Introduction

Established in 1872, the Graduate School of Arts and Sciences currently grants degrees in 57 departments, divisions, and committees in the humanities, natural sciences, and social sciences. Individual programs determine the admissions standards and requirements appropriate to their respective fields.

This book outlines those requisites to obtaining a higher degree, along with the current research interests of faculty members. Some programs admit graduate students with the assumption that the master’s degree is conferred in the process of pursuing the doctorate. Please see the Graduate School of Arts and Sciences application and Guide to Admission and Financial Aid for those departments that offer admission for the terminal master’s degree.

The Harvard Integrated Life Sciences (HILS) is a federation of programs, departments, and subject areas that oversees all PhD education in the life sciences, and integrates twelve life sciences graduate programs and subject areas across four Harvard faculties: the Faculty of Arts and Sciences, the School of Dental Medicine, the Medical School, and the School of Public Health.

The School of Engineering and Applied Sciences (SEAS), a school within the Faculty of Arts and Sciences (FAS), offers doctoral and master’s degree programs that lie at the interfaces of engineering, the applied sciences (from biology to physics), and technology.

The Faculty of Arts and Sciences allows for the establishment of special ad hoc PhD programs when a student’s approved program extends beyond the academic discipline of a single department. Each ad hoc committee ordinarily consists of four faculty members, three of whom must be members of the Faculty of Arts and Sciences, representing at least two established departments. A student must have completed a full year of graduate study at Harvard and achieved an outstanding academic record in an established PhD degree program in order to apply to establish an ad hoc PhD program. Master’s degrees are not awarded in ad hoc subjects.

The Graduate School of Arts and Sciences Guide to Admission and Financial Aid contains information useful for all graduate school applicants. Please refer to that publication for information regarding general admissions and financial aid policies. Many departments also maintain web pages with additional information.

Should you have any questions, please write to us at admiss@fas.harvard.edu, or at:

The Graduate School of Arts and Sciences
Harvard University
Admissions Office
Holyoke Center 350
1350 Massachusetts Avenue
Cambridge, MA 02138-3654

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The Department of African and African American Studies offers graduate programs in the fields of African American studies and of African studies. Their aim is to offer rigorous interdisciplinary training in the humanities and the social sciences, with a focus in a disciplinary field, leading to the PhD.

The program admits four or five students a year into a five-to-six-year program. While there are no specific prerequisites, typically students either have undergraduate majors in African American studies or African studies, or have majors in fields such as anthropology, comparative literature, English, history, history of art, music, philosophy, sociology, and religious studies, and have done some undergraduate work in the field of African or African American studies.

African American Studies

The fundamental rationale for the African American Studies program is that there now exists a substantial body of scholarly writing on African American social, cultural, economic and political life and history, conducted by scholars with a primary training in a traditional discipline, who have drawn on the work of colleagues in other fields to enrich their work. This interdisciplinary corpus of scholarship is at the core of African American studies, and most serious work on African American literature, history, culture and social, economic or political life, proceeds with an awareness of this interdisciplinary background. There is, as a result, a fairly substantial tradition of writings and a lexicon of ideas that together define a core of knowledge in the field. Familiarity with this core at the graduate level is an important part of the training of those who work on these topics.

Along with this background, there is also a good deal of work on the concept of race, which is clearly central to the field, and that can no longer be said to be rooted in a single primary discipline. It draws on anthropology, sociology and intellectual history, the history of science and philosophy, literary and cultural studies, and political science.

These two corpora are substantial enough and of sufficient importance that training in them provides a significant component of the graduate education of a student who wishes to work in African American studies at the same time as acquiring the intellectual tools of a primary discipline.

Our conception of the “American” in “African American” is capacious, not least because a full history of the African presence in the United States cannot be properly constructed without attention to relations among communities in many parts of the New World. There are many other reasons why this is intellectually necessary: a proper understanding of the concept of race, for example, must be comparative (and thus cross-national); and we are bound to acknowledge the complex role of economic, religious, and intellectual linkages among communities of African descent within the Americas, as well as their connections with Africa and with Europe. These general points can be illustrated by various iconic examples: Marcus Garvey, the founder of the largest African American mass political movement in the first half of this century was a Jamaican; Alexander Crummell, who was born in New York, was shaped by his experiences as one of the founders of the University of Liberia; the decolonization of Africa and the presence of African diplomats in New York at the United Nations affected the politics of the Civil Rights movement.

It is this interdisciplinary, comparative, cross-national approach to African American subjects in the humanities and the social sciences that makes our PhD program unique. Students study these topics from a variety of disciplinary perspectives, participating in graduate seminars in anthropology, government, history, literature, and sociology, for example. Thus, they are able to ask and answer questions from a wider variety of perspectives than traditional disciplinary approaches allow. This interdisciplinary approach enables a student to produce richly contextualized analyses while retaining a principled focus within one discipline. The core seminars assure that students have familiarity with the essential social, political, economic and cultural background, and a body of established questions central to the field.

African Studies

African Studies has existed as a field at the university level for almost 50 years now, contributing rich insights and novel paradigms to the humanities and social sciences through its interdisciplinary approach and careful attention to history, culture and lived experience. Emerging at the time of Africa’s political independence, the field has matured at a period of monumental challenges in the continent’s quest for development in the face of marked resilience and creativity on the part of African peoples. In the past five decades, paradigms have shifted in the study of Africa in developmental economics, understandings of state and society, ethnicity and identity, religion and daily life, environment and constructions of environmental sustainability, health and the burden of disease. Since Harvard was the pioneer among American universities in the study of Africa at the beginning of the 20th century, there are strong intellectual and historical reasons for having a strong African Studies program here. The study of Africa is in fact already part of the literature and discourse across many disciplines in the Humanities and Social Sciences. Historians have long studied African history, ranging from pre-colonial studies drawing on both oral traditions and written sources to exploration of colonial and post-colonial periods. In the fields of literature, music, and art, African creativity is of interest in terms of their central roles in African societies as well as their diasporic circulation and influence on expressive culture worldwide. For anthropology, sociology, and political science, Africa has provided major subjects of research and study as well as a source of comparative data. In economics, law, political science, public health, and medicine, Africa has contributed striking new data that has realigned thinking in these fields as well as provided grist for comparative studies.

African Studies incorporates concerns with many of the central issues and problems of present-day scholarship. The history of the continent, in particular the impact of the colonial period on indigenous peoples and polities, demands close attention as it constructed borders and boundaries in relationships to indigenous ethnic, religious, or national identities. Many disciplines have begun to recognize the importance of indigenous African knowledge systems and practices to the global discourse in areas of natural resources, environment, healing practices, spirituality, and cultural creativity. Work in African Studies brings to the fore questions about well-worn categories such as tradition, modernization, westernization, and secularization.

The Harvard Graduate Program emphasizes both the local and global dimensions of African Studies, at once seeking to convey a broad understanding of African history and culture while addressing a wide array of peoples, languages, and societies past and present on the continent. The program also seeks to recognize important national and regional entities in Africa. The curriculum focuses on individuals and institutions important to Africa’s past and present as it explores the relationship of the continent to the wider world, including the historical African diaspora that emerged in the wake of the slave trade and the late 20th-century movement of African peoples after African independence.

The Harvard Graduate Program in African Studies is interdisciplinary and comparative. In particular, it seeks to look closely at the ongoing dialogue between Africa and the West, most especially the American diaspora, both as historically constituted and as newly formed by waves.
of immigration in the late 20th century. It seeks both to train scholars across the disciplines and to produce individuals who will in the future contribute to the discussion of social, cultural, and economic development and growth on the African continent. It seeks to incorporate individuals from the widest range of disciplines and experiences, and to engage them with the larger African Studies community at Harvard. Our curriculum conveys a broad understanding of African history and culture while addressing a wide array of peoples, languages, and societies past and present on the continent and in the African/black diaspora. In this respect, we seek to grasp the African and African American experience in a single, unifying perspective that endows this experience with its full historical significance. Thus, our conception of the African diaspora extends beyond the Atlantic paradigm that has dominated academic and intellectual discourse concerned with the black experience, in order to project a larger, more comprehensive view that embraces the Indian Ocean, the Pacific area (Peru, Colombia) and the Trans-Saharan-Mediterranean.

Requirements for the Degree

Advising

In their first year, students are advised by the director of graduate studies (DGS), who serves as their mentor until they choose an advisor, generally before the beginning of their second year. After consulting with the DGS, a student may change advisors. Students are encouraged to discuss their interests outside of the primary field with faculty from other departments. This process enables students to develop relationships with various faculty members from whom the student will ultimately select a dissertation committee.

Academic Residence

A minimum of two years of full-time study (fourteen half-courses or equivalent) is required.

Program of Study

Students must take a combination of fourteen courses of which eight must be courses in a primary field.

The distribution of courses in the first three years of study is as follows:

**First Year**

_African-American Studies 301/302_

This yearlong course is co-taught by the faculty of the program. It aims to introduce students to central topics and themes in African and African American studies and to major theories and debates. The first term focuses on issues in literature, philosophy, and culture, including: the concepts of race and ethnicity, slavery and the slave narrative, debates about African literature, the American literary canon, the African and the American in African American culture. The second term focuses on issues in the social sciences and public policy concerning African and African American peoples, including such topics as African languages, nationalism, colonialism and decolonization, varieties of religious experience, aspects of intellectual history, ethnic conflicts and governance, strategies of economic development, and public health (e.g., HIV/AIDS, sickle-cell anemia, malaria, and the politics of science practice) as well as race and class in America, the role of race in the political system, the study of racial attitudes, racial discrimination, affirmative action, criminal justice, and redistricting. There are two required final presentations to the faculty at the end of each term: one on a humanities topic, the other on a social science topic.

In addition, students must ordinarily take at least six other courses of which at least two must be in the Department of African and African American Studies and two in the primary field.

Save under exceptional circumstances, the Department of African and African American Studies does not give credit toward the PhD for courses from other universities and under no circumstances would the Department give credit for more than two courses.

**Second Year**

Students must ordinarily take at least six courses in their second year.

Students will ordinarily be required to take all of the following courses or their equivalents by the end of their second year:

- One graduate seminar in African or African American History
- One graduate seminar in African and African American Humanities
- One graduate social science methods course (other than History)
- At least one research seminar – Students who have not taken a research seminar by the end of the first term of their second year must enroll in a graduate course in which they produce a paper of publishable quality. This must be done no later than the second term of their second year. This can be done in a research seminar or in an independent tutorial through AAAS 391 (Directed Writing). Students will not be allowed to take their oral general examination unless they satisfactorily complete a research paper.
- By the end of the second year, the total number of courses taken in African and African American Studies and the primary field should be fourteen, including at least eight in the primary field. In particular, students should take all courses required for an AM in their primary field.

**Third Year**

Students must have completed all coursework and language requirements prior to their oral exams for their admission to candidacy.

By the end of the fall term of this year students must have completed the oral exam.

**Master of Arts (AM)**

The department does not admit candidates for a terminal AM degree, but students who have met all the course requirements for the degree may petition to be awarded an AM in African and African American Studies. (Students may also find that they can meet the requirements for the AM in their primary field. Students should consult with the DGS in their primary field if they wish to pursue this option.)

**Teaching**

- An important element of graduate education in the program is the experience of working as a teaching fellow in courses in African or African American Studies. The department also encourages students to seek teaching opportunities in their primary fields.
- The graduate committee must verify that a student has had sufficient preparation in teaching before voting the degree. Students ordinarily teach at least two courses in African and African American studies and one in their primary field during their third and fourth years.
- If designated as part of the student’s financial package, students are expected to teach in their third and fourth years at the rate of 2/5 per term. The department will assist the student in securing teaching positions. Priority for teaching fellow positions is given to students in their third and fourth years of graduate study.

**Other Requirements**

**Languages**

The student’s advisor will identify the language requirements appropriate for the student’s research in the primary field. In general, these requirements reflect the language requirements of the graduate program in their primary field. However, the DGS and the student’s primary advisor may propose modifications of these requirements if, in their judgment, a different language is more suitable. The student’s orals committee is responsible for determining whether the student has met an appropriate language require-
ment before proposing a candidate to the graduate committee for admission to the doctorate. Students in African Studies are required, in addition to a major European language, to take at least one African language to the level at which they reach proficiency.

**Grade Requirements**

Students must maintain a grade average of B+ or better in each year of graduate work. At no time may a student register for a term if he or she has more than one Incomplete. Where the primary field requires either that all courses be passed at or above a certain grade or that the student’s average grade be higher than B+, the student will be required to meet that requirement for courses in the primary field.

No more than one Incomplete may be carried forward at any time by a graduate student in African and African American Studies. It must be made up no later than six weeks after the start of the next term. In applying for an Incomplete, students must have signed permission from the instructor and the director of graduate studies, or the course in question may not count toward the program requirements. If students do not complete work by the deadline, the course will not count toward the program requirements, unless there are documented extenuating circumstances.

**Admission to Candidacy**

**Oral Examination**

Once students have completed their coursework, they begin to prepare for their oral exam in their primary field. For this purpose they require a committee, consisting of their major advisor and at least two others, at least one of whom should be a member of the discipline of the primary field. The student’s oral committee meets with the student once or twice a month, and a set of topics on which the student will be tested in the first term of the third year. Once the student has passed the oral exam, he or she prepares a written prospectus.

**The Dissertation Prospectus**

Ordinarily the oral committee then becomes the dissertation committee, but students may reform their committee at this stage. Students have flexibility in picking their major advisor at the stage that the dissertation committee is formed, since this is the right moment to identify the member of the faculty whose work is closest to theirs. The dissertation committee is responsible for approving the prospectus, and this should ordinarily be completed and accepted by the middle of their fourth year at the latest. The composition of the student’s orals and dissertation committees is subject to the approval of the graduate committee in African and African American Studies, though students are given great flexibility in choosing their advisors.

**Prospectus**

The prospectus is due by the end of the first term of the fourth year of residence at the latest. The student must discuss the prospectus with each member of the dissertation committee and then have a final oral exam on that prospectus. If the committee accepts the prospectus at the exam, the student is admitted to candidacy and begins research for the dissertation.

**NOTE:** Many departments and independent groups organize dissertation colloquia for students in their fourth, fifth, and sixth years, at which they may present and discuss their research.

**Dissertation Review**

During the period that a student is working on the dissertation, the student will have a primary advisor and a dissertation committee. Each term the student will consult with and report to the dissertation committee, which will in turn report to the committee on graduate studies as to the progress toward completion of the dissertation. While the student’s principal advisor will ordinarily become the primary advisor and the prospectus committee will ordinarily become the dissertation committee, a student, in consultation with the DGS, may choose other faculty members. The dissertation committee must consist of a primary advisor and at least two others, at least one of whom must be a member of the discipline of the primary field. The primary advisor is the chair of the dissertation committee and must be a member of the Faculty of Arts and Sciences. In addition, at least one other member of the dissertation committee must be a member of the Faculty of Arts and Sciences.

Upon approval of the dissertation by the dissertation committee, the department, student, and the dissertation committee will agree upon a date for the dissertation defense. Completion of the dissertation is ordinarily expected by the end of the sixth year.

The dissertation defense is an oral examination at which the dissertation committee leads in questioning the candidate on his or her work and which is open to any member of the university. Upon completion of the oral examination, the members of the graduate committee will consult with the dissertation committee and vote as to whether the candidate should be recommended for the PhD degree in African and African American Studies and whether the candidate passed with distinction.

**Satisfactory Progress**

The faculty monitors each student’s progress yearly. During the period between admission to candidacy and submission of the dissertation, the dissertation committee is asked whether the candidate is making satisfactory progress and has to certify in writing when the candidate has completed two draft chapters.

**Summary of Requirements**

- Fourteen courses, at least eight in the primary field
- African and African American Studies 301, 302, one graduate seminar in African or African American History, one graduate seminar in African or African American Humanities, and one graduate social science methods course (other than History) (or equivalent courses with approval of the DGS)
- All courses required for an AM in the primary field
- Completion of one research paper of publishable quality (may be completed through AAAS 391)
- Language requirements as specified
- B+ average at the end of each year (and any other requirements of the primary field)
- No more than one Incomplete outstanding at any given time
- Oral exam for admission to candidacy
- Teaching experience
- Prospectus exam
- Dissertation completion
- Dissertation defense

**Faculty in the Program**

**Lawrence D. Bobo,** W.E.B. Du Bois Professor of the Social Sciences (Chair)

**Emmanuel K. Akyeampong,** Professor of History and of African and African American Studies (on leave 2013–14)

**Ali S. Asani,** Professor of Indo-Muslim and Islamic Religion and Cultures (on leave full term)

**Robert H. Bates,** Eaton Professor of the Science of Government and Professor of African and African American Studies

**Robin M. Bernstein,** Associate Professor of African and African American Studies and of Studies of Women, Gender, and Sexuality

**Homi K. Bhabha,** Anne F. Rothenberg Professor of the Humanities
Suzanne P. Blier, Allen Whitehill Clowes Professor of Fine Arts and Professor of African and African American Studies (on leave 2013–14)

Vincent Brown, Charles Warren Professor of American History and Professor of African and African American Studies

Glenda R. Carpio, Professor of English and of African and African American Studies

Jean Comaroff, Professor of African and African American Studies and of Anthropology

John Comaroff, Professor of African and African American Studies and of Anthropology

Boubacar Diakite, Preceptor in African and African American Studies

Caroline Elkins, Professor of History

Marla F. Frederick, Professor of African and African American Studies and of Religion

Henry Louis Gates Jr., Alphonse Fletcher Jr. University Professor

Claudine Gay, Professor of Government and of African and African American Studies (on leave 2013–14)

Evelyn Brooks Higginbotham, Victor S. Thomas Professor of History and of African and African American Studies (on leave 2013–14)

Jennifer L. Hochschild, Henry LaBarre Jayne Professor of Government and Professor of African and African American Studies, Harvard College Professor (on leave 2013–14)

Kellie C. Jackson, College Fellow on African and African American Studies

Biodun Jeyifo, Professor of African and African American Studies and of Comparative Literature (on leave spring term)

Walter Johnson, Winthrop Professor of History and Professor of African and African American Studies

Michael R. Kremer, Gates Professor of Developing Societies (on leave 2013–14)

Michèle Lamont, Robert I. Goldman Professor of European Studies and Professor of Sociology and of African and African American Studies

Joanna Lipper, Lecturer on African and African American Studies

Carla Denny Martin, College Fellow on African and African American Studies

Ingrid Monson, Quincy Jones Professor of African-American Music, Supported by the Time Warner Endowment

Marcyliena Morgan, Professor of African and African American Studies

John M. Mugane, Professor of the Practice of African Languages and Cultures and Director of the African Language Program

Jacob Olupona, Professor of African and African American Studies and Professor of African Religious Traditions (Director of Graduate Studies)

Laurence A. Ralph, Assistant Professor of African and African American Studies and Anthropology

Tommie Shelby, Professor of African and African American Studies and of Philosophy (on leave 2013–14)

Kay Kaufman Shelemay, G. Gordon Watts Professor of Music and Professor of African and African American Studies

James Sidanius, Professor of Psychology and of African and African American Studies

Werner Sollors, Henry B. and Anne M. Cabot Professor of English Literature and Professor of African and African American Studies

Doris Sommer, Ira Jewell Williams, Jr. Professor of Romance Languages and Literatures and of African and African American Studies (on leave spring term)

John Stauffer, Professor of English and of African and African American Studies

David Williams, Florence Sprague Norman and Laura Smart Norman Professor of Public Health in the School of Public Health and Professor of African and African American Studies in the Faculty of Arts and Sciences

William Julius Wilson, Lewis F. and Linda L. Geyser University Professor

Other Faculty Offering Instruction in African and African American Studies

Aisha Mahina Beliso-De Jesus, Assistant Professor of African American Religions (Divinity School)

Orlando Patterson, John Cowles Professor of Sociology (on leave fall term)

Mark R. Warren, Associate Professor of Education (Education School)

Further information regarding study in the program may be obtained by contacting:

Kathleen Cloutier
Department of African and African American Studies
Graduate and Undergraduate Program Officer
Cambridge, Massachusetts 02138
Telephone: (617) 384-7767
e-mail: cloutier@fas.harvard.edu

Applications for admission and financial aid may be obtained online through the Harvard Graduate School of Arts and Sciences. See www.gsas.harvard.edu.
PhD in American Studies

Harvard’s doctoral program in American Studies emphasizes interdisciplinary study within a broad historical framework. Students have the opportunity to study with faculty from many departments in the University while completing core requirements that emphasize classic works in American studies as well as emerging themes and methods. The program is governed by a faculty committee drawn from the Departments of African and African American Studies, English and American Literature and Language, Government, History, History of Art and Architecture, Music, and Sociology. The committee also includes professors from the Graduate Schools of Divinity, Education, Government, and Law.

