the University of Chicago 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 General Studies  
1427 E. 60<sup>th</sup> Street  
Press Building, Suite 2  
Chicago, IL 60637  
773/702 1726



# ACADEMIC CALENDAR

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## 2005 AUTUMN QUARTER

College Orientation	Sat, Sep 17
Registration	Wed, Sep 21
Quarter Begins	Mon, Sep 26
Thanksgiving	Thu Fri, Nov 24 25
Reading Period	Thu Fri, Dec 01 02
Convocation	Fri, Dec 09
Quarter Ends	Sat, Dec 10

## 2006 WINTER QUARTER

Quarter Begins	Tues, Jan 03
Martin Luther King Jr. Day	Mon, Jan 16
College Break	Fri, Feb 10
Reading Period	Thu Fri, Mar 09 10
Convocation	Fri, Mar 17
Quarter Ends	Sat, Mar 18

## 2006 SPRING QUARTER

Quarter Begins	Mon, Mar 27
Memorial Day	Mon, May 29
Reading Period	Thu Fri, June 01 02
Convocation	Fri Sun, Jun 09 11
Quarter Ends	Sat, June 10

## 2006 SUMMER QUARTER

Quarter Begins	Mon, Jun 19
Independence Day	Tue, Jul 04
Convocation	Fri, Aug 25
Quarter Ends	Sat, Aug 26
Medicine Ends	Fri, Sep 01

## NOTES

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