Requirements for the Degree

Academic Residence
A minimum of two years of full-time study (16 half-courses or equivalent). Normally a student is not permitted to engage in part-time study prior to the General Examination.

For the financial residence requirement, see the GSAS Guide to Admissions and Financial Aid.

Program of Study
The interdepartmental nature and purposes of the program require that students cut across departments in selecting courses. However, to ensure a coherent program of study, they should plan their schedules in consultation with the program chair.

All students are required to enroll in the Colloquium in American Studies during the fall term of their first and second years. Among their courses students should include two courses in a coherent field from outside the United States (e.g., English literature; Latin American history; comparative gender).

In the course of their residence, all students will take two seminars. These seminars should be taken from among the offerings of two different departments. Normally the student will take one seminar in each term of the first year of residence.

The remainder of the student’s program (lecture courses, reading courses, and, with the approval of the chair, TIME) will consist of work in fields appropriate to the student’s general examination. (See under Examinations.) Reading courses and TIME are ordinarily not part of a student’s program until the second term of the second year. If such courses are taken earlier, 11 half-courses (lectures, conference courses, and seminars) must be completed by the end of the fourth term. All coursework and language requirements must be met before taking the oral exam. All programs must be approved by the chair.

Languages
Candidates for the degree must have a reading knowledge of two of the following languages: French, German, Spanish. Other languages relevant to the student’s program may be substituted with the permission of the Chair. No student may take the General Examination until the language requirements have been met.

The student must fulfill language requirements by passing two examinations given by the History Department or the English Department; and in case of a substitution, by passing an equivalent examination in a language department. Fellowships for developing language fluency are available for the summer between the first and the second year. Students are also encouraged to enroll in at least one course for credit in which advanced work with texts in other languages is undertaken.

One language examination must be passed in the course of the student’s first year of residence. Students who fail to do so may be denied continuation in the program.

Students who have one language requirement unfulfilled at the beginning of their second year of residence must pass a history or English department language examination in September of their second year. If they do not pass the language examination, they must enroll in an approved language course and pass a history or English department language exam in January.

Grade Requirements
Students must maintain a grade average of B+ or better in each year of graduate work. Each student must do work at the A or A- level in at least one seminar.

Examinations
Students must pass a two-hour oral examination conducted by four members of the faculty no later than the end of September in their third year. One hour of that exam will be devoted to the student’s major field, and one half-hour each to two minor fields.

The major field must cover the full chronological sweep in a single discipline such as history, literature, law, or musicology. Normally, there will be two examiners in the major field. They may divide the field chronologically or thematically as long as there is full coverage of themes central to teaching and scholarship in the discipline.

Minor fields should be chosen from two areas of study distinct from the major field. A minor field may be defined chronologically or thematically as long as it covers a significant range of material, minimally a century. For example, a student whose major field is American literature and whose primary area of interest is 19th-century fiction, might prepare one minor field in 19th-century US history and another in 19th-century music. Or, a student whose major field is US history, and who plans to write a dissertation on race relations in the 1930s, might prepare a minor field in American protest literature over time and another in African American studies.

Field preparation should be seen as laying a broad foundation for future teaching and scholarship rather than as specific preparation for writing a dissertation. Although the program will supply guidelines, students should work closely with individual faculty in selecting courses appropriate to their fields and in designing reading lists for oral exams. In the semester before taking exams, they should submit their reading lists to the committee for approval.

If a student fails the oral examination, and the examining committee agrees that the student may retake it, the committee will set a date (not earlier than six months after the date of the first examination) by which the second examination must be taken.

Dissertation
After the general examination has been passed, the student will select a dissertation topic and arrange for dissertation advisors. The choice of a topic and advisors must be submitted to the committee for approval. Students must also submit a draft of the dissertation prospectus to their primary advisor no later than April 1 in their third year. The dissertation should be characterized by a familiarity with the historical treatment of two or more fields in the program. Before the end of May of their third year the student will present at a conference at which a discussion of the prospectus will take place before faculty and students in the program. Upon completion of a substantial chapter, and upon recommendation of the advisors, students defend the finished part of the work as well as an outline for the completion of the dissertation in front of an audience consisting of faculty and students in the program as well as a broader academic public.

Any candidate for the degree who has not submitted a completed dissertation within five years after passing the general examination will be withdrawn unless, prior to the deadline, the candidate presents evidence that the dissertation
can be finished within a specified extension and receives an extension from the committee.

The final dissertation manuscript should conform to the requirements described in The Form of the PhD Dissertation found online.

Dissertation Review

Students entering the program will be required to have a formal dissertation review.

The review committee will consist of the student’s dissertation committee plus one additional member drawn from the American Studies program, a Harvard department, or from outside the university.

Before setting up the dissertation review, the student should have completed the dissertation.

With the approval of the dissertation director, the student will ask the chair or administrator of American Studies to schedule the dissertation review, which will normally occur not later than April 1 for a May degree, not later than September 1 for a November degree, and not later than December 15 for a March degree. The review itself will last 90 minutes.

Once the dissertation has been successfully defended, members of the dissertation committee will sign the dissertation acceptance certificate.

The dissertation director will then write a report, ranging from a paragraph to a few pages, which summarizes the strengths of the dissertation and suggests revisions for publishing it as a book (or series of essays).

Upon successful defense of the dissertation, the student must submit the dissertation according to the FAS Registrar’s procedures, and arrange for one bound copy to be sent to the American Studies Program office.

This requirement is for all students in the program filing for the PhD degree after May 2009.

A student may petition to have the dissertation review waived for reasons of hardship.

Recent PhD Dissertation Titles


Further information regarding study in the History of American Studies program may be obtained by contacting:

Arthur Patton-Hock
Administrative Director of the American Civilization Program
12 Quincy Street
Cambridge, MA 02138
Telephone: (617) 495-3325
email: apattonh@fas.harvard.edu
www.fas.harvard.edu/~amciv/

Applications for admission and financial aid may be obtained from the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, Massachusetts 02138. We encourage online submission of the application. See www.gsas.harvard.edu.

Members of the Committee on Higher Degrees in the History of American Studies

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Lepore, Jill, David Woods Kemper ’41 Professor of American History
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Menand, Louis, Anne T. and Robert M. Bass Professor of English
New, Elisa, Powell M. Cabot Professor of American Literature
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Roberts, Jennifer L., Professor of History of Art and Architecture

Shell, Marc, Irving Babbitt Professor of Comparative Literature and Professor of English

Sollors, Werner, Henry B. and Anne M. Cabot Professor of English Literature and Professor of African and African American Studies

Sommer, Doris, Ira Jewell Williams Jr. Professor of Romance Languages and Literatures

Stauffer, John, Professor of English and Professor of African and African American Studies (Chair)

Thatcher Ulrich, Laurel, 300th Anniversary University Professor
Higher Degrees in Anthropology

Harvard University’s Department of Anthropology is a dynamic, expanding program of teaching and research with a clear focus on in-depth and comparative studies of societies and cultures around the world, past and present. With social anthropological research focusing on transformative social changes realized in the present day through such processes as transculturalism and globalization, and with archaeological research examining transformational processes from the rise and spread of humans to the emergence of complex societies around the world, the department offers graduate students the resources, training and guidance required to pursue successful careers in a variety of fields of academic and non-academic endeavors. The character of the department, as it looks to the future, is also grounded in a unique and venerable history: the department was founded in 1886 in response to the desire for instruction in the then new fields of archaeology, ethnology, and physical anthropology to complement what were at the time—and remain today—the virtually unparalleled collections of the Peabody Museum of Archaeology and Ethnology. Equally important as a resource base to the department is the Alfred M. Tozzer Library, which holds more than 250,000 volumes in all fields of anthropological research and study. The department offers coursework and guidance leading to the PhD in two principal fields of specialization: Archaeology and Social Anthropology. Prospective candidates should consult the department website: http://www.fas.harvard.edu/~anthro/.

In addition to its graduate programs in archaeology and social anthropology, Harvard offers facilities and intellectual opportunities for anthropology graduate students that are difficult to match elsewhere; these include: Widener Library, the Museum of Comparative Zoology, the Bauer Center for Genomics Research, the Concord Field Station, the Fogg Art Museum, a wide range of computing facilities and resources, and, above all, the distinguished departments in the other social sciences, humanities, and natural sciences throughout the university, including Harvard’s many institutes and centers dedicated to research on specific regions of the world (e.g., the Asia Center, the David Rockefeller Center for Latin American Studies, or the Weatherhead Center for International Affairs). Members of the Department of Anthropology often coordinate their research with other faculties in the University and encourage graduate students to tailor their programs of research and study with faculties and facilities around the University. Additional research opportunities at Massachusetts Institute of Technology, Boston University, Brandeis University, and other educational institutions in the Boston area are available to faculty and students in the department.

Fieldwork or lab work, essential components of graduate training in the department, are available to students in both individual and Harvard-sponsored projects. Another opportunity offered to graduate students, after their second year of study, is to assist faculty members in the preparation and teaching of undergraduate courses in Harvard College. Each year, prominent scholars from around the world participate in the department’s seminar series in archaeology and social anthropology. The seminar series are designed to give faculty and graduate students the opportunity to learn about current research and critical issues in their respective fields, as well as to engage in debates about future directions in the discipline.

Master of Arts (AM)

With the exception of the master’s degree in medical anthropology (see below), a terminal master’s degree is not offered in anthropology. Since one of the principal objectives of advanced training in anthropology is preparation for college teaching, for which the doctoral degree is generally required, the master’s degree in anthropology is not taken as an end in itself. A master’s degree may be awarded at some point during the student’s progress toward the doctorate, if the student qualifies and so desires; or, in some cases, as a terminal degree for students unable or unwilling to continue toward the doctorate. At least one year of residence at the full tuition rate is required for each Harvard degree; students who take a Harvard AM must, if they continue for the PhD, complete an additional year of residence in the Harvard Graduate School at the full tuition rate.

Doctor of Philosophy (PhD)

Prerequisites for Admission

A bachelor’s degree, ordinarily with distinction. Previous concentration in anthropology is not required, but some substantive engagement with anthropology is generally expected of applicants. All applicants are required to take the aptitude tests of the Graduate Record Examinations. In addition to academic qualifications, admission decisions are based on the best possible fit between a student’s prospective research area and the current areas of research and teaching of department faculty.

Academic Residence

of six years in residence the norm for PhD candidates, after which students will receive lowest priority for access to departmental aid, teaching fellowships, and the use of facilities. For financial residence requirements, see the Graduate School of Arts and Sciences (GSAS) Guide to Admissions and Financial Aid.

Financial Aid

Students admitted to the PhD program receive five years of funding. This guarantee by the GSAS includes tuition and fees, plus ten months of stipend support in the G-1 and G-2 years; four semesters of support from guaranteed teaching fellowships in the G-3 and G-4 years and a final year of support for dissertation completion. Students will ideally obtain support from outside funding agencies for a year’s fieldwork for their dissertation research. This fieldwork will normally occur in the fifth year of the student’s program of study.

Two-month summer research awards are available for the summers following the first through the fourth years. Awards are reviewed annually and are contingent upon students making satisfactory progress in their program of study.

Prospective graduate students are urged to apply for outside fellowships that offer tuition and stipend support during graduate school. These include the National Science Foundation Graduate Research Fellowships, Ford Foundation Diversity Fellowships, and the US Department of Education’s Jacob K. Javits Fellowships. Application deadlines for these fellowships are in the fall, well before Harvard’s admissions deadline. Eligible applicants are encouraged to investigate these funding opportunities early in the application season.

Anthropology students are eligible for Harvard grants, including summer and term-time research awards, traveling fellowships, and dissertation completion awards. Many students also receive support for dissertation research from outside agencies, such as the Social Science Research Council, the National Science Foundation, the Wenner-Gren Foundation for Anthropological Research, Foreign Language and Area Studies fellowships, and scholarships offered by other departments or research centers in the University, including the area studies centers and institutes that focus on particular cultural regions or on specific topical concerns (e.g., the Harvard Center for the Environment).
Programs of Study

Archaeology and Social Anthropology have their own programs of study and examination procedures. Prospective students normally apply, through the GSAS, to one or the other of these programs, although in exceptional cases students may be accepted on a joint basis between the two programs (see below). A student may change his or her area of interest after admission to the program, contingent upon the continued willingness and availability of a faculty member to supervise the student’s research.

Admission

The application process, which proceeds through the office of the GSAS, is now completely online. The application for admission may be obtained and submitted at http://www.gsas.harvard.edu/prospective_students/admissions_overview.php.

Archaeology

The principal objectives of the graduate program in archaeology are to provide 1) informed, critical examinations of core issues in archaeology, 2) comprehensive training in principal methods and theories of anthropologically oriented archaeology, and 3) direction and support for PhD candidates preparing for research and teaching positions in a wide variety of domains of archaeological practice. While students who wish to pursue PhD training in any area of expertise are invited to apply to the program, there are several areas of particular strength in terms of faculty interests, departmental facilities, and institutional resources. Principal strengths in archaeology at Harvard include: a) the archaeology of complex societies,  b) the archaeology of ethnicities and languages, c) archaeology, art and religion, d) the archaeology of human evolution, e) landscape archaeology,  f) the archaeology of colonialism, and g) environmental archaeology/bioarchaeology. Students are strongly encouraged to select one of these areas of specialization in focusing their work, although the specific program of study pursued by each student will be developed in close consultation with his/her principal advisor and advisory committee.

In addition to a primary area of specialization, all students are expected to acquire a basic understanding of the archaeology of complex societies in both the Old and New Worlds as well as general knowledge of those aspects of ethnography, ethnology, and biological anthropology that have particular relevance to his/her area(s) of interest in archaeology. The expectation is that the student will be able to complete the program in six years.

Each student will have a faculty advisor, whose research interests will be close to those of the student. For the first three or four semesters, the student’s progress will be overseen by an Advisory Committee, normally consisting of the advisor(s), and two other archaeology faculty members. The student will meet with his/her advisory committee at least once during each of the first two years of residence, generally before or during the first week of classes, in the fall term. The purpose of these meetings is to review proposed plans of study, completion of the language and other requirements, and overall progress in the program. The progress of each student will be assessed annually by the archaeology faculty, and this appraisal will be communicated to the candidate. Students are expected to maintain an overall B+ average in coursework. Incomplete (INC) grades are strongly discouraged. Any INC should be made up by the end of the term following the term in which the INC was taken. No grade of INC can fulfill any departmental requirement. A transcript with an outstanding INC is likely to jeopardize a student’s chances of obtaining teaching fellowships and financial awards.

After the successful completion of the general exam and generally no later than the end of the fourth semester, an examining and dissertation committee will be chosen by the student and the major advisor(s) on the basis of the student’s domain(s) of specialization.

Course Requirements

During the first two years of graduate study, the student will normally enroll in 16 half courses (four each term). Within this program of study, the following requirements must be fulfilled:

a) Anthropology 2250a and 2250b: Proseminar in Archaeology (2 half courses)
b) Anthropology 2070a, Archaeological Method and Theory
c) Twelve half-courses in archaeology or other fields chosen in consultation with the advisor and advisory committee.

In the latter category, serious consideration should be given to taking courses outside the Department of Anthropology in fields related to the student’s domain(s) of interest (e.g., Earth and Planetary Sciences, Biology, Near Eastern Studies, Classical Archaeology, History, Chemistry, Modern or Ancient Languages, etc.). In addition, research time (Time R) can be utilized with advisor and advisory committee approval as part of the 16 half-course requirement.

In addition, and as part of the 16 half-course requirement, the following seminar must be taken prior to the prospectus defense:

Courses taken to fulfill requirements (a–d) must be passed with a grade of B+ or better. In addition, students may continue to take classes into their third or fourth year should these be relevant to fulfilling requirements (e.g., languages, see below) or to their domain(s) of study. Students are expected to obtain competence in quantitative methods or computer applications (e.g., GIS) as they relate to the practice of archaeology.

Languages

Proficiency in one modern, scholarly language other than English is required. In addition, the candidate must attain proficiency in a second scholarly language or in a field language or in a laboratory skill. The election of one among these options shall be made following consultation by the student with his/her advisor. Proficiency in language(s) and/or laboratory skill must be demonstrated before the defense of the dissertation prospectus.

Fieldwork

Although no specified period of fieldwork or field training is required, it is expected that each student’s program of study will include adequate experience in field methods through the student’s participation in archaeological field projects. This fieldwork is frequently related to gathering data for the dissertation.

Advisory Meeting

In addition to primary advisor(s), students will also have an advisory committee consisting of three archaeology faculty members including the primary advisor(s) for the first three to four semesters of the student’s academic career. Students shall meet with their advisory committees at least once during each of the first two years of residence, generally before or during the first week of classes in the fall term. The purpose of these meetings is to review proposed plans of study, completion of the language and other requirements, and overall progress in the program. The Advisory Committee normally will comprise the student’s advisor(s) and two additional faculty members.

General Examination

Near the end of the third term of graduate study there will be general examinations. These examinations will consist of written and oral components pertaining to important issues in world archaeology. The purpose of the general examinations is to assess the progress of students and determine general knowledge of current archaeological issues. Students deemed weak in specific areas or topics may be required to retake the examination and/or to take designated courses.
Dissertation Prospectus and the Prospectus Examination

A dissertation topic will be developed in consultations among the student, the principal advisor, and other appropriate scholars. The dissertation prospectus consists of a proposal that describes the research on which the dissertation will be based. It should include a statement of the problem(s) and topic(s) to be addressed and should relate how the student intends to address them. The prospectus normally should be no longer than 20 double-spaced typewritten pages of text and include relevant visual and bibliographic materials as well as details on possible funding sources. With the approval of the student’s advisor, the prospectus may be produced in the form of a proposal to the National Science Foundation for a dissertation improvement grant.

The student is required to have developed and submitted the prospectus to each member of a prospectus examining committee at least two weeks before the prospectus examination. The examining committee shall consist of at least the student’s advisor(s) and at least two other faculty members, one of whom must be an archaeology program member, although any other faculty member who wishes may participate in the examination. The chair of the examining committee must be a member of the archaeology program and is ordinarily (one of) the student’s advisor(s).

Following the prospectus examination, the final version of the prospectus should be circulated for comment and approval to the prospectus examination committee (or to the dissertation committee, should said committee have been constituted by that time) at least two weeks before being placed on file with the department’s graduate program administrator. The special examination shall take the form of a defense before the student’s advisory committee of the dissertation prospectus.

Students ordinarily may not apply for outside funding for dissertation field research until they have successfully defended their prospectus, in the Special examination. Any application to a funding source outside of Harvard University for either fieldwork or other research funding for dissertation research must be approved by the student’s advisor(s), and it is expected that students shall submit all research proposals to their advisor(s) before submitting them.

The Dissertation Committee and the Dissertation Defense

The dissertation committee shall be composed of at least three members, two of whom must be archaeology program faculty members. The chair of the committee must be a member of the archaeology program faculty. Normally, the prospectus examination committee and the dissertation committee will be composed of the same individuals, although it may be appropriate that substitutions or additions be made. A complete draft of the dissertation must be received by all members of the dissertation committee at least two months before the approved dissertation is due at the Registrar’s office and must be approved by that committee at least one month before the Registrar’s due date. A draft of the dissertation must be made available to other members of the Department at least two weeks before the public defense. The text of the dissertation, exclusive of charts, figures, and appendices, ordinarily may not exceed 250 typewritten pages.

The dissertation ordinarily must be 1) assessed by the dissertation committee at least two months before the dissertation is due at the Registrar’s office; 2) formally defended in a closed meeting with the dissertation committee and other interested faculty members approximately one month before the Registrar’s due date, and 3) presented orally to a general audience, including other faculty members soon after a successful private defense. After successful completion of the above assessments and after the incorporation of any required revisions, signatures of the committee members must be obtained on the dissertation acceptance certificate, which is submitted with the bound dissertation to the Registrar’s office. The final manuscript of the dissertation must conform to the requirements described in The Form of the PhD Dissertation, available from the Registrar’s Office and online.

A complete draft of the dissertation is expected to be submitted by the end of the sixth year of graduate study, and ordinarily the dissertation must be approved by the end of the eighth year of graduate study or the student will be required to withdraw.

Social Anthropology

Advisors

Upon admission to the PhD program in social anthropology, each student is assigned an advisor, based on a preliminary assessment of mutual interests. After the first year, the student may select a permanent advisor, either the person to whom they were assigned when they entered, or another faculty member whose interests more closely match those of the student. Normally, in preparation for the General Exams (discussed below) students will put together an advising committee consisting of three faculty members (which may include one faculty member from outside the department).

Students should schedule meetings with their advisor(s) at least once a term—more often is very strongly encouraged—to discuss their progress and to work out a plan of study. Students should also keep their advisors informed about their progress while in the field.

Coursework

The course of study in social anthropology at the PhD level requires a minimum of 16 half-courses (not including TIME), at least 12 of which must be in the anthropology department.

Required Courses:

First Year

a) Proseminar (two half-courses)
   ANTH 2650a and 2650b

Any Year

b) Area-Specific Ethnography (one half-course)

All candidates are required to take one area-specific half-course devoted to the ethnography of the region in which they plan to do research. See Area Studies Research, below.

c) Related Courses (two half-courses)

The department recommends that PhD candidates take at least one half-course in Archaeology. These courses should be selected in consultation with the student’s advisor. A student who has already done extensive work in these fields may petition to be excused from this requirement, as may a student whose advisor deems other courses more appropriate to his or her research interests.

Language

As a rule, students should demonstrate competence in two languages, other than their first language, one of them a language in which fieldwork will be conducted, and the other a language with an extensive scholarly literature relevant to the student’s research. In some cases, the fieldwork language and the scholarly language may be the same. Determination of appropriate standards of competence is determined by the advisor in consultation with other faculty, including language faculty.

General Examination

The General Examination in social anthropology is designed as a process that builds from the first year (G1) of graduate studies through the third year (G3). The stages of this process, with the required courses and activities relevant to each stage, are outlined below.

Year 1 (G1): Foundations of Theory and Ethnography in Social Anthropology
1. **General Theory Requirement**: This will be satisfied by the submission of satisfactory final papers for the fall and spring semesters of the Proseminar sequence (2650a and 2650b). To be completed by the end of Semester 2.

2. **First Year Progress Review**: At the end of the spring semester, the progress of each G1 will be reviewed by the Social Anthropology Program faculty, in consultation with the Proseminar (ANTH 2650a,b) course heads, the student’s primary advisor, the DGS and the Graduate Program Administrator. Review to be completed by the end of Semester 2.

Year 2 (G2): Focusing in on the Dissertation Research Area, Topic, and Themes

1. **Formation of Generals Committee**: Following a successful first year progress review, each student should form a general examination committee composed of three faculty members and chaired by the primary advisor. The formation of the committee should be completed by the beginning of Semester 3.

2. **Individualized General Examinations**:
   a. **Reading Lists**: In consultation with his or her generals committee, the student will develop two reading lists that pertain directly to his or her research interests. The two lists will ordinarily include one regionally focused list and one primarily thematically focused list.
   b. **Field Statements**: Between the end of the fall (3rd) semester and the beginning of the fall (5th) semester, each student should have submitted to his or her committee two essays or field statements (each a maximum 15 pages) based on a close and selective engagement with key works on the previously submitted reading lists, in consultation with the advisor and/or committee members. These two essays jointly constitute an important step in the students’ process of defining the doctoral dissertation research topic.
   c. **Dissertation Project Statement**: By the end of the spring (4th) semester or at latest the beginning of the fall (5th) semester, each student should have composed and submitted a preliminary research proposal (maximum 15 pages) to his or her generals committee.
   d. **Oral Examination**: Upon agreement from all members of the student’s Generals Committee, an oral examination will be scheduled. While the oral examination will ordinarily focus on the Dissertation Project Statement and the two Field Statements, the student’s previous work may also fall within the scope of the examination, at the committee’s discretion. The oral exam will typically be held by the end of the 4th semester or the beginning of the fall (5th) semester. The dissertation project statement and the two field statements are critical preliminary steps toward the writing of grant proposals and the prospectus, which will normally be completed before the end of the spring of year 3 (semester 6).

**Dissertation Prospectus and Conference**

All candidates must, in consultation with their advisors, select a dissertation topic and describe their proposed doctoral research in a prospectus. The prospectus should: 1) give a concise statement of the problem to be addressed in the dissertation or of the hypothesis it proposes to test, 2) demonstrate a thorough scholarly knowledge and understanding of the area, 3) provide a clear research design, and 4) address the project with appropriate research methods. The dissertation prospectus should be presented no later than the end of the third year. The prospectus should normally be no more than 25–30 double-spaced pages in length, exclusive of bibliography and any figures. The candidate will discuss and defend the prospectus before his or her dissertation committee. The prospectus defense will normally take place no later than the semester prior to the beginning of dissertation fieldwork. Completion of the Human Subjects compliance forms and approval of them by Harvard’s Institutional Review Board must be completed before dissertation fieldwork can begin (see the IRB website at http://www.fas.harvard.edu/∼research/hum_sub/index.html).

**Dissertation and Defense**

A dissertation committee, formed by the student and approved by the social anthropology faculty, will review the dissertation and decide when it is ready for defense. The doctorate will be awarded when the candidate passes a defense. The final copy of the dissertation should be in committee members’ hands one month before the scheduled defense. The final manuscript of the dissertation must conform to the requirements described in *The Form of the PhD Dissertation*, available from the GSAS office. Dissertations are now submitted online.

**Satisfactory Progress to Degree**

A degree candidate’s program will be reviewed annually by all members of the social anthropology faculty. An overall B+ average is expected. First-year students must attain at least a B+ in each of the first-year required courses. All course requirements must be fulfilled and the general exam passed before the dissertation prospectus may be submitted.

First year graduate students are not permitted to receive a grade of incomplete in any of their coursework.

Students may not proceed to their dissertation research until the dissertation prospectus has been approved. Normally, a complete draft of the dissertation must be submitted within five years after entering the program (exclusive of the time required to complete the dissertation fieldwork). Students entering their seventh year (exclusive of the time required to complete the dissertation fieldwork) must submit a letter to the department requesting an extension of this time limit.

All students must be able to demonstrate that they are making satisfactory progress toward the completion of their degree. Failure to meet these deadlines normally will be grounds for dropping the student from candidacy. A student can be reinstated only by formal readmission to the Graduate School of Arts and Sciences and to the department; the student may also be required to retake the General Examination.

**The Joint PhD in Archaeology and Social Anthropology**

In exceptional circumstances, the Department of Anthropology may admit students who have a strong interest in pursuing graduate studies combining archaeology and social anthropology. The policies and requirements governing these joint degrees are outlined below.

Upon entrance into the program, candidates will be assigned co-advisors, one in archaeology and one in social anthropology.

**Course requirements:**

- 16 courses are required for the joint program:
  - 12 courses must be taken within the department of Anthropology. The remaining 4 courses will be selected by the candidate in consultation with his/her co-advisors

**Required courses:**

- Proseminars in Social Anthropology – A-2650A & B
- in Archaeology: either A-2250A or A-2250B (to be selected in consultation with the co-advisors) and A-2070A (Method & Theory)

**Formation of the Generals Committee**:

Following a successful first year progress review, each student should form a general examination committee composed of three faculty members and to be chaired by the co-advisors. The formation of the committee should be completed by the beginning of Semester 3.
General Examination:
Candidates will take the General examination following the procedures and the schedule described above for the Social Anthropology program. The selection of the topics for the two required research papers should be made in consultation with the student’s co-advisors. The oral defense will be directed by the candidate’s co-chairs and the Generals committee.

Upon successful completion of the Generals Examination, the candidate shall form a prospectus committee, which will normally consist of at least one faculty member in Archaeology and one in Social Anthropology both of whom are members of the Department of Anthropology and one additional faculty member chosen from the department.

The Prospectus and Its Defense and the PhD Dissertation and Its Defense
The policies and procedures for the production and defense of the PhD prospectus and the PhD dissertation for candidates studying jointly in archaeology and social anthropology follow the guidelines laid out in the Social Anthropology program description (see above).

M.A. Program in Medical Anthropology
The Department of Anthropology offers an M.A. in Medical Anthropology. The program is intended to provide a basic education in medical anthropology, in particular for physicians or other health professionals, and can be completed in an intensive 12 months. Application to the program follows the same procedures as application to the PhD program.

Application to the MA program in Medical Anthropology follows usual procedures for application to the Harvard Graduate School of Arts and Sciences, including GRE examinations. Prospective candidates should indicate your interest in medical anthropology in the statement of purpose when applying to the PhD in Social Anthropology. Prospective applicants who visit the Graduate School of Arts and Sciences website will find an Application Request Form that can be completed on-line.

The social anthropology program of the Anthropology Department will accept applications for the master’s degree in medical anthropology only from persons who have a demonstrable commitment to work in medicine and who want supplementary training in anthropology. Students enrolled in this AM program are expected to provide their own funds.

Perequisites for Admission
The requirements and standards are the same as those for the PhD as discussed above.

Program of Study
Requirements for the M.A. program in Medical Anthropology include one year of full-time residence, a minimum of eight half-courses or the equivalent, five of them in the Department of Anthropology, is required. These must include the first term of the Proseminar in anthropological theory taken by all first-year graduate students in social anthropology, an ethnography course, and three courses in medical anthropology. Only one course may be included that is outside of social anthropology. Required courses above this minimum are determined individually. Each student will submit a thesis, which must be read and accepted by two department members.

Academic Residence
The minimum program consists of one academic year of full-time study (eight half courses or equivalent) plus one summer. Where other professional or pre-professional commitments make it desirable to spread this year of course work over a two-year period, this will be permitted. Some students will want to take an extended program of full-time study over a two-year period, and in suitable cases that will also be allowed, but no AM candidate will be permitted to remain in residence for more than a two-year period. An overall B+ average is expected of the student.

Recent PhD Dissertation Titles
Archaeology
2011–12
Molly Fierer-Donaldson, “To Be Born an Ancestor: Death and the Afterlife among the Classic Period Royal Tombs of Copan, Honduras”
Emily Hammer, “Local Landscapes of Pastoral Nomads in Southeastern Turkey”

2010–11
Carrie Brezine, “Dress, Technology and Identity in Colonial Peru”

2009–10
Christina Warniner, “Life and Death at Teposcolula Yucundaa: Mortuary, Paleodemographic, Archaeogenetic, and Isotopic Investigations of the Early Colonial Period in Mexico”

2008–09
Deena Duranleau, “Flexible Sedentism: The Subsistence and Settlement Strategies of the Pre-Contact Residents of Coastal New England and New York”

Social Anthropology
2011–12
Felicity Aulino, “Senses and Sensibilities: The Practice of Care in Everyday Life in Northern Thailand”
Stella Kao, “Rediscovering the House and Body: Theatre and Performance Life in Hong Kong in the 1990s”

Jennifer Mack (Joint Architecture, Urbanism and Anthropology), “Producing the Public: Architecture, Urban Planning, and Immigration in a Swedish Town, 1965 to the Present”
Andrea Murray, “Footprints in Paradise: Ethnography of Ecotourism, Local Knowledge, and Nature Therapies in Okinawa”
Aria Daniel Nakissa (Joint Middle Eastern Studies), “Islamic Law and Legal Education in Egypt”
Rheana Salazar Parrenas, “Arrested Autonomy: an Ethnography of Orangutan Rehabilitation”

Kedron Thomas, “An Ethnography of Brand Piracy in Guatemala”

2010–11
Andrea Allen, “We Are Phantasms: Female Same-Sex Desires, Violence, and Ideology in Salvador, Brazil”

Kambiz Behi, “Neoliberal Jihad: Reconfiguring Space in a Context of Islamic Moral Economy”
Naor Ben-Yehoyada, “Mediterranean, Becoming and Unbecoming: Fishing, Smuggling and Region Formation Between Sicily and Tunisia Since World War II”

Edward Akintola Hubbard, “Creolization and Contemporary Pop Iconicity in Cape Verde”

Kathryn Mason, “After SARS: The Rebirth of Public Health in China’s ‘City of Immigrants’”
Illiana Quimbaya, “Pare de Sofrer/Succeed in Life: The Interpretation and Influence of the Prosperity Gospel in the Igreja Universal do Reino de Deus Salvador, Brazil”

Tashi Rabgny, “Specters of China: Tibetan Legal Recognition and the Politics of Sovereignty in Post-Democratization Taiwan”


2009–10

JoonHyun Michael Choi, “Orijinél Mansin: An Ethnography of Shaman Life in South Korea”

Lyndon K. Gill (Joint African And African American Studies), “Transfiguring Trinidad and Tobago: Queer Cultural Production, Erotic Subjectivity and the Praxis of Black Queer Anthropology”


Anthony Shenoda, “Cultivating Mystery: Miracles and a Coptic Moral Imaginary”

2008–09

Sharon Abramowitz, “Psychosocial Liberia Managing Suffering in Post-Conflict Life”

Adia Benton, “Yu get fo liv positiv: HIV, subjectivity and the politics of care in post-conflict Sierra Leone”

Zongze Hu, “Keeping Hope: Encountering and Imagining the National State in a North China Village”

Yi-Chieh Jessica Lin, “Knockoff: A Cultural Biography of Transnational Counterfeit Goods”

Laurie McIntosh, “Interlopers, Immigrants and Others: Difference and Ambivalence in the ‘New’ Norway”

Andrew Preston, “Traveling the trail of self-determination, or ‘the path the people walk’: Sovereignty, environmental practice, and Lutselk’e Dene’s place in Northwest Territories, Canada”

Current Research Interests of Members of the Department of Anthropology

Ahmed, Asad (PhD, Chicago, 2006), Assistant Professor of Anthropology. Legal, linguistic, and historical anthropology, Muslim societies, secularism and religion, ethnography of the state, Islamic nationalism, Islamic law, South Asian history.

Bar-Yosef, Ofer (PhD, Hebrew University, 1970), George Grant and Janet G. B. MacCurdy Professor of Prehistoric Archaeology. The origin of modern humans and early farming societies; Near East.

Bestor, Theodore C. (PhD, Stanford, 1983), Reischauer Institute Professor of Social Anthropology. Markets, globalization, and urban studies; economic institutions and exchange; food systems and food culture; fishing and the environment; space, place, and identity; Japan, East Asia, North Atlantic.

Carrasco, David (PhD, Chicago, 1977), Neil L. Rudenstine Professor for the Study of Latin America in the Faculty of Divinity and the Faculty of Arts and Sciences. History of religions.

Caton, Steven (PhD, Chicago, 1984), Professor of Contemporary Arab Studies. Linguistics, cultural studies, gender, Yemeni poetics and politics, US men’s movement.

Fash, William L. (PhD, Harvard, 1983), Charles P Bowditch Professor of Central American and Mexican Archaeology and Ethnology. Cultural process, settlement pattern analysis, sociopolitical evolution, the rise of complex culture, Maya epigraphy; Mesoamerica.

Flad, Rowan K. (PhD, UCLA, 2004), Professor of Anthropology. East Asian Archaeology; Neolithic and Bronze Age China; Complex Societies; Production; Zoarchaeology; Intersections between economic, ritual, political and social aspects of ancient society.

Good, Byron (PhD, Chicago, 1976), Professor of Medical Anthropology in the Department of Social Medicine. Medical and psychiatric anthropology; symbolic anthropology and ethnography of Middle East and of American health care; Iran, Turkey, the United States.

Harkness, Nicholas (PhD, Chicago, 2010), Assistant Professor of Anthropology. Linguistic anthropology, semiotics, voice, quality, Christianity, South Korea.


Kleinman, Arthur (MD, Stanford, 1967), Harvard College Professor and Esther and Sidney Rabb Professor of Anthropology in the Faculty of Arts and Sciences and Professor of Medical Anthropology in the Faculty of Medicine. Social experience, suffering, social and mental health; China, Taiwan, and North America.


Liebmann, Matthew (PhD, Pennsylvania, 2006), Assistant Professor of Anthropology. North American Archaeology, Southwest US, contact and colonialism in the Americas, Historic Pueblos, NAGPRA.

Meadow, Richard (PhD, Harvard, 1986), Senior Lecturer on Anthropology and Director of the Zooarchaeology Lab. Archaeology of the Middle East and South Asia, faunal analysis, domestication of plants and animals.

Quilter, Jeffrey (PhD, UC Santa Barbara, 1981), Senior Lecturer on Anthropology and Deputy Director for Carrieral Affairs and Curator, Intermediate Area Archaeology in the Peabody Museum of Archaeology and Ethnology. Andean South America, The Intermediate Area, and interactions between and shared culture among New World peoples. Social change and transformations. Ancient and Non-Western Art. The limits and potentials of archaeology in understanding the past.

Ralph, Laurence (PhD, Chicago, 2010), Assistant Professor of African and African American Studies and of Anthropology. Gang Formations; Urban Anthropology; Disability; Medical Anthropology; Masculinity; Race; Theories of Violence; Popular Culture and Hip Hop.

Stager, Lawrence (PhD, Harvard, 1975), Dorot Professor of the Archaeology of Israel and Director of the Semitic Museum. Israel and the Near East.

Steedly, Mary M. (PhD, Michigan, 1989), Professor of Anthropology. Historical ethnography; colonialism and nationalism; gender and cultural studies; spirit possession; Indonesia.

Subramanian, Ajantha (PhD, Duke, 2000), Professor of Anthropology. Postcolonial anthropology, political theory, anthropology of development, social movements; South Asia, South Asian Diaspora.

Theidon, Kimberly (PhD, UC Berkeley, 2002), John L. Loeb Associate Professor of the Social Sciences and Assistant Professor of Anthropology. Medical Anthropology, political violence and human rights in Latin America.

Ur, Jason A. (PhD, Chicago, 2004), John L. Loeb Associate Professor of the Social Sciences and Assistant Professor of Anthropology. Environmental/landscape anthropology; archaeology of Ancient Mesopotamia; GIS; Near East.

Urton, Gary (PhD, University of Illinois, 1979), Chair of the Department of Anthropology and Dumbarton Oaks Professor of Pre-Columbian Studies. South American archaeology and ethnology, ethnoastronomy, state formation; Peru, South America.
Architecture, Landscape Architecture, and Urban Planning

Students may study for a PhD degree in architecture, landscape architecture, or urban planning. These three degrees are administered by a committee of the Faculty of Arts and Sciences in cooperation with the Faculty of Design. The program is intended for persons who wish to enter teaching and advanced research careers in the history and theory of architecture, landscape architecture, and urban form from antiquity to the present; or the analysis and development of cities, landscapes, and regions with emphasis on social, economic, ecological, transportation, and infrastructural systems. (The PhD program does not prepare students for licensing as design practitioners in any of these fields. For information on professional masters’ programs, contact the Harvard Design School, Admissions Office, 48 Quincy Street, Cambridge, MA 02138, (617) 495-5453.)

Requirements for Admission

Applicants must have completed a four-year bachelor of arts or bachelor of science degree, or a professional degree in architecture, landscape architecture, or urban planning, or the foreign equivalent of the foregoing. Students from other countries must provide proof of their command of English. To be eligible for admission, individuals must also show evidence of distinguished academic work in the field or closely related fields, or distinguished work in the intended area of concentration. Applications from minorities are particularly welcome.

All applicants are required to indicate a proposed major subject of study at the time of initial application. These proposed areas of study should be congruent with the interests and expertise of at least one member of the Faculties of Design or Arts and Sciences.

The results of the Graduate Record Examination (GRE) and other supporting documents specified in the GSAS Guide to Admission and Financial Aid are also required parts of the application.

Academic Residence

Two years of full-time study while registered in the Graduate School of Arts and Sciences are required.

Program of Study

Course information may be found in Courses of Instruction offered by the Faculty of Arts and Sciences as well as in the course catalogues published by Harvard’s other professional schools, including the Official Register of the Harvard Design School. These publications are also available online.

Students are expected to prepare in each of the following areas:

1. **General Knowledge of the Field**: The PhD is an academic degree, but PhD holders in our fields may be interacting with professionals as well as with other scholars. In fact, many may elect to teach in professional schools. Therefore, in addition to academic requirements, it is required that every PhD student be generally knowledgeable of the basic skills of architecture, landscape architecture, and urban design.

2. **Main Subject**: The interfaculty structure and purposes of the program require that students cross disciplinary boundaries. All students must master a major area of their respective field, including the historic development and current state of research on the subject. In addition, every student must demonstrate competence in the methods of inquiry used for research in his or her major subject.

3. **All students must also achieve a thorough grounding in the theory and methods of one of the arts or sciences related to their major subject, such as history of art, cultural history, economics, philosophy, government, sociology, or history of science equivalent to at least one year of full-time graduate study.**

4. **Languages**: Candidates for the degree in architecture must normally have a reading knowledge of at least two languages other than English in which there is broad and important literature related to their field or major subject; those in urban planning must have one other language. Every student must have a level of mathematical skills appropriate for research in the major subject.

Dissertation

The PhD is not a professional degree, but it is designed to prepare students for professional careers in their field. The PhD program is intended to prepare students for teaching and advanced research careers in the history and theory of architecture, landscape architecture, and urban form from antiquity to the present; or the analysis and development of cities, landscapes, and regions with emphasis on social, economic, ecological, transportation, and infrastructural systems. (The PhD program does not prepare students for licensing as design practitioners in any of these fields. For information on professional masters’ programs, contact the Harvard Design School, Admissions Office, 48 Quincy Street, Cambridge, MA 02138, (617) 495-5453.)

Students are expected to take the general examination in the fifth term of residence, and no later than one year after completion of the required coursework. The examination is given only during the fall and spring terms of the academic year. The examination tests the student’s mastery of their general field of scholarship, specific interpretive problems within that field, and their ability to research and write a dissertation.

At least two months prior to the date of the examination, the student should meet regularly with the examination committee (see “Advising”) and, with its help, should formulate a proposal describing the general and specific fields to be covered in the examination and possible examination questions.

The examination comprises a major and minor field. The general field is ordinarily a broad area of history and theory of architecture, landscape architecture, or urban planning (for example, “modern architecture from 1750 to the present”). The specific field is a narrower area of study chosen by the student and subject to faculty review; in principle it should comprise a coherent and clearly defined area of scholarly inquiry which may be interdisciplinary in nature.

**Grades**

The Graduate School of Arts and Sciences requires that all students maintain an average of B or better in each year of graduate study. All incomplete grades must be removed before the end of the next regular term.

If students are cross-registered in Schools where the grading system does not use letter grades, they should ask the course instructor to issue letter grades.

**Faculty Advisor and Student’s Graduate Committee**

The chair of the PhD committee will assign a faculty member as the student’s advisor at the time of registration in the program. This advisor will assist in planning the student’s academic program. In addition, not fewer than three faculty members, appointed by the chair in consultation with the student, will be made available for consultation regarding the general examination and the dissertation.

**General Examination and Dissertation**

Students are expected to take the general examination in the fifth term of residence, and no later than one year after completion of the required coursework. The examination is given only during the fall and spring terms of the academic year. The examination tests the student’s mastery of their general field of scholarship, specific interpretive problems within that field, and their ability to research and write a dissertation.

At least two months prior to the date of the examination, the student should meet regularly with the examination committee (see “Advising”) and, with its help, should formulate a proposal describing the general and specific fields to be covered in the examination and possible examination questions.

The examination comprises a major and minor field. The general field is ordinarily a broad area of history and theory of architecture, landscape architecture, or urban planning (for example, “modern architecture from 1750 to the present”). The specific field is a narrower area of study chosen by the student and subject to faculty review; in principle it should comprise a coherent and clearly defined area of scholarly inquiry which may be interdisciplinary in nature.

**Master of Arts (AM)**

The department does not admit candidates for a terminal AM degree. PhD candidates may, however, apply for a master’s degree after having completed with satisfactory grades, eight half-courses. The degree may also be offered to students unable to complete the doctorate.
The examination will normally consist of two or three written essays, one in the general field (eight hours) and one or two in the specific field (total eight hours). Within one week of the written examination, the student and the examination committee will meet to evaluate the entire examination and discuss plans for the dissertation. Students whose performance on the examination is not satisfactory will be given one opportunity to repeat all or part of it.

**Dissertation**

The dissertation will be directed by a dissertation committee consisting of one primary advisor and at least two secondary advisors or readers. Two readers must be from the Faculty of Arts and Sciences or the Committee on Architecture, Landscape Architecture, and Urban Planning; one reader will normally be from the area of the student’s disciplinary minor and one reader must be from the Harvard Design School.

No later than five months (within the academic calendar) after the successful completion of the general examination, students will submit to the chair a written dissertation proposal and the names of the faculty persons who will supervise it. The student will confer with the examination committee to discuss and develop the proposal. The committee will conduct an oral examination of the dissertation proposal, whose purpose is to provide for the student a formal occasion to discuss and gain approval of the dissertation topic.

Students are normally expected to complete their program (including approval of the dissertation) within seven years of entering the program. Students who require more than five years to complete the dissertation after passing the General Examination must petition the Committee on the PhD Program in Architecture, Landscape Architecture, and Urban Planning to extend their time. After the approval of the dissertation by the faculty members who are its director and reader(s), three copies must be presented to the chair a written dissertation proposal and the names of the faculty persons who will supervise it. The student will confer with the examination committee to discuss and develop the proposal. The committee will conduct an oral examination of the dissertation proposal, whose purpose is to provide for the student a formal occasion to discuss and gain approval of the dissertation topic.

After the approval of the dissertation by the faculty members who are its director and reader(s), three copies must be presented to the committee on the PhD not less than six weeks before the degree recommendations of that committee are due at the Registrar’s Office. The committee will receive the recommendations of the advisor and reader(s), and must formally vote on the recommendation for the degree. The final copy of the dissertation must conform to the requirements described in *The Form of the PhD Dissertation*.

**Financial Aid**

Financial aid is administered under the direction of the Graduate School of Arts and Sciences. Harvard grants are awarded to first and second-year graduate students primarily on the basis of financial need as determined by documents submitted to the Graduate School of Arts and Sciences at the time of application.

After the first two years, financial assistance and employment opportunities as teaching and research assistants will be allocated on the basis of financial need, the capability of the student concerned, and the funds and employment opportunities available.

Students expecting to need financial aid at any time in their program should submit this documentation at the time of their first application to the program.

**To Apply**

Application forms for admission and financial aid may be obtained from the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138, or at www.gsas.harvard.edu/prospective_students/admissions.php. On the application’s first page, applicants should indicate “architecture, landscape architecture, and urban planning” as the program, and only one of these three fields as the subject.

Further information regarding courses and programs of study leading to the PhD in architecture, landscape architecture, and urban planning may be obtained by writing to the PhD Program, Gund Hall 334B, Harvard University, Cambridge, MA 02138; by calling (617) 495-2337; or by visiting the Web address www.gsd.harvard.edu.

Please note that completed materials for application and financial aid are due January 2 for the following September. The program does not guarantee consideration of application materials received after this deadline. All applicants should arrange to take the Graduate Record Examination (GRE) not later than October of the year before they intend to begin studies. Applicants for whom English is not a native language should also schedule their examinations in English (the TOEFL examination) not later than October in order that the results will be available by the first week in January.

**Doctor of Design Program**

The Harvard Design School also offers a separate three-year program leading to the doctor of design degree, which is oriented to the practice and teaching of architecture, landscape architecture, and urban design. An applicant normally must hold either a professional master’s degree in architecture, landscape architecture, urban planning, or urban design, or the GSD degree master in design studies (MDes). This program requires different application forms. To obtain information and application forms for this program, go see www.gsd.harvard.edu/admits or write to: Harvard Graduate School of Design, 48 Quincy Street, Rm 334B, Cambridge, MA 02138; or call (617) 495-2337.

**PhD Standing Committee**

K. Michael Hays, Co-chair, PhD Program, the Eliesh Noyes Professor of Architectural Theory at the Harvard University Graduate School of Design. Hays joined the Faculty of Design in 1988 and teaches courses in architectural history and theory, including Buildings, Texts, and Contexts from the Enlightenment through the 20th Century. Hays has played a central role in the development of architectural theory in North America, and his work is internationally known. His research and scholarship have to date focused on the areas of European modernism and critical theory, as well as on theoretical issues in contemporary architectural practice. He has published work on the work of modern architects such as Hannes Meyer, Ludwig Hilberseimer, and Mies van der Rohe, as well as of figures such as Peter Eisenman, Bernard Tschumi, and the late John Hejduk. He is currently working on a history of architecture since 1968. Hays was the founder of the scholarly journal *Assemblage*, which was a leading forum of discussion of architectural theory in North America and Europe. In addition to his teaching and research, he is director of the GSD’s Advanced Independent Study Program and chair of the PhD Committee. In 2000, he was appointed the first adjunct curator of architecture at the Whitney Museum of American Art. Hays received the Bachelor of Architecture from the Georgia Institute of Technology in 1976, the Master of Architecture in Advanced Studies from the Massachusetts Institute of Technology in 1979, and the Doctor of Philosophy in the History, Theory, and Criticism of Architecture and Art from MIT in 1990.

Antoine Picon, Co-chair, PhD Program. Picon is Professor of the History of Architecture and Technology. He teaches courses in the history of architecture and technology. Trained as an engineer, architect, and historian of science and art, Picon is best known for his work in the history of architectural technologies from the 18th century to the present. His French *Architects and Engineers in the Age of Enlightenment* (1988; English translation, 1992) is a synthetic study of the disciplinary “deep structures” of architecture, garden design, and engineering in the 18th century, and their transformations as new issues of territorial management and infrastructure-systems planning were confronted. In addition to four other books—Claude Perrault (1613–1688) or la curiosité d’un classique (1988), *L’Invention de l’ingénieur moderne*, L’École des Ponts et Chaussées 1747–1851 (1992), *La ville terrienne des cyborgs* (1998), and Les Saint-Simoniens: Raison, Imaginaire, et *Utopie* (2002)—he has also published numerous articles, mostly dealing with the complementary
histories of architecture and technology. He has received several awards in France for his writings, including the Medaille de la Ville de Paris and twice the Prix du Livre d’Architecture de la ville de Brie. Picone received engineering degrees from the Ecole Polytechnique and from the Ecole Nationale des Ponts et Chaussees, an architecture degree from the Ecole d’Architecture de Paris-Villemain, and a doctorate in history from the Ecole des Hautes Etudes en Sciences Sociales.

Eve Blau. Blau is Program Chair for the Architecture Department at the Graduate School of Design and Adjunct Professor of Architectural History and teaches courses in the history of modern architecture and urbanism. She currently teaches Proseminar in History, Theory and Urban Studies; Transparency and Modernity, and in the core history sequence: Buildings, Texts, and Contexts. Previous courses include: Scale and Modernity; City, Object, Subject; The Sixties: Architecture in the Time of the Vietnam War, and Modern Architecture and the Big City as Form and Idea in Europe, 1890–1940.


Blau’s publications on architecture and modes of representational discourse include Architecture and Cubism (1997), Architecture and Its Image (1998), and Russkian Gothic (1982). She edited Architectural History 1999/2000: A Special Issue of JSASH (1999), and is the author of Architecture or Revolution: Charles Moore and Yale in the late 1960s (2001) as well as numerous articles on 19th and 20th-century architecture, the city, photography and other issues in architectural representation. Editor of the Journal of the Society of Architectural Historians from 1997–2000, Blau was Curator of Exhibitions and Publications at the Canadian Centre for Architecture from 1984–1990, and Adjunct Curator from 1991–2001. She has received a number of awards for her publications, including the Alice Davis Hitchcock Book Award, the Austrian Cultural Institute Book Prize, the Spiro Kostof Book Award, the Philip Johnson Exhibition Catalogue Award, and the AIA Citation for Excellence in International Architectural Book Publishing.

Blau received a BA from the University of York in England, and an MA and a PhD from Yale University.

Neil Brenner is Professor of Urban Theory at the Harvard Graduate School of Design (GSD) and the coordinator of the Urban Theory Lab GSD. He holds a PhD in Political Science from the University of Chicago (1999); an MA in Geography from UCLA (1996); and a BA in Philosophy, Semma Cum Laude, from Yale College (1991). Brenner’s writing and teaching focus on the theoretical, conceptual and methodological dimensions of urban questions. His work builds upon, and seeks to extend, the fields of critical urban and regional studies, comparative geopolitical economy and radical sociospatial theory.

Major research foci include processes of urban and regional restructuring and uneven spatial development; the generalization of capitalist urbanization; and processes of state spatial restructuring, with particular reference to the remaking of urban, metropolitan and regional governance configurations under contemporary neoliberalizing capitalism.

Brenner is the author of New State Spaces: Urban Governance and the Rescaling of Statehood (Oxford University Press, 2004). Other book-length publications include Cities for People, not for Profits: Critical Urban Theory and the Right to the City (co-edited with Peter Marcuse and Margit Mayer; Routledge 2011); Henri Lefebvre, State, Space, World (co-edited with Stuart Elden, translated with Gerald Moore and Stuart Elden, University of Minnesota Press, 2009); The Global Cities Reader (co-edited with Roger Keil; Routledge, 2006); Spaces of Neoliberalism: Urban Restructuring in North America and Western Europe (co-edited with Nik Theodore; Blackwell, 2003); and State/Space: A Reader (co-edited with Bob Jessop, Martin Jones and Gordon MacLeod; Blackwell, 2002). Several scholarly articles and essays have been translated into other languages, including Chinese, Finnish, German, Italian, Japanese, Portuguese, Spanish and Turkish.

Major current research and writing projects focus on planetary urbanization; new conceptual and methodological challenges for 21st century critical urban theory; the future of ‘comparative’ urban studies; neoliberalization: geographies, modalities and pathways; the evolution of urban, metropolitan and regional governance in geohistorical and comparative perspective; the rescaling of state space in geohistorical and comparative perspective; and Henri Lefebvre on space, politics and urbanization.

Giuliana Bruno, PhD, Professor of Visual and Environmental Studies. Professor Bruno’s work explores the relation of cinema to other visual sites, fashioning, in particular, the bond of the moving image to architecture, travel culture, and the history of the visual arts, as well as its connection to the art of memory and that of mapmaking. Her previous book, Streetwalking on a Ruined Map, combined her interests in Italian cinema, women in film, cultural theory, and the spatial architecture of film. It won the 1993 Katherine Kovacs prize for best book in film studies. Its Italian version received the 1995 Premio Filmcritica, Italy’s national book award in film studies.

Bruno is co-editor of Off Screen: Women and Film in Italy (Routledge, 1988), and Immagini allo schermo (Rosenberg & Sellier, 1991), which was named one of the 50 Best Books of the First 100 Years of Film History. Bruno’s latest book, Atlas of Emotion: Journeys in Art, Architecture and Film (Verso, 2002), charts a cultural history of spatiovisual arts, focusing on the representation of affects and place.

Professor Bruno lectures and publishes internationally on visual culture and has written on art and film, among other topics, for exhibition catalogs of the Museum of Modern Art and the Solomon R. Guggenheim Museum.

Lizeth Cohen, PhD, Howard Mumford Jones Professor of American Studies. Professor Cohen’s research interests include 20th-century United States social, political, and cultural history. Her book A Consumers’ Republic: The Politics of Mass Consumption in Postwar America looks at the political consequences of a mass consumption-oriented economy and culture in post-World War II America. Other teaching and research interests include urban history, material culture, and popular culture. Professor Cohen is also the author of Making a New Deal: Industrial Workers in Chicago, 1919–1939 (1990) and the co-author of The American Fugitive: A History of the Republic (1998, 2002).

Diane E. Davis, PhD, Professor of Urbanism and Development, Program on Planning and Design. Professor Davis’s research interests include the relations between urbanization and national development, comparative international development, the politics of urban development policy, and conflict cities. With a special interest in Latin America, she has explored topics ranging from historic preservation, urban social movements, and identity politics to urban governance, fragmented sovereignty, and state formation. Her current research focuses on the transformation of cities of the global south, particularly the urban social, spatial, and political conflicts that have emerged in response to globalization, informality, and political or economic violence. Before to moving to Harvard’s Graduate School of Design, Davis served as the head of the International Development Group in the Department of Urban Studies and Planning at MIT, where she also was Associate Dean of the School of Architecture and Planning. Prior to that she taught
in Sociology and History at the New School for Social Research.

Davis is the author of Urban Leviathan: Mexico City in the Twentieth Century (Temple University Press 1994; Spanish translation 1999) and Discipline and Development: Middle Classes and Prosperity in East Asia and Latin America (Cambridge University Press, 2004; named 2005 Best Book in Political Sociology, American Sociological Association) as well as co-editor of Irregular Armed Forces and their Role in Politics and State Formation (Cambridge University Press, 2003) and Cities and Sovereignty: Identity Conflicts in the Urban Realm (Indiana University Press, 2011). A prior recipient of research fellowships from the John D. and Catherine T. MacArthur Foundation, the Heinz Foundation, the Ford Foundation, the Social Science Research Council, the United States Institute for Peace, the Andrew W. Mellon Foundation, and the Carnegie Corporation of New York, Davis now coordinates a large scale project titled Urban Resilience in Conditions of Chronic Violence, funded by USAID. An elected member of the Urban and Regional Development Section (RC21) of the International Sociological Association (ISA) and a member of Panel SH3 (Environment and society: environmental studies, demography, social geography, urban and regional studies) of European Research Council, she also serves on the Editorial Boards of City and Community, Political Power and Social Theory, and the Journal of Latin American Studies.

Davis received her BA in Sociology and Geography from Northwestern University, and her MA and PhD in Sociology from UCLA.

Peter Galison, PhD, Mallinckrodt Professor of the History of Science and of Physics. In 1997, Professor Galison was named a John D. and Catherine T. MacArthur Foundation Fellow; in 1999, he was a winner of the Max Planck Prize given by the Max Planck Gesellschaft and Humboldt Stiftung. Galison is interested in both the philosophical and historical questions that arise when examining the role of experiments in modern physics: What, at a given time, convinces people that an experiment is correct? More broadly, Galison’s main work explores the complex interaction between the three principal subcultures of 20th-century physics: experimentation, instrumentation, and theory. The volume on experiment (How Experiments End, 1987) and that on instruments (Image and Logic: A Material Culture of Microphysics, 1997) are to be followed by the final volume, Theory Machines, which is still under construction. In addition, Galison has launched several projects examining the powerful crosscurrents between physics and other fields, including his co-edited volumes on the relations between science, art, and architecture, The Architecture of Science (1999) and Picturing Science, Producing Art (1998), as well as Big Science (1992), The Disunity of Science (1996), and Atmospheric Flight in the 20th Century (2000). Image and Logic won the Pfizer Award from the History of Science Society in October 1998.

Galison’s courses include: History and Philosophy of 20th-Century Physics; History and Philosophy of Experimentation; Fascism, Art, and Science in the Interwar Years; Science and Realism; the Einsteinian Revolution; seminars on Critical History and on the History and Philosophy of Theory in 20th-Century Physics; and Filming Science. Additionally, he leads weekly meetings of Harvard’s Physical Sciences Research Group where students, faculty, and staff have the opportunity to present and discuss relevant topics in the history of science including the history of mathematics and the history of technology.

Timothy Hyde is Assistant Professor of Architecture at the Harvard University Graduate School of Design, where he teaches course in history and theory and serves as Area Coordinator for the History and Philosophy of Design concentration of the Master of Design Studies Degree. He is also the Thesis Director of the MArch degree program.

Hyde’s research focuses on of modern architecture and culture, and his writings range from a genealogy of mid-century, to a précis of the work of John Johansen, to an explication of Reyner Banham’s concept of the gimm. He is one of the editors of the forthcoming volume Governing by Design, by the architectural history collaborative Aggregate. Hyde is currently pursuing an extended study of entanglements between architecture and law, research that includes his current book project, A Constitutional Modernism: Architecture and Civil Society in Republican Cuba, as well as his essay, “Some Evidence of Libel, Criticism, and Publicity in the Architectural Career of Sir John Soane,” published in Perspecta.

Hyde received his BA from Yale University, MArch from Princeton University, and PhD from Harvard University.

Jerold Kayden, the Frank Backus Williams Professor of Urban Planning and Design, and Director of the Master in Urban Planning Degree Program, Harvard Graduate School of Design. His research and teaching focus on law and the built environment, and public-private urban development.

His courses include: Public and Private Development; Design, Law, Policy; Advanced Topics in Design, Law, Policy; and Planning and Environmental Law.

Kayden’s publications include Privately Owned Public Space: The New York City Experience; Landmark Justice: The Influence of William J. Brennan on America’s Communities (co-authored); and Zoning and the American Dream: Promises Still To Keep (co-edited). He has written numerous articles on such topics as property rights and government regulation, smart growth, design codes, and market-based regulatory instruments. He is currently completing a book about the “tyranny of context” in design review administrative and judicial decision-making.

As both attorney and urban planner, Kayden has acted on behalf of governments, private developers, and not-for-profit groups, in and out of court. He has argued cases and written briefs, including amicus curiae briefs in several significant US Supreme Court land use cases. In 2002, he founded Advocates for Privately Owned Public Space to improve New York City’s 500+ zoning-created plazas, arcades, and indoor spaces in cooperation with the City’s Department of City Planning. For the past 13 years, he has been principal constitutional counsel to the National Trust for Historic Preservation.

Hyde’s research focuses on of modern architecture and culture, and his writings range from a genealogy of mid-century, to a précis of the work of John Johansen, to an explication of Reyner Banham’s concept of the gimm. He is one of the editors of the forthcoming volume Governing by Design, by the architectural history collaborative Aggregate. Hyde is currently pursuing an extended study of entanglements between architecture and law, research that includes his current book project, A Constitutional Modernism: Architecture and Civil Society in Republican Cuba, as well as his essay, “Some Evidence of Libel, Criticism, and Publicity in the Architectural Career of Sir John Soane,” published in Perspecta.

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tween the life sciences and design. He writes frequently on the work of young and emerging practitioners in the nascent transdisciplinary field of experimental spatial practice. He is currently at work on a book on paleo-ecology and the origins of form.


Professor Levine has been the Bannister Fletcher Professor of Architecture at the University of London, the Slade Professor of Fine Arts at Cambridge University, a Phi Beta Kappa Visiting Scholar, and chair of the Department of History of Art and Architecture at Harvard. He serves on the Board of Directors of the Frank Lloyd Wright Building Conservancy and the Board of Editors of Wright Studies. He received his PhD from Yale University.

Erika Naginski, PhD, Associate Professor of Architectural History, Harvard Graduate School of Design. Professor Naginski teaches courses on 17th and 18th century architecture, early modern aesthetic philosophy, and the critical traditions of architectural history. Her published work includes the prize-winning book Sculpture and Enlightenment (Getty Research Institute, 2009), a study of public art and architecture in an age of secular rationalism and revolutionary politics; Polémical Objects (2004), a special issue of Res co-edited with Stephen Melville that explores the philosophy of medium in Hegel, Heidegger, and others; and Writing on Drawing (2000) for the journal Representations, with essays on the collision of semiotics and mimesis in drawing practices. Her articles, essays and reviews have appeared in journals such as Art Bulletin, Journal of Visual Culture, Perspectives, Representations, Res: Anthropology and Aesthetics, and Yale French Studies. She has been a fellow at the Harvard Society of Fellows, The Radcliffe Institute for Advanced Study, the Clark Art Institute and the Deutsches Forum für Kunstgeschichte.

Before joining the GSD faculty, she taught at the University of Michigan and MIT. She was awarded a John Simon Guggenheim Memorial Foundation Fellowship for her current book project on the intersections of architecture, archaeology and conceptions of history in the late 17th and 18th centuries.

Alina A. Payne, PhD, Professor of History of Art and Architecture. Professor Payne teaches Renaissance and Baroque architecture, late 19th- and 20th-century history and theory of architecture, and architectural representation. Topics of her current research include: (Early Modern) Italian architectural theory, criticism and historiography, architects’ books and libraries, architecture and science, architectural representation, and architecture and its relationship to the other arts; (20th century) ornament and the theory of objects in modernist architecture, and historiography.

A. Hashim Sarkis, the Aga Khan Professor of Landscape Architecture and Urbanism in Muslim Societies. He teaches design studios and courses in the history and theory of architecture, such as Practices in Democracy, Constructing Vision: A History and Theory of Perspective’s Applications in Architecture, Developing Worlds: Planning and Design in the Middle East and Latin America After WWII, and Green Modern: A History of Environmental Consciousness in Architecture from Patrick Geddes to the Present. Sarkis is a practicing architect, working between Cambridge and Lebanon. His projects include a housing complex for the fishermen of Tyre, a park in downtown Beirut, two schools in the North Lebanon region, and several urban and landscape projects.

Sarkis was previously a lecturer in MIT’s Department of Architecture and a research associate in MIT’s Department of Urban Studies and Planning. He has taught design studios at the Rhode Island School of Design and Yale University, and has been visiting lecturer at the American University of Beirut and the Metropolis Program in Barcelona.

He is author of several books and articles, including Circa 1958: Lebanon in the Pictures and Plans of Constantinos Doxiadis (Beirut: Dar Anna, 2003), editor of CASE: Le Corbusier’s Venice Hospital (Munich: Prestel, 2001), co-editor with Peter G. Rowe of Projecting Beirut (Munich: Prestel, 1998), and executive editor of the CASE publication series (GSD/Prestel).

Sarkis directs the Aga Khan Program of Activities at the GSD associated with the Aga Khan Chair. He received his BArch and BFA from the Rhode Island School of Design, his MArch from the GSD, and his PhD in architecture from Harvard University.

Christine Smith, the Robert C. and Marion K. Weinberg Professor of Architectural History at the Harvard Graduate School of Design. She teaches courses in Early Christian, Romanesque, and Italian Renaissance architecture; and she has published on Early Christian, Italian Romanesque, Italian Renaissance, and 20th-century American art and architecture, although most of her publications are in the field of Tuscan Romanesque, or on Leon Battista Alberti and Early Renaissance architectural theory.

A book on Giannozzo Manetti’s writings on architecture, Building the Kingdom: Giannozzo Manetti on the Material and the Spiritual Edifice, co-authored with Joseph O’Connor, is in press. This work includes critical editions of, commentaries on, and interpretive essays about his letter written on the occasion of the consecration of Florence Cathedral (1436) and Book 2 of his Life of Nicholas V (1455).

A longer project is an anthology of texts c. 300–1520, from the Greek East and Latin West, illuminating such themes as the architect’s knowledge of geometry and mechanics, the participation of the patron in architectural design, the role of architectural ornament (wall revetment and pavements), praise and condemnation of building practice and buildings, the praise of cities, fictive architecture, and the response to ruins.
Astronomy

The Department of Astronomy offers a rich and varied program of theoretical, observational, and experimental graduate work leading to the PhD in astronomy and astrophysics. Students are not accepted for a separate master’s degree program. Research is carried out at the Harvard College Observatory, which shares buildings and general facilities with the Smithsonian Astrophysical Observatory (SAO). Together, the two observatories constitute the Harvard-Smithsonian Center for Astrophysics: a large and diverse research setting that provides opportunities in nearly every branch of astrophysical work, from atomic physics to cosmology using the full range of techniques from gamma ray detectors through radio antennas.

Over 360 PhD scientists are engaged in work at the Center for Astrophysics (CfA), providing students with an unusually wide choice of dissertation topics and stimulating opportunities for both formal and informal learning through courses and seminars. Graduate students at Harvard benefit from this diverse environment, have access to extensive facilities, and pursue their work in a supportive and stimulating setting.

Facilities

Students who embark on research at optical and infrared wavelengths have access to high-performance, well-instrumented 6.5 meter telescopes in both hemispheres: the converted Multiple Mirror Telescope at the Whipple Observatory in Arizona and the Baade and Clay Telescopes at the Magellan Observatory in Chile. The Giant Magellan Telescope will be one of the next class of super giant Earth-based telescopes that promises to revolutionize our view and understanding of the universe. It will be operational in about 10 years and will be located in Chile adjacent to the current Magellan Observatory. The GMT has a unique design that offers several advantages. It is a segmented mirror telescope that employs seven of today’s largest stiff monolith mirrors as segments. Six off-axis 8.4 meter or 27-foot segments surround a central on-axis segment, forming a single optical surface with a collecting area of 24.5 meters, or 80 feet in diameter. The GMT will have a resolving power 10 times greater than the Hubble Space Telescope. The GMT project is the work of a distinguished international consortium of leading universities and science institutions including Harvard University.

Students also have access to the Whipple Observatory’s 1.5, 1.3, and 1.2 meter telescopes equipped with high-performance spectrographs and imagers. An active instrument development program is aimed at maintaining state-of-the-art observing facilities, and students are welcome to participate in this development program. CfA scientists have also led the development of infrared array cameras for the Spitzer satellite, currently the world’s premier IR space observatory. Students will have the opportunity to work with this experienced team on Spitzer observations. The CfA is involved in the Pan-STARRS and LSST consortiums, and our students continue to be major users of the Hubble Space Telescope.

Through the DASCH project (Digital Access to a Sky Century @ Harvard) Students will soon have digital access to a 100 year archive of photographic plates exposed starting in the late 1880s. The digitization of the Harvard Astronomical Plate Collection will provide the capability for systematic study of the sky on 100 year time scales.

DASCH will enable new Time Domain Astronomy (TDA) science, including:

- Conduct the first long-term temporal variability survey on days to decades time scales
- Novae and dwarf novae distributions and populations in the Galaxy
- Black hole and neutron star X-ray binaries in outburst: constraining the BH, NS binary population in the Galaxy
- Black hole masses of bright Quasars from long-term variability measures to constrain their characteristic shortest timescales and thus size
- Quiescent black holes in galactic nuclei revealed by tidal disruption of a passing field star and resultant optical flare
- Unexpected classes of variables or temporal behavior of known objects: preview of what PanSTARRS and LSST may see in much more detail but on shorter timescales
- More information is available here: http://dasch.rc.fas.harvard.edu/project.php

Radio astronomy students have direct access to the Smithsonian Astrophysical Observatory’s Sub-Millimeter Array (SMA), an eight element sub-millimeter-wave interferometer operating on Mauna Kea in Hawaii. A 1.2-m telescope is available in Cambridge for survey observations of CO at 3 mm. Students have also been active users of millimeter-wave interferometers in California, France, and Chile, and of single dish millimeter and submillimeter telescopes in Spain, Hawaii, and Chile. In addition, students frequently use the cm-wave facilities of the National Radio Astronomy Observatory including the Jansky Very Large Array, the Expanded Very Long Baseline Array in New Mexico, and the 100-m telescope in Green Bank, West Virginia. The Submillimeter Receiver Laboratory offers opportunities for instrumentation work at sub-millimeter wavelengths including the Terahertz band. There are also opportunities to work on instrumentation to measure the cosmic microwave background radiation with dedicated telescopes at the South Pole, as well as surveys with the 10-m South Pole telescope. Harvard is a member of the US consortium developing the Square Kilometer Array (SKA), and the Murchison Widefield Array (MWA).

High-energy astrophysics facilities and opportunities are especially strong. They include the Chandra X-ray Center (managed by CfA under contract with the National Aeronautics and Space Administration), which operates the space-based Chandra X-ray Observatory; ready access to and local expertise with the entire Chandra data archive, as well as the Einstein and ROSAT x-ray observatory databases; laboratory development of x-ray detectors and telescopes; development and operation of solar x-ray telescopes, including Trace and Hinode XRT, AIA telescopes on the Solar Dynamics Observatory and instruments on the WIND spacecraft and Lunar Reconnaissance Orbiter; and the ProToEXIST balloon-borne coded aperture telescopes and high resolution imaging detectors for wide-field hard x-ray imaging and temporal monitoring surveys of cosmic sources. Faculty and CfA staff members carry out major observational programs with the currently operating x-ray observatories (Chandra, XMM-Newton, Suzaku, and NuSTAR) as well as coordinated programs using ground- and space-based telescopes at other wavelengths; and participate in the design and study of next-generation x-ray facilities.

Solar, Stellar and Planetary Sciences facilities include the SOHO Ultraviolet Coronagraph Spectrometer (UVCS/SOHO) which is currently being used to observe the extended solar corona between 1 and 10 heliocentric radii. It makes spectroscopic measurements leading to the determination of densities, velocities, temperatures, and elemental abundances in the solar wind, coronal holes, equatorial streamers, and coronal mass ejections. The CfA also operates ground-based telescopes searching for extrasolar planets, including the MEarth Project to photometrically monitor 2000 nearby, small stars (called M dwarfs) and the HAT network with telescopes at five sites around the world. Astronomy Professor Dimitar Sasselov is a co-investigator on NASA’s Kepler space telescope which has recently achieved its mission goals and is now in an extended use phase that is currently on hold due to equipment faults. The scientific objective of the Kepler mission is to explore the structure and diversity of planetary systems. This is achieved by surveying a large sample of stars to:
• Determine the percentage of terrestrial and larger planets that are in or near the habitable zone of a wide variety of stars
• Determine the distribution of sizes and shapes of the orbits of these planets
• Estimate how many planets there are in multiple-star systems
• Determine the variety of orbit sizes and planet reflectivities, sizes, masses and densities of short-period giant planets
• Identify additional members of each discovered planetary system using other techniques
• Determine the properties of those stars that harbor planetary systems.

Data from the Kepler mission will continue to be assessed and will generate new theories and substantiate existing ones for years to come.

Facilities for laboratory work are extensive, including the development of instrumentation for astrophysical observations at all wavelengths. The Atomic and Molecular Physics (AMP) group has laboratory astrophysics facilities including state-of-the-art spectrograph calibrators based on laser frequency combs; atomic and laser-based frequency standards used in precision tests of relativity; and a wide range of instruments for laboratory astrophysics, including a spectrograph used to measure gas properties relevant to atmospheres of brown dwarf stars; millimeter wave spectrometers used to produce highly reactive molecules that serve as probes of interstellar conditions; laboratory measurements of the weak equivalence principle; and instrumentation for novel applications of basic physics developments, including medical imaging and geophysical applications. AMP Facilities for Earth observation include access to satellite instruments making measurements of Earth’s atmospheric species to study global pollution and greenhouse gases.

Students in theoretical astrophysics have access to a wide range of expertise at the Institute for Theory and Computation (ITC) to carry out investigations ranging from atomic processes to extrasolar planets to exploding stars and black holes to the origin of the universe. Computational facilities include numerous networked workstations, computing clusters, and a variety of output devices. ITC members have access to the High Performance Computer Facilities operated by Harvard’s Science Division.

The John G. Wolbach Library and Information Center combines the collections of the Harvard College Observatory Library (1839) and the Smithsonian Astrophysical Observatory Library (1959), forming one of the world’s preeminent astronomical collections. Hundreds of digital resources are available in addition to print journals, books, videos, CDs, DVDs, sky surveys and slides in astronomy, astrophysics and related fields. The collections are managed by librarians who guide users to the information they need, whether it resides locally or in collections throughout the world. The collection of early observational publications is considered to be one of the most comprehensive in the world.

The Minor Planet Center and the Central Bureau of Astronomical Telegrams also make their homes at the CfA.

Graduate Study Programs

The program of graduate study is designed to make Harvard PhD students first-rate researchers with a broad knowledge of astrophysics and competence in teaching. To do this, the Astronomy Department has constructed an advising program, and a set of requirements to help students develop their astrophysical understanding, and to a successful dissertation in a timely way.

The standing Committee on Academic Studies (CAS) in the Department of Astronomy has the primary responsibility for administering the graduate program. This committee is composed of members of the teaching staff, including the department chair, and two graduate students. The chair of the CAS is the departmental Director of Graduate Studies. The purpose of the committee is to insure that students receive adequate guidance at the pre-dissertation level, to see that uniform academic standards are applied, and to define the professional qualifications expected by the department for advanced degrees in astronomy and astrophysics. At regular intervals the committee reviews the progress of each graduate student. It also reviews and approves study programs, arranges oral examinations, and selects dissertation examining committees, dissertation advisory committees, and research exam committees.

A faculty advisor is assigned to each incoming graduate student to help the student make informed decisions about coursework and research opportunities. Each student is free to choose a new advisor at any subsequent time, but should inform the department administrator and the CAS of such a change after obtaining the new advisor’s consent.

Study plans are prepared by students in consultation with their advisor early in each fall term, and are submitted to the Committee on Academic Studies. With the approval of the student’s advisor, revised study plans may be sent to the committee at any time during the year, to reflect changing interests.

Requirements for Advanced Degrees

The department expects candidates for advanced degrees to acquire professional competence in an area of research and to acquire a general knowledge of astronomy for an understanding of important developments in other areas.

1. Course and General Background Requirements. Candidates are admitted to the PhD program only, although the AM degree will be awarded upon satisfactory completion of the residence and course requirements. Candidates for the PhD degree in the Department of Astronomy must satisfy the course and general background requirements, and complete one research project, a thesis, and final oral examination as described below.

General Background Requirements. Previous knowledge of astronomy is not a prerequisite for admission to the department. However, students with little or no basic astronomy background are expected to become familiar with introductory concepts before enrolling at Harvard.

Placement Exam. All students are expected to pass a written placement examination in the second half of the first semester covering the basic concepts/core of astronomy and astrophysics. Remedial programs will be designed for students who do not pass the exam.

Physics and Mathematics. Strong training in these fields is essential for graduate students in astronomy. Candidates for advanced degrees must have a substantial background in physics and mathematics. The following list, based on courses at Harvard, is representative of the minimum background the candidate should have acquired as an undergraduate:

• Stellar and Planetary Astronomy (AY16)
• Galactic and Extragalactic Astronomy (AY17)
• Mechanics and Relativity (Phys 15a)
• Electromagnetism (Phys 15b)
• Wave Phenomena (Phys 15c)

A total of two halfcourses in Math from the choices below:

• Calculus or Differential Equations (Math 21a or 21b)
• Linear Algebra and Real Analysis (Math 23a or 23b)
• Honors Algebra (Math 25a or 25b)
• Mathematical Methods (Applied Math 21a or 21b)
• Research Tutorial (AY98)

• Two additional courses in Astronomy or related fields to complete the requirement of 12 halfcourses

A knowledge of more advanced physics and mathematics is important, so students are encouraged to pursue these subjects at the graduate level by taking Physics 232 and 251a, b (or their equivalents) and Applied Mathematics 201 and 202. As a minimum, students are expected to obtain a satisfactory grade (A or B) or otherwise demonstrate knowledge of the material in
Physics 251a or AY 251 or Physics 210, or other graduate-level physics courses.

**Astronomy Courses.** Candidates for advanced degrees should obtain a broad knowledge of astronomy by obtaining a satisfactory grade or by passing an oral examination in one core course (Astronomy 200 Radiative Astrophysics), plus at least five additional courses selected from the following: Astronomy 151, 189, 193, 201a, 201b, 202a, 202b, 215hf, 218, 219, 224, 231, 251, 253, Physics 210, 211, and 251a and 251b. Courses taken elsewhere or courses of equivalent intellectual substance in mathematics or physics may be used to satisfy this requirement at the discretion of the CAS. In addition, students must participate every semester in the weekly Journal Club (AY 301hf).

**Teaching.** Department of Astronomy graduate students are required to teach for two semesters. First-year students are not normally allowed to teach so they may devote their time to studies. A student’s teaching will be evaluated by the University’s course evaluation process. Students who are not proficient in the English language are required to demonstrate to the course head their proficiency before they will be allowed to teach. Various routes to improving English communications skills are available through the University; the department will help students achieve the necessary proficiency. The Derek Bok Center for Teaching and Learning offers activities and services to aid those who teach, and is especially useful for new teaching fellows or those who are unfamiliar with teaching in the American classroom setting. The first two units of a student’s teaching are part of her/his compensation package from the department. Many students wish to teach more than the required amount. The Department believes that students should have this opportunity if they are in good academic standing and are making good progress toward their degree. Students who undertake additional teaching will normally receive half of their teaching stipend while the remaining half is applied to their support if sufficient research funds are available. Students who wish to teach additional courses should obtain the consent of their advisors and, by University rules, must be in good academic standing. Students may not teach more than one course per semester unless they have the consent of the Committee on Academic Studies (CAS). It is the responsibility of the student and their advisor to ensure that additional teaching (beyond the two required semesters) will not slow progress toward completion of academic/degree requirements.

**Plan of Study.** Students are expected to discuss their proposed course and study schedule with their advisor and then to submit it to the committee for approval as part of their annual study plan. Students should attempt to complete their course work and general background studies before the end of the second year. A student is notified when the CAS agrees that these requirements have been met.

The Astronomy Department has no formal requirement in foreign languages. Students should, however, be familiar with the scientific literature in foreign languages if it is necessary to their work.

**2. Research Project.** Before beginning work on a thesis, a student must complete one research project. The purpose of the project is to introduce students to methods of research and to ensure that they can organize material and present it cogently in written form. The topic may be in the area of intended thesis work, although research in another area is encouraged. No research project or paper carried out before the student has registered for graduate study at Harvard will be accepted for this requirement.

Each research project must have a faculty supervisor who approves the subject material and ensures that the written report meets the appropriate standard. Students are expected to select an area of research in their second term in residence, and should submit a proposal for a research project to the CAS before May 15 of their first year. This is a short statement of the intended research and does not require prior completion of any phase of the work.

**Research Exam Committees (REC).** The CAS will appoint Research Exam Committees for all students. This committee consists of the research project supervisor and three other members, one of whom will be appointed the chair. The REC will advise the CAS on the suitability and scope of the research proposal.

Normally students devote the summer following their first academic year to research their project and continue to work on it during the second year. On completion of that work, the student writes a Research Project Report. The student may work as a member of a research group, but the Project Report should be written entirely by the student, though it need not be the final version submitted for publication. The report need not describe a completed research project, but can be a description of work accomplished. Its total length should not exceed 50 pages.

**Research Exam.** The Research Project Report is evaluated by the Research Exam Committee, which also conducts a brief oral examination on the subject of the research as well as related astrophysics. The research examination is normally scheduled two weeks after the submission of the research report. Exams generally last two hours including the presentation, questions and committee deliberation. Students who have not completed their research exams by the end of the first semester of their third year will be required, with their advisor, to meet with the CAS. Salary/stipend support may be withdrawn and the student not allowed to register if the student has not completed their research exam by the end of the third year.

**3. Dissertation Proposal.** Within three to four months of completion of the research exam, the student should submit to the Committee on Academic Studies a dissertation proposal and a list of possible thesis committee members. It is desirable, but not required, that the dissertation topic be in an area different from that pursued for the research project.

**Thesis Advisory Committee.** The Thesis Advisory Committee (TAC) monitors the student’s progress towards the completion of the dissertation, giving both advice and supervision. It includes members with interests and knowledge broadly related to the dissertation research. Although the dissertation supervisor will be a member of the committee, another member will be designated chair by the Committee on Academic Studies (CAS). The student and committee will meet together at least once per semester. Each student has the responsibility for arranging TAC meetings each semester, starting no later than six months after completion of the research exam. The role of the TAC is to provide additional advice to the student and to report to the CAS on the student’s progress toward the PhD.

In advance of each meeting the student provides the committee members with a brief summary of current progress and problems. This, together with an evaluation form completed by the committee and given to the student, will be reviewed by the CAS.

**4. PhD Thesis.** It is desirable that the student complete the thesis and other degree requirements by the end of the fifth year. Before the final oral examination, the student is required to give a public lecture on the dissertation topic. Information on due dates for degree applications and submission of dissertations may be obtained from the department administrator. The final manuscript should conform to the requirements described in The Form of the PhD Dissertation.

**5. Final Oral Examination.** The Committee on Academic Studies will appoint a committee to conduct a final oral examination at which the candidate will defend their PhD dissertation. The Final Oral Exam Committee must contain at least two faculty members (by university rules) and one examiner from outside the University (by department rules). Typical committees have four or five members. The examination will be confined to the dissertation and topics bearing directly on it.
6. Duration of Graduate Study. Duration of graduate study should not ordinarily exceed five years, and students in their sixth year are encouraged to finish promptly.

7. Satisfactory Progress. Students who are not progressing satisfactorily will be put on a grace period, essentially a half year or one year. University probation during which they must begin to make appropriate progress. Students who, at the end of such a probationary period, are still not progressing satisfactorily will lose stipend support and may be asked to withdraw from the graduate program.

University Requirements for Advanced Degrees
University requirements for advanced degrees are found in The Graduate School of Arts and Sciences Handbook. University requirements include Common Requirements for Degree Candidates. Academic Residency Requirements: All candidates for advanced degrees must meet the University residence requirements, as defined in The GSAS Handbook. For the AM degree, a minimum of one year of full-time study in residence—normally eight half-courses or equivalent—is required; for the PhD degree, the minimum requirement is for two years of full-time study in residence—normally 16 half-courses or equivalent.

Financial Support
The Department of Astronomy plans to fully support all students who are accepted for graduate study. The department does not require or expect the statement of financial need upon application to the Graduate School. Students are accepted and supported on the basis of merit. The support may be in the form of a national or University fellowship, a teaching fellowship, or a research assistantship. The normal pattern of student support is a combination of fellowship, research assistantship, and teaching fellowship. Students gain teaching experience during their graduate career by teaching part-time (usually ten hours a week) during two terms. Prospective students are encouraged to visit the Center for Astrophysics to meet the faculty and students.

Further information may be obtained online at http://astronomy.fas.harvard.edu or from the Department Administrator, Department of Astronomy, Harvard University, 60 Garden Street, Cambridge, MA 02138; (617) 495-3753; department@cfa.harvard.edu.

Selected PhD Dissertation Titles
Zachory Berta, “Super-Earth and Sub-Neptune Exoplanets: A First Look from MEarth Project”
Robert Penna, “Black Hole Accretion Disks and Jets: Connecting Simulations and Theory”
Gregory Snyder, “Modeling Spatially and Spatially Resolved Observations to Diagnose the Formation of Elliptical Galaxies”
Nicholas Stone, “Tidal Disruption of Stars by Supermassive Black Holes”

Faculty of the Department of Astronomy
Charles Alcock, Professor of Astronomy. Massive compact halo objects, comets, and asteroids.
Edo Berger, John L. Loeb Associate Professor of the Natural Sciences. Observational studies of gamma-ray bursts and transient phenomena in the optical, X-rays, and radio; multi-wavelength studies of magnetic fields in low mass stars and brown dwarfs.

David Charbonneau, Professor (Director of Undergraduate Studies). Detection and characterization of planets orbiting nearby, Sun-like stars, design and implementation of automated telescopes for photometric monitoring, formation and structure of brown dwarfs, and searches for their low-mass companions.

Daniel Eisenstein, Professor of Astronomy. Theoretical and observational cosmology, focusing on high-precision large-scale structure, galaxy redshift surveys, dark energy, and galaxy evolution.

Douglas Finkbeiner, Professor of Astronomy and of Physics. Observational consequences of dark matter annihilation; interstellar dust and ionized gas as CMB foregrounds; galactic evolution, cosmic infrared background; largescale structure, deep redshift surveys (SDSS, DEEP2).

Alyssa A. Goodman, Professor of Astronomy. Studies of the interstellar medium, interstellar dust and star formation, including single-dish and interferometric spectral-line mapping, polarimetry, Zeeman observations, infrared photometry, stellar spectroscopy, satellite observations, and theoretical investigations.


Lars Hernquist, Mallinckrodt Professor of Astronomy. Theoretical studies of dynamical processes in cosmology and galaxy formation/galaxy evolution. Numerical simulations of stellar dynamical and hydrodynamical systems. Investigations of the physics of compact objects, particularly neutron stars and the interplay between thermal and magnetic processes in strongly magnetized neutron stars.

John Johnson, Professor of Astronomy. Detection and characterization of exoplanets using the Exoplanet Orbit Database, a carefully constructed compilation of quality, spectroscopic orbital parameters of exoplanets orbiting normal stars from the peer-reviewed literature.

Robert K. Kirshner, Clovis Professor of Science. Observations of supernovae, supernova remnants, galaxy dynamics and evolution, clusters and galaxy distributions on very large scales using KPNO, CTIO, Las Campanas, IUE, Whipple Observatory, HST, and the MMT.

John Kovac, Assistant Professor of Astronomy and of Physics. Observations of cosmic microwave background temperature and polarization anisotropies, and their use to search for evidence of Inflation, constrain cosmological parameters,
and study the evolution structure. Cosmology using radio observations. Experimental techniques for measurements from radio to sub-mm wavelengths, including interferometry, bolometric detection, optics, and guided wave devices. Analysis methods for CMB and other cosmological datasets.

Julia C. Lee, Associate Professor of Astronomy. High-resolution X-ray spectroscopy. Abraham Loeb, Professor of Astronomy. Theoretical cosmology, in particular the early formation of structure in the universe; gamma-ray bursts and gravitational lensing.

Abraham Loeb, Frank B. Baird, Jr. Professor of Science. Theoretical cosmology, in particular the early formation of structure in the universe; gamma-ray bursts and gravitational lensing.

James M. Moran, Donald H. Menzel Professor of Astrophysics. High angular resolution studies of radio sources, such as the galactic center and masers in accretion disks of AGN.

Ramesh Narayan, Thomas Dudley Cabot Professor of the Natural Sciences. Theoretical high energy astrophysics. Accretion disks in binary neutron stars and black holes and in galactic nuclei; gamma-ray bursts, gravitational lensing.

Karin Oberg, Assistant Professor of Astronomy. Solar-type star icy mantles on microscopic dust particles. H2O, CO2, CO, NH3, CH4 and CH3OH ices exposed to heat or UV irradiation. Chemistry in protoplanetary disks, encompassing both gas and grain phase reactions and their dependences on different disk environments.

Dimitar D. Sasselov, Professor of Astronomy. Research in dynamic stellar atmospheres, chromospheric heating, and mass loss through coupled hydrodynamics and radiative transfer. Galactic stellar populations and nucleosynthesis. Extrasolar planets.

Irwin I. Shapiro, Timken University Professor. Applications of radio and radar techniques to astrometry, astrophysics, geophysics, planetary physics, and tests of theories of gravitation.

Alicia Soderberg, Assistant Professor of Astronomy. Catastrophic death of stars, “supernovae”; combination of astronomical data sets from many observatories and satellites in order to probe the eruptive, destructive, and explosive nature of supernovae and their role in the Universe.

Christopher Stubbs, Samuel C. Moncher Professor of Physics and of Astronomy. Dark energy and dark matter, observational cosmology. Astronomical instrumentation and detector development; high performance computing applied to astronomical data analysis. Gravitational microlensing and supernova observations.
Higher Degrees in Biostatistics

Biostatistics involves the theory and application of statistical science to analyze public health problems and to further biomedical research. The faculty includes leaders in the development of statistical methods for clinical trials and observational studies, studies on the environment, and genomics/genetics. The department’s research in statistical methods and bioinformatics and its interdisciplinary collaborations provide many opportunities for student participation. The Department of Biostatistics offers the PhD through GSAS and the Master of Science through Harvard School of Public Health.

Current departmental research areas include Bayesian inference, bioinformatics, causal inference, computationally-intensive methods, decision sciences, design and analysis of clinical trials, experimental design, high dimensional data analysis, machine learning, measurement error, missing data, multivariate and longitudinal studies, network analysis, quantitative genomics, semiparametric methods, sequential methods, spatial statistics, statistical computing, statistical genetics, stochastic processes, surveillance methods, and survival analysis, among other areas. Areas of application include biology, cancer, clinical research, computational biology, the environment, epidemiology, genetics, health disparities, health policy, HIV/AIDS, infectious diseases, neurology, and psychiatry, among other areas. Collaborative research activities include coordination of national and international clinical trials, participation in studies of potential environmental hazards, collaboration on novel genetic and genomic studies, evaluation of health interventions and medical technologies, consultation with federal, state, and local agencies, and working with biomedical scientists in other Harvard-affiliated institutions.

The PhD program in Biostatistics trains students in the areas of probabilistic and statistical theory, biostatistical and bioinformatics methods, statistical computation and algorithm development, the ability to collaborate and communicate effectively with scientists in related disciplines, and the ability to teach biostatistics and bioinformatics effectively to general or specialized audiences. The PhD program includes training in the development of methodology, consulting, teaching, and collaboration on a broad spectrum of health-related problems.

The Department offers the PhD in Biostatistics with two areas of interest: Biostatistics and Bioinformatics. Students select the area of interest most appropriate to their background and interests, and satisfy the specific degree program requirements for their area of interest.

The First Two Years

Advising and Course Selection

Each first-year student is assigned a faculty advisor by the Biostatistics Student Advising Committee. The faculty advisor will assist the student in course selection and other academic issues until the student has selected a dissertation advisor. The Student Advising Committee oversees student advising and orientation, funding concerns, teaching and research assistantships, and other related matters.

The particular courses a student is required to take may vary based upon his or her academic background. The specific requirements for the PhD in Biostatistics are outlined in the Biostatistics Graduate Student Handbook, including requirements for the areas of interest in Biostatistics or Bioinformatics. The director of graduate studies is responsible for reviewing the student’s program of study and has the authority to consider exceptions to the rules and regulations established by the department. The recommendations of the director of graduate studies are forwarded to the department chair for final approval.

Advising of students comes from faculty advisors, course instructors, the Biostatistics Student Advising Committee, the director of graduate studies, the department chair, other faculty, and GSAS. All students are monitored by the Committee on Academic Standing. Third- and higher year students are also monitored by their dissertation advisor and their research committee.

Credit for Work Done Elsewhere

The program may excuse a student from some of the program course requirements in consideration of courses taken elsewhere. Only graduate courses taken after the bachelor’s degree may be given official GSAS credit toward the PhD degree. The maximum allowable credit for courses taken elsewhere is eight half-courses (a half-course is equivalent to a five-unit Harvard School of Public Health course). Students petitioning for credit for work done elsewhere should seek the approval of the director of graduate studies. The recommendations of the director of graduate studies are forwarded to the department chair for final approval.

Master of Arts (AM)

No one is admitted as a candidate for the AM, only for the PhD. Nevertheless, the requirements for the master’s degree must be satisfied by all students as they move toward the PhD and are expected to be completed by the end of the fourth term. The AM degree may be granted when these requirements are fulfilled. In addition, the department may confer a terminal AM on students who will not be completing the requirements for the PhD.

For the AM degree, four terms of course work with a minimum average grade of B is ordinarily required. With the department’s approval, students with a previous graduate degree in a medical, scientific, or statistical field and with prior sufficient prior statistical training may qualify for the AM degree with two terms of course work. The specific requirements for the AM in Biostatistics are outlined in the Biostatistics Graduate Student Handbook. Upon fulfilling the AM requirements, students should submit an application for the master’s degree.

Applicants interested in the Master of Science program in Biostatistics should apply through Harvard School of Public Health.

Teaching

The Biostatistics program encourages its students to gain meaningful teaching experience as part of their graduate training. All PhD students participate as a teaching assistant in courses offered by the department.

Computing

Students entering the PhD program in Biostatistics are expected to have experience with a programming language and one or more statistical packages. Given the increasing reliance of statistical practice on computing technology, students are recommended to take one or more courses in statistical computing as part of their program.

Qualifying Examinations

Each student must take and pass two qualifying examinations: a written qualifying examination and, later, an oral examination.

The written qualifying examination assesses the student’s background in probability and statistical theory and in applications. It is administered annually by the Biostatistics Qualifying Examination Committee.
The written examination is typically given just prior to the spring term of the second academic year. The Biostatistics Qualifying Examination Committee supervises the writing and grading of the examination. Students may be allowed to retake the examination, once, with Departmental approval. A student who has not passed the written qualifying examination after two attempts will be asked to leave the program.

The oral qualifying examination assesses the student’s potential to perform research in a chosen field, and examines the student’s knowledge of his or her fields of study. The oral examination should be scheduled within three terms of passing the written examination. The student nominates an oral qualifying examination committee of at least three faculty members who will give this examination. The membership of the oral qualifying examination committee must be approved by the director of graduate studies. Successful completion of the written qualifying examination is a prerequisite for taking the oral qualifying examination.

Dissertation Advisor Selection

Students select their dissertation advisors following their successful completion of the written qualifying examination. The dissertation advisor will take over the duties of academic advising from the student’s faculty advisor. A student’s selection of dissertation advisor must be approved by the director of graduate studies.

Research Committee

After a student has passed the oral qualifying examination, the student, in consultation with the dissertation advisor, nominates a research committee to oversee the student’s progress. The research committee ordinarily consists of the dissertation advisor, who serves as the chairperson, and two or more faculty members. The membership of the research committee must be approved by the director of graduate studies.

The research committee will provide timely and considered advising to the student. The research committee helps set logical goals for the completion of the dissertation and monitors progress toward completion of degree requirements.

The student is responsible for arranging periodic meetings with the research committee. The student and his or her dissertation advisor will prepare a written report twice per year.

Preparation for the Dissertation Defense

The FAS Registrar specifies deadlines by which the dissertation must be submitted and the dissertation examination passed to receive the PhD diploma in November, March, or May of each academic year. A dissertation information packet is available from the Registrar’s office or from the biostatistics administration office specifying the steps to be taken when the student is ready to apply for the PhD degree and the various forms that need to be submitted.

The dissertation should be an original contribution to scientific knowledge. It can contribute to a subject matter field through innovative application of existing methodology, can produce an original methodological contribution, or be a combination of the two.

Acceptance of the dissertation is the responsibility of the student’s research committee, the department, and GSAS. When the dissertation is complete, the student defends it to the research committee at a public presentation. The defense must be scheduled at least three weeks in advance. Copies of the dissertation should be given to members of the research committee and the department chair at least two weeks before the defense.

Faculty

Biostatistics faculty work in a wide variety of research and application areas and collaborate with faculty in FAS, Harvard School of Public Health, Harvard Medical School, Harvard-affiliated hospitals, and with many external groups. More information about our faculty can be found on the department’s website.
The PhD in Business Economics

A joint degree offered by the Department of Economics in the Faculty of Arts and Sciences and the Harvard Business School, the PhD in business economics combines economic analysis with the practical aspects of business. This degree is primarily intended to prepare students for careers in research and teaching in business administration and related fields of economics. The general management approach of the Harvard Business School is an important ingredient in the program.

The program can be distinguished from the Harvard PhD in economics by its greater emphasis on business fields and its focus on the use of economic analysis and statistical methods in dealing effectively with management problems in these applied business fields.

Admission

Successful candidates have strong records of academic performance in rigorous programs and exemplary GRE General Test or GMAT scores, especially in the quantitative area. They are not required to hold a degree in economics, though prior coursework is strongly recommended. Furthermore, they generally have an effective working knowledge of college-level calculus and linear algebra.

Adequate command of spoken and written English is required for admission. Non-native English speakers must take the TOEFL, unless they have obtained the equivalent of a US bachelor degree from an institution at which English is the language of instruction. The committee prefers scores of at least 100 on the Internet based test (IBT) of the TOEFL.

Further information about the program is available on the Harvard Business School website (www.hbs.edu/doctoral). The online application for admission is available on the Graduate School of Arts and Sciences website (www.gas.harvard.edu). Questions regarding the program should be directed to:

Harvard Business School
Doctoral Programs Office
doctoralprograms@hbs.edu
(617) 495-6101

Financial Aid

All incoming students receive a merit-based award, regardless of need. This includes a fellowship for tuition and health fees, as well as a stipend for living expenses ($39,300 in 2013–2014).

Program

During the first year, students take courses in graduate economic theory (i.e., microeconomics, general equilibrium, and macroeconomics) to prepare for the written General Examination. All courses should be completed with a grade of B or better. Most students take an advanced course in statistics and a basic graduate course in econometrics. This is the same first-year program that would be undertaken by a candidate for the PhD in economics.

To complete the PhD in business economics, students must fulfill the following requirements:

- Courses in economic theory
- Courses in quantitative methods
- Business Education for Scholars and Teaching
- Business history
- Teaching
- Written General Examination in economic theory
- Oral Special Field Examination
- Dissertation

In consultation with faculty advisors, students engage in a customized field experience as part of Business Education for Scholars and Teaching requirement.

Students may specialize in fields such as: capital markets and financial institutions, corporate finance, corporate governance, competition and strategy, international business, production and innovation, negotiation and decision-making, game theory, organizational economics, business organization, marketing, transportation and logistics, and business and economic development.

Each field is conceived as a synthesis of some field or area in business administration with those areas of economics that contribute appropriate theoretical and methodological tools. Each student takes an active role in selecting and defining the combination of subjects that make up the special field.

Selected PhD Dissertation Titles


“Essays on the Economics of Risk and Financial Markets”

“Essays on the Industrial Organization of Health Care”

“Social Forces and Public Good Provision”

“Matching Models of Markets”

“Essays in Microeconomic Theory”

“The Industrial Organization of Health Insurance Markets”

“Effects of the Organization of Financial Markets”

“Capital Market Imperfections and Corporate Finance”


“Malnutrition, Infectious Disease, and Economic Development”

“Individuals and Corporate Decisions”

Faculty

Business Economics faculty members come from both the Faculty of Arts and Sciences and the Harvard Business School. They include, but are not limited to:

Jerry R. Green, Chair, John Leverett Professor in the University; David A. Wells Professor of Political Economy. Microeconomic theory.

Philippe Aghion, Robert C. Magerman Professor of Economics. Economic theory, development, industrial organization, economic growth, contract theory.
Bharat Anand, Professor of Business Administration. Applied and empirical industrial organization and corporate strategy.

Nava Ashraf, Associate Professor of Business Administration. Decision making, economic development, and field experiments.

Malcolm Baker, Professor of Business Administration. Interaction between corporate financing decisions and market efficiency.

Carliss Y. Baldwin, William L. White Professor of Business Administration. Finance and organizational economics.

John Y. Campbell, Morton L. and Carole S. Olshan Professor of Economics. Stock prices, term structure of interest rates, and aggregate consumption in relation to economic fluctuations.

Lauren Cohen, Associate Professor of Business Administration. Empirical asset pricing, behavioral finance, and portfolio choice.

C. Fritz Foley, Professor of Business Administration. International corporate finance.

Kenneth A. Froot, Andre R. Jakurski Professor of Business Administration. International finance, distribution of insurance risk, risk capital, and capital allocation.

Drew Fudenberg, Frederic E. Abbe Professor of Economics. Game theory and microeconomic theory.

Stuart Gilson, Steven R. Fenster Professor of Business Administration. Valuation, corporate finance, and corporate restructuring.

Paul A. Gompers, Eugene Holman Professor of Business Administration. Private equity funds, private firms, and long-run performance evaluation for newly public companies.

Brian J. Hall, Albert H. Gordon Professor of Business Administration. Compensation and incentive strategy, corporate governance, corporate finance, and organizational economics.

Samuel Hanson, Assistant Professor of Business Administration. Corporate finance, behavioral finance, and asset pricing.

Oliver S. Hart, Andrew E. Fierer Professor of Economics. Theory of the firm and contract theory.

Paul M. Healy, James R. Williston Professor of Business Administration. Corporate financial reporting and analysis and corporate finance.

Richard Hornbeck, Assistant Professor of Economics. Economic history and development.

Victoria Ivashina, Associate Professor of Business Administration. Applied corporate finance, credit markets.

Dale W. Jorgenson, Samuel W. Morris University Professor. Econometrics.

Robert S. Kaplan, Marvin Bower Professor of Leadership Development, Emeritus. Link between cost and performance measurement systems with strategy implementation and operational excellence.

Taru Khanna, Jorge Paulo Lemann Professor of Business Administration. Corporate strategy of diversified business.

Ian Larkin, Assistant Professor of Business Administration. Employee decisions and firm performance.

Josh Lerner, Jacob H. Schiff Professor of Investment Banking. Venture capital, private equity, and intellectual property.

Nathan Nunn, Professor of Economics. International trade, economic development, economic history.

Felix Oberholzer-Gee, Andreas Andresen Professor of Business Administration. Senior Associate Dean for International Development. Strategy.

Ariel Pakes, Steven McArthur Heller Professor of Economics. Industrial organization and econometrics.

Krishna G. Palepu, Ross Graham Walker Professor of Business Administration. Strategy, valuation, and disclosure.

Jan Rivkin, Bruce V. Rauner Professor of Business Administration. Interactions across functional and product boundaries within a firm.

Julio J. Rotemberg, William Ziegler Professor of Business Administration. Sources of economic fluctuations, emphasizing effects of monetary policy, fiscal policy, and oil price changes.


David Scharfstein, Edmund Cogswell Converse Professor of Finance and Banking. Entrepreneurship and venture capital; corporate resource allocation; and financing and management of biotechnology.

Andrei Shleifer, Professor of Economics. Applied theory, corporate finance, and economic transition.

Jeremy C. Stein, Moise Y. Safra Professor of Economics. Corporate finance, behavioral finance, money and banking.

Adi Sunderam, Assistant Professor of Business Administration. Corporate finance, asset pricing, and financial intermediation.

Luis M. Vicereja, George E. Bates Professor. Investments and asset prices.

Dennis Yao, Lawrence E. Fouraker Professor of Business Administration. Incentive and information problems affecting firms.
Celtic Languages and Literatures

The First Two Years

The First Year
Eight half-courses. Should include at least three 200-level half-courses, two of which must be in early Irish or early Welsh language (unless satisfied elsewhere). The ability to read Latin and either French or German. The ability to read these languages is to be demonstrated as follows:

For Latin, successful completion (B-grade or better) of Harvard Latin Aab; for French, successful completion (B-grade or better) of Harvard French Ax; for German, successful completion (B-grade or better) of Harvard German Ax. An equivalent qualification acquired at Harvard or elsewhere (and approved by the director of graduate studies or Celtic department chair) or a departmental examination may also demonstrate competence in any of the languages noted above.

Note: Any coursework offered in satisfaction of this requirement must normally be taken in addition to the eight half-course requirement. The demonstration of ability to read Latin and either French or German may be postponed until the second year.

A grade of Incomplete, whether in Celtic department courses or in courses in other departments, must be converted into a letter grade before the end of the next registration period, or it will become permanent unless the student has successfully petitioned the GSAS Dean’s office for an extension of time.

Students must make up incomplete grades in required courses before taking the general examination.

The Second Year
Students would normally be expected to take eight half-courses, two of which must be 200-level courses in early Irish or early Welsh, which has not been satisfied in the first year or elsewhere. This requirement is exclusive of the Latin, French, and German requirement as noted above. The remaining language requirement, namely the ability to read French or German, is to be demonstrated. Any language requirement deferred from the first year must also be met.

Master of Arts (AM)
Ordinarily, students are not admitted to the department to pursue a terminal AM degree.

For students matriculated in the Celtic department and working toward the PhD, and students matriculated in other departments of GSAS, the minimum requirements for the AM in Celtic are:

- A minimum of six half-courses in the department, three of which must be introductory, intermediate, and advanced courses in early Irish or early Welsh (or their equivalents) and at least one additional half-course in another Celtic language.
- Two additional half-courses related to the field of Celtic studies and approved by the department’s director of graduate studies.
- The ability to read Latin, to be demonstrated by successful completion (B-grade or better) of Harvard Latin Aab (or its equivalent elsewhere) or departmental examination.
- The ability to read French and/or German, to be demonstrated by successful completion (B-grade or better) of Harvard French Ax and/or German Ax (or equivalent elsewhere) or departmental examination.

Teaching
Students will normally be eligible for teaching fellowships during their third and fourth years. Students holding the master’s degree may be eligible in their second year.

Students teaching in courses offered by members of the department faculty must participate in the teaching fellows (TF) orientation program at the beginning of the term in which they will teach, as well as attend course lectures and weekly TF meetings with the course head.

Students who are fluent in speaking, reading, and writing one of the modern Celtic languages may be eligible to teach introductory and intermediate courses in that language.

General Examination
The general examination is a two-hour oral examination in the general field of Celtic studies, augmented by the student’s special interests within Celtic or an allied field, normally structured for the purposes of the examination as reading lists of primary and secondary sources in four or five areas.

It is conducted by the student’s committee, normally comprising at least two members of the Celtic department and one additional faculty member.

It is expected that the examination will be taken in the third year of PhD residency, ordinarily in the fall. In exceptional circumstances, it may be taken in the spring of the third year.

In cases of unsatisfactory performance, the student may normally take the examination a second time. A student who does not pass on the second attempt must withdraw from the program. A student who has not passed the general examination by the end of the fourth year must withdraw.

Dissertation
As soon as possible after passing the general examination, and not later than the end of the term following successful completion of the examination, the candidate must identify a dissertation director and submit a prospectus of the proposed dissertation.

Early in the semester following the approval of the prospectus, the candidate, in consultation with the dissertation director, will invite two other readers, one of whom must be a member of the Faculty of Arts and Sciences, to serve as additional readers and to offer guidance as the dissertation progresses. This procedure must have the approval of the chair of the Celtic department.

Members of the dissertation committee must receive a final draft of the complete dissertation by the beginning of August for a November degree, the end of November for a March degree, and the end of March for a May degree.

The final manuscript of the dissertation must conform to the requirements described in The Form of the PhD Dissertation, available on the Web (www.gas.harvard.edu/current_students/form_of_the_phd_dissertation.php).

Students are encouraged to complete the PhD before the end of the sixth year.

Dissertation Defense
Upon completion of the dissertation, the candidate will be required to defend it before an audience comprising members of the dissertation committee together with an invited audience of faculty and students. Once the dissertation has been successfully defended, the members of the dissertation committee will sign the dissertation acceptance certificate.

Ad Hoc Degrees
Interested parties should consult the Celtic department’s director of graduate studies and review the GSAS Ad hoc Program requirements described earlier in this handbook.

PhD Secondary Fields
The Celtic Department encourages students who have a background and interest in a subject closely related to the field of Celtic studies (e.g., Classics, Comparative Literature, Historical Linguistics, Medieval Studies, Romance Languages and Literatures) to consider completing a Secondary Field in that area. Please see the list of Secondary Fields in PhD Studies in the Graduate School of Arts and Sciences Programs of Study.
PhD in Chemical Physics

The degree of doctor of philosophy in chemical physics was established to meet the needs of students wishing to prepare themselves for the study of chemical problems by the methods and theories of modern physics. The Committee on the Degree of Doctor of Philosophy in Chemical Physics is composed of members of the Departments of Chemistry and Chemical Biology, Physics, and of the School of Engineering and Applied Sciences, with special interests in the field commonly known as chemical physics. The program of study includes courses in these subjects, and research on an appropriate problem under the direction of a member of one of these departments.

In general, candidates have access to the facilities and are eligible for the fellowships and scholarships of these departments. For further information, consult Chemistry and Chemical Biology and Physics.

Admission

Applications for admission to study for the PhD degree in chemical physics are accepted from students who have received the bachelor’s degree or have had equivalent preparation. These applications should be initiated during the fall of the year preceding the September when admission is desired. Normally, students are admitted only for September.

Applicants must take the GRE general and chemistry (or physics) examinations. These must be taken no later than November of the year prior to admission and preferably earlier so that score reports arrive by the December application deadline. TOEFL is required of all foreign applicants other than those whose native language is English.

We encourage prospective students to submit their applications online whenever possible at http://www.gas.harvard.edu/apply. To apply to the Chemical Physics program, please select Chemistry and Chemical Biology in the drop down box in the Preliminary Questions section of the online application. You will be able to select Chemical Physics as a subject within Chemistry and Chemical Biology. Please note: Chemical Physics is a separate and distinct program from Chemistry and Chemical Biology. Applicants selecting Chemical Physics and admitted to the Chemical Physics program will receive a PhD in Chemical Physics. We also ask the student’s recommenders to submit their letters online whenever possible.

Financial Support

Students should refer to the Chemistry and Chemical Biology Program of Study descriptions for information about financial support.

Master of Arts (AM)

No master’s degree is offered in chemical physics. However, a prospective candidate for the doctoral degree in this subject may apply to the departments of either Chemistry and Chemical Biology or Physics. The requirements for the AM degree in either Chemistry or Physics are described in the GSAS Handbook under the Chemistry and Chemical Biology or Physics sections.

Requirements for the PhD

Prerequisites for Admission

A sufficient preparation in intermediate physical chemistry, physics, and mathematics. The GRE General Examination is required, as is the subject exam, in either chemistry or physics.

Qualifying Requirements

Students in the Program for the PhD in Chemical Physics are required to pass five half-courses. Courses must be passed with average grades of B or higher. Grades of B- will count as a pass if balanced by a B+ or better on a one-for-one basis.

There are two tracks:
1) one course from Group A), one course from Group B), and three courses from Group C) or
2) two courses from Group A), one course from Group B), and two courses from Group C).

Groups:
A) Chemistry 242 or Physics 251a, 251b
B) Chemistry 190 or 240; Physics 262; or Applied Physics 284
C) Applied Mathematics 201, 202; Chemistry 158; Applied Physics 195, 282, 292, 295a, 295b, 296r, 298r; Physics 151, 153, 181 (or Eng. Sci. 181), 218, 232a, 232b, 253a, 253b, 268r

Equivalent courses may be substituted with the approval of the Curriculum Advising Committee.

Advising

During Orientation, each incoming student meets with an assigned member of the Curriculum Advising Committee (CAC) to formulate a Plan of Study. The CAC advises students on their academic plans, approves required courses, and assists in decisions related to the PhD program. Any changes to the original Plan of Study must be discussed with and approved by a member of the CAC.

During rotations, once in a lab, each rotation student will be assigned a graduate student or postdoctoral mentor. Mentors are a valuable resource for rotation students, providing guidance and advice regarding lab practices and policies.

All students should enter a research group by June 30 of their first year. Once a student joins a research group, the faculty member of that group becomes the student’s advisor. If a student subsequently finds that another area of research more closely matches his or her interests, the student should consult with the director of graduate studies.
At the end of their first year, students are expected to form, in consultation with the director of graduate studies, their Graduate Advising Committee (GAC). The GAC consists of the student’s advisor and two other faculty members, one of whom must be a CCB faculty member. Students report their progress to the GAC at least once per year, beginning in their G2 year. The GAC may require more frequent meetings depending on the student’s progress, especially as the dissertation defense nears. Students are expected to present and defend a research proposal anytime between the first semester of their 2nd year up to the end of their 4th year in the presence of their GAC. Any one of the G2, G3, or G4 GAC committee meetings can serve as the independent research proposal meeting. The objective of these meetings is to promote the timely completion of degree requirements, to foster (non-advisor) faculty-student interactions, and to provide career counseling.

Students are encouraged to consult with the director of graduate studies on any issues that affect graduate student life.

Oral Examinations

Students in Chemical Physics are expected to present and defend a research proposal anytime between the first semester of their 2nd year up to the end of their 4th year (June 30th). Any one of the G2, G3, or G4 GAC committee meetings can serve as the independent research proposal meeting. Students are required to choose topics that are distinct from their Ph.D. research, and the final topic should be arrived at in consultation with their advisor. The student with his/her advisor will decide when to present the independent proposal. Completing an independent research proposal will expand a student’s base scientific knowledge and provide a formal exercise in identifying research projects in interesting and promising areas of research. The objectives of the independent research proposal program are:

1. To provide students the opportunity to:
   a. think deeply and creatively about a significant research problem and propose how that problem can be addressed experimentally.
   b. develop writing skills by preparing a clear and concise scientific document.
   c. develop oral presentation skills and engage in scientific discourse.
2. To provide students with a forum to receive constructive, critical feedback from faculty members.

The oral exam is expected to be 30 to 60 minutes in duration. During the presentation, students should be prepared to answer questions concerning the proposal topic as well as allied areas. Questions of a more general nature or of topical interest (e.g., recent CCB seminars) may also be asked. At the end of the independent research proposal presentation, there will be a short discussion on research progress to date.

Language

A thorough command of oral and written English is required. Incoming PhD students who are non-native speakers of English and who have not received their undergraduate degree from an English speaking institution will have their English proficiency determined by their TOEFL iBT score. Students who are not deemed proficient will be required to take courses approved by GSAS to improve their English proficiency as part of their preparation for teaching and professional development. Students will not be allowed to teach until they are deemed proficient.

Teaching

All students are expected to teach discussion or laboratory sections halftime for two terms. Most students teach in the spring term of their first year and during one term of the second year (usually the fall). With his or her advisor’s approval, a student may teach in subsequent years.

Satisfactory Progress

Continuation in the degree program is contingent on the following: (1) satisfactory completion of required coursework, (2) successful presentation and defense of a research proposal in accordance with policy set by the Graduate Advising Committee (GAC), (3) admission to a research group by June 30 of the first year, and (4) satisfactory progress in 300-level research courses.

Dissertation

The preparation of a satisfactory dissertation normally requires at least four years of full-time research. The final manuscript must conform to the requirements described online in The Form of the PhD Dissertation.

All students are expected to provide a public presentation of their PhD research. The dissertation defense will be comprised of two parts: 1) a public presentation of the student’s PhD research to which members of the CCB community will be invited, followed by 2) the private PhD dissertation defense before the dissertation defense committee (generally the GAC). One of the readers must be a faculty member of the department of Chemistry and Chemical Biology (generally the advisor). Two members of the committee must be members of the Faculty of Arts and Sciences. Faculty members from other schools at Harvard who hold appointments on GSAS degree committees as well as FAS emeriti and research professors may serve as members of the dissertation committee. Faculty of institutions outside of Harvard may serve as a member of the dissertation committee providing the requirement of two readers from FAS (one being a CCB faculty member, generally the advisor) is met.

PhD in Chemical Physics

Selected PhD Dissertation Titles

Nathalie de Leon Snapp, “Quantum Plasmonic Circuit Elements” (Park Group)

Brian Landry, “Semiclassical Methods for Many-Body Systems” (Heller Group)


Patrick Rebentrost, “Exciton Transfer in Photo-synthesis and Engineered Systems: Role of Electronic Coherence and the Environment” (Aspuru-Guzik Group)

Alexander Shalek, “Nano- and Micro-structured Interfaces for Interrogating Living Cells” (Park Group)

Sangwoo Shim, “Quantum Dynamics in Biological Systems” (Aspuru-Guzik Group)

Jie Xiang, “Semiconductor Nanostructures and Nanowire Heterostructures: Fundamental Transport Phenomena and Application in Nanoelectronics” (Lieber Group)
Harvard Graduate Programs in Classics

For application materials for the graduate program, please contact Graduate Admissions (617-495-5315). Please note that writing samples should be submitted as PDFs to preserve Greek script and other special formatting.

The department has been at the forefront of graduate education in Classics for well over a century. It offers a variety of approaches, emphasizing a wide range of knowledge and skills rather than a narrow early specialization. Traditionally, the PhD in Classical Philology has been the degree taken by most doctoral candidates, but the department also offers degrees in Ancient History, Classical Archaeology, Classical Philosophy, Medieval Latin, Byzantine Greek, and Modern Greek. All candidates admitted to the PhD programs are expected to enter with competence in the pertinent languages, ancient and modern, on which they will build in the course of their graduate study.

Ideally, the doctoral program is conceived as lasting six years, divided into three segments. The first two years, defined as "academic residence" for administrative purposes, are largely devoted to seminars, to lecture/reading courses, and to independent reading in preparation for the General Examinations. While all these formats are designed to broaden experience of the languages and literature needed for the degree, the seminars form the core of the department’s program of graduate education. Summers are often spent in reading to prepare for examinations.

In the third year, students prepare for their Special Examinations in three chosen categories, and begin to gain experience of teaching, which the Department regards as an essential part of graduate preparation.

In the last two years, they continue to teach, but otherwise work towards the completion of the degree, especially the writing of the dissertation.

Though the department views the training of future university teachers as a major part of its mandate, its primary concern is to foster as thorough an expertise as possible in those classical, medieval, and modern fields which are centered on Greek and Latin language and literature. For this reason, the department emphasizes the acquisition not only of knowledge, but also of skills—in teaching, in analysis, in research—which will enable its graduates to find careers both within and outside the traditional fields. Great emphasis is laid in the process of graduate admission on the adaptability of students to a flexible job market, and the department assists the career development of its students by placement advice and other practical assistance with the application process.

In working towards a degree in Classical Philology, students may come to emphasize one language over the other and may explore interests in philology, archaeology, history and prehistory, linguistics, philosophy, religion, law, literary criticism, mythography, or the medieval world both western and eastern. The department also offers specialized training in such disciplines as papyrology, epigraphy, palaeography, and numismatics. The resources of other Harvard departments are open to those interested in other ancient languages and scripts, the history of science, and the relations of the Greek and the Romans with other ancient cultures.

Progress to the doctorate is supported by the outstanding collections of the Widener Library in every aspect of the ancient world, with the pertinent texts and journals located conveniently beside study desks in the stacks. The department also maintains the Herbert Weir Smyth Classical Library, with 9,000 volumes and comfortable working tables. Classical art is housed in the Harvard Art Museums, which also have an extensive collection of books on ancient art. The Museum of Fine Arts, Boston, has famous classical collections, and graduate students may be admitted to its library with special permission. Harvard’s Houghton Library holds papyri, manuscripts, and rare books pertaining to the classical field. Palaeographical works and manuscript facsimiles are kept in Smyth and in Widener D; the Parry Collection of oral epic is in Widener C, and epigraphical records and other aids are kept nearby in the Smyth Classical Library. The departmental space in Boylston Hall and the Smyth library both contain computer equipment for the use of the graduate students; this equipment provides access to the TLG, PHI, DCB, and other standard research tools.

There are regular occasions for graduate students and members of the Department to meet informally outside the classroom; in addition, there are frequent colloquia, and opportunities for discussion of graduate and faculty work. The Seminar on Ancient Greece and Rome in Harvard’s Humanities Center sponsors roundtable discussion groups for faculty and graduate students. There are many public lectures sponsored by the Department each year, including several James Loeb Classical Lectures given by distinguished scholars invited from outside the University. In alternate years the Carl Newell Jackson Lectures bring an eminent scholar to deliver four lectures which are subsequently published as a book; occasionally the Lectures are replaced by a Colloquium.

Funding for the duration of graduate study is normally provided by outright fellowship grants in the first two years, by a dissertation completion fellowship in the final year, and by a combination of tuition grants and teaching fellowships in the intervening years. In addition, the GSAS offers a variety of fellowships for assistance at various stages, and also limited grants for summer language study, travel and other projects. The Charles Eliot Norton Fellowship provides funding for a year or a summer at the American School of Classical Studies at Athens. The Dumbarton Oaks Research Library and Collection, under the administration of the Trustees for Harvard University, offers some junior fellowships in the late classical, early Christian, and Byzantine fields.

The following Graduate School scholarships and fellowships are reserved in whole or in part for graduate students of the classics: George Henry Chase, Arthur Deloraine Corey, Charles Haven Goodwin, William Watson Goodwin, Albert and Anna Howard, Francis Jones, the Loeb Classical Library Foundation, Joseph Benjamin Moors, Charles Eliot Norton, William King Richardson, Fred N. Robinson, Paul Shorey, and Teschemacher Memorial. For the Bowdoin and other prizes, students in residence should consult the pamphlet “Prizes Open to Students of Harvard College and in the Graduate School of Arts and Sciences.”

Candidates who have successfully completed their General Examinations (see below) are normally assigned teaching fellowships in undergraduate courses, which include elementary language courses, sophomore and junior tutorials, literature surveys, and courses taught in translation.

The department’s graduate program is chiefly designed to prepare students for the degree of doctor of philosophy (PhD); the department will not admit applicants for the degree of master of arts (AM) only. However, any student who has completed with honor two years of full-time study (16 applicable half-courses) will qualify for the degree of AM in the appropriate area as a level of attainment, which the department will normally recommend upon application by the student. No examinations beyond those required in the courses are required. Prerequisites are the same as for the PhD.
Doctor of Philosophy in Classical Philology

Prerequisites

Competence in both Greek and Latin sufficient to allow the student to take courses numbered above 100 upon entering Graduate School.

Academic Residence

Minimum of two years of full-time study (a combination of 16 half-courses, 301s or units of TIME). Students are not normally permitted to take more than two courses numbered 301 before sitting for their General Examinations.

Program of Study

Such as to foster expertise in:

(1) The methodology covered in the Proseminar (required).
(2) Greek and Latin languages and literatures, to be tested in the General Examinations.
(3) Intensive exegesis (textual, critical). To this end, before the PhD is conferred, candidates must pass four seminars having the designation “Classical Philology” (two in Greek topics, two in Latin).
(4) Prose composition, both Greek and Latin. This requirement is normally met by passing Greek K and Latin K, or the equivalent of the final examination in these courses, which may be set, if requested, as exemption examinations in late September or in January. This requirement must be met before the Special Examinations are taken (see below).
(5) Historical linguistics. To this end, candidates must pass Greek 134 and Latin 134 or the equivalent work, before taking the Special Examinations (see below).
(6) Ancient history and classical archaeology. In these areas candidates must pass three courses, subject to the following provisions:
   (a) If two courses are taken in ancient history, the third must be in classical archaeology, and vice versa.
   (b) At least one of the three courses must be on a Greek topic, and one other on a Roman topic.
   (c) At least one of the three courses must be a graduate seminar.
   (d) Two of the three courses must be passed before the Special Examinations.
   (e) A course on an ancient author in which work of an historical nature is submitted to fulfill the course requirements will be permitted to count towards the ancient history requirement.

(7) Other fields (Medieval Latin, Byzantine Greek, Modern Greek, Classical Philosophy, epigraphy, numismatics, palaeography, papyrology; other relevant fields with permission of the graduate committee). Candidates must pass one half-course in any one of these areas, or a second half-course either in Greek or Roman history or in classical archaeology. This requirement must be met before the PhD is conferred.

Modern Languages

The demonstration of a reading knowledge of French or Italian and of German, to be tested by the department (with the aid of dictionaries). This requirement must be fulfilled before the Special Examinations are taken. Tests are normally administered in September, February, and April.

General Examinations

All students will, normally by the end of April of the second year, take General Examinations comprising four parts, namely:

(1) Two written examinations of three hours each in the translation of Greek and Latin authors; each examination will consist of six passages (half prose and half verse) of which two will be at sight (i.e., not from the list given below).

(2) An oral examination of one-and-one-half hours, divided into two parts, on the history of Greek and Latin literature respectively. This examination will include, but will not be confined to, the material contained in the reading list. The examining committee will consist of one faculty member chiefly responsible for Greek literature; one chiefly responsible for Latin literature; and an additional one to moderate the proceedings and to intervene at his or her discretion.

These examinations may only be repeated once in the event of failure. If a student fails only one part of the examination, then he or she need only repeat that part.

Before taking these examinations, the candidate must have read, as a minimum, the following reading list in the original languages.

Reading List

Greek Literature:

Aeschines: Against Ctesiphon 159–end
Aesop: Fortune Tales, Persae
Apollonius Rhodius: I 1153–1307, III 1–166, 609–824
Aristophanes: Acharnians, Birds, Clouds, Frogs
Aristotle: Politics: Nicomachean Ethics I, Poetics
Callimachus: 1. 2, 6, 7, 9–75, 110, Hymns 2
Demosthenes: Olynthiacs I, On the Crown 199–end, Philippics 1
Dio Chrysostom: Euboicus

Euripides: Bacchae, Hippolytus, Medea
Gorgias: Helen
Hesiod: Theogony, Works and Days
Homer: Iliad, Odyssey, Hymns 2 and 5
Isocrates: Panegyricus 26–50, Helen
Longus: Daphnis and Chloe 1, 4
[Longinus]: De sublimitate 1–16
Lucian: Dream, Assembly of the Gods
Lyric Poetry: selections as in D. Campbell, Greek Lyric Poetry
Lysias: 1, 7, 12
Menander: Samia
Pindar: Olympians 1, 2, 7, 14, Pythians 1, 4, 8, 10, Nemeans 6, 7, 8, 10; Isthmians 7, 8
Plato: Apology, Gorgias, Republic I, VI 496a11–VII 518b7, Symposium
Plutarch: Demosthenes-Cicero, including synkrisis
Polybius: VI 2–10, XXXVIII 22, XXXIX 1–6
Sophocles: Antigone, Oedipus at Colonus, Oedi-pus Tyrannus
Theocritus: 1, 2, 7, 11, 13
Xenophon: Agesilaos

Latin Literature:

Apuleius: Metamorphoses I, IV 28–VI 24
Augustus: Res Gestae
Caesar: Bellum Gallicum I, Bellium Civile III
Catullus: all
Cicero: In Catilinam I–4; Pro Archia; Pro Caesar; Philebus; 1, 7, 14; Somnium Scipionis; De Offi-ciosis I 1–60; Brutus; letters, as in D. R. Shack-leton Bailey’s Select Letters
Ennius: all fragments
Horace: Odes, Epodes, Satires I, Epistles I, II I
Juvenal: 1–5, 10
Livy: I, VI, XXI, XXXIII
Lucan: I
Marzial: I

Epigrams (numbered as in Page, Epigrammata Graeca, except where otherwise specified):

- Antipater Sidonius: XI, XXXVI–XL
- Asclepiades: I, VI, XI, XX–XXII, XXXI–XXXII
- Dioscorides: XVII, XXII
- Hesiodus: XI
- Meleager: VI, IX, XIII, XXIX–XXXVI, XL–LVI, CII
- Philodemus: XXIII
- Posidippus IX, XXIV, Lithika I–XX Austin-Bastiani
- Theocritus: XIII–XV

Euripides: Bacchae, Hippolytus, Medea
Gorgias: Helen
Hesiodus: I 1–130, III 1–16, 30–87, VIII 18–99
Hesiodus: Theogony, Works and Days
Homer: Iliad, Odyssey, Hymns 2 and 5
Isocrates: Panegyricus 26–50, Helen
Longus: Daphnis and Chloe 1, 4
[Longinus]: De sublimitate 1–16
Lucian: Dream, Assembly of the Gods
Lyric Poetry: selections as in D. Campbell, Greek Lyric Poetry
Lysias: 1, 7, 12
Menander: Samia
Pindar: Olympians 1, 2, 7, 14; Pythians 1, 4, 8, 10; Nemeans 6, 7, 8, 10; Isthmians 7, 8
Plato: Apology, Gorgias, Republic I, VI 496a11–VII 518b7, Symposium
Plutarch: Demosthenes-Cicero, including synkrisis
Polybius: VI 2–10, XXXVIII 22, XXXIX 1–6
Sophocles: Antigone, Oedipus at Colonus, Oedi-pus Tyrannus
Theocritus: 1, 2, 7, 11, 13
Xenophon: Agesilaos

Latin Literature:

Apuleius: Metamorphoses I, IV 28–VI 24
Augustus: Res Gestae
Caesar: Bellum Gallicum I, Bellium Civile III
Catullus: all
Cicero: In Catilinam I–4; Pro Archia; Pro Caesar; Philebus; 1, 7, 14; Somnium Scipionis; De Offi-ciosis I 1–60; Brutus; letters, as in D. R. Shack-leton Bailey’s Select Letters
Ennius: all fragments
Horace: Odes, Epodes, Satires I, Epistles I, II I
Juvenal: 1–5, 10
Livy: I, VI, XXI, XXXIII
Lucan: I
Marzial: I
Students taking General Examinations before April 2012 may make any substitutions of works by the same author, provided that the substituted material is roughly of the same length and parallel in genre. With the approval of the graduate committee, students may also substitute a work or works of one of more authors for a work of another, or a work of an author not on the list for an author on the list, with the same proviso. One month before the written examination (by June 1 for a fall examination), students will deliver their reading list, whether the original or a modified version, to the director of graduate studies. This will be used as the basis for the written translation examinations.

Students taking General Examinations in or after April 2012 must petition the graduate committee to make substitutions of items on the reading list in two categories: a) substitutions of a work by the same author, provided that the substituted material is roughly of the same length and parallel in genre, and b) a work of one author on the list for a work of another, or a work of an author not on the list for an author on the list, provided that the substituted material is roughly of the same length and parallel in genre. Petitions should be submitted to the graduate committee in advance of the regular advising meeting at the beginning of the semester, no later than the beginning of the term in which the student will sit the General Examinations (normally the spring term of the second year). Petitions will be discussed with the student at this advising meeting and the approved list will be used as the basis for the written translation examinations.

Special Examinations

By the end of the third, or, at the latest, the fourth graduate year, the candidate must take a two-hour oral examination in two special author, one Greek and one Latin, and one special field. The candidate will be expected to know the historical background and manuscript tradition of these authors. The special field should be selected from fields such as the following: a period of Greek or Roman history, philosophy, religion, mythology, archaeology, topography, epigraphy, palaeography, papyrology, grammar or linguistics, metrics, history of classical studies, Medieval Latin literature, patristics, Byzantine studies, or the special problems of a literary genre (e.g., epic, historiography). The choice of authors and field should be submitted for approval by the graduate committee at the time of the General Examinations or within a month following them. Preparation for this examination will be by independent study, with regular supervision by a faculty member for each part of the examination (Class. Phil. 302). These examinations may be repeated only once in the event of failure.

Dissertation Regulations

(1) At the end of the Special Examinations, or at the latest within one month thereafter, the candidate should specify the area in which the dissertation is to be written and the name of the dissertation director. This person shall be a member of the Harvard faculty.

(2) The candidate, after consultation with the director, and within two months of the Special Examinations, will then invite two other faculty members to serve as readers. In exceptional cases, and with the prior approval of the graduate committee, one of these two members may be drawn from another department, another university, or an equivalent institution.

(3) Before the end of the semester following the Special Examinations, the candidate shall meet with the director and the two readers for approval of the prospectus of the dissertation. The prospectus can take many forms, and its scope is various. The purpose is to ensure that the candidate has done enough work to determine that (a) the project is manageable, is of suitable scope, and has not been done before in the same way, and (b) the candidate has the knowledge and skills to make an original contribution on the topic. The prospectus should include an account of the issue to be investigated, an outline of the approach to be taken, an annotated bibliography, and a timetable for completion. The recommended length is 20–25 pages. The director shall promptly, by means of the appropriate form (available in the department office), notify the graduate committee of the approved title and the name of the members of the dissertation committee.

(4) The director and other members of the dissertation committee shall, by May 15th of each year, or within 12 months of the prospectus meeting, and on annual occasions thereafter, meet with the candidate to reflect on the progress towards the dissertation, and on other aspects of the candidate’s professional profile (teaching, attending conferences, giving papers, publishing articles, etc.). External members of the committee shall normally be physically present at these annual meetings, but may be present via conference call, Skype or video-conferencing. The candidate shall submit to the committee a self-report in advance of this meeting, detailing progress towards the dissertation, any problems or setbacks, reflections on teaching, and on professional development in general. After the meeting, the director shall prepare a written summary of the discussion, and this report will be made available to the student and the DGS.

(5) Not later than the end of the sixth graduate year (except by permission of the graduate committee), the candidate must present a dissertation, written in an acceptable English style, as evidence of independent research. The final copy should conform to the requirements described in The Form of the PhD Dissertation, available online from the GSAS.

(6) When the candidate and the committee deem that the dissertation is ready to be examined, the candidate shall present three unbound copies of the entire dissertation not later than one week before the defense date specified on the Degree Calendar in the GSAS handbook for that year. All students are strongly encouraged to undergo a dissertation defense, as detailed in “New Dissertation Regulations for Students entering the Program from September 2010,” but only those entering the program from September 2010 are required to do so. Students should refer to the appropriate section below for the remaining steps in the dissertation process.

New Dissertation Regulations for Students Entering the Program from September 2010:

(7) The members of the committee shall have not less than two weeks after the submission date in which to read the dissertation, after which they shall confer, either in person or by other means, and shall decide, by majority vote, whether the dissertation defense should proceed. If the decision is positive, the committee members shall also agree on the changes and revisions needed for the dissertation to be approved. If, in the view of the committee members, substantial work remains to be done on the dissertation, the defense will be postponed to a later date. The director shall communicate the results of the committee discussion to the candidate.

(8) If the committee decides that the defense can proceed, the candidate shall normally have up to four weeks in which to make such changes and revisions as may have been specified by the committee and to submit a revised draft of the dissertation. The committee members shall have at least one week to review this revised draft before the defense takes place.
(9) The defense shall consist of a full and frank discussion of the dissertation, including plans for eventual publication of the results in article or monograph form. External members of the committee shall normally be physically present at the defense, but may be present via conference call, Skype or video-conferencing. Following the discussion, the members of the committee shall decide, by majority vote, whether to approve the dissertation, and, if the result is positive, shall sign the dissertation approval form.

(10) The dissertation as approved shall be accompanied by two copies of a summary of not over 1,200 words, which the director will promptly forward to the Editor of Harvard Studies in Classical Philology for publication.

Sample timeline for the procedures set out in steps 7–10: March 15th: candidate presents three copies of entire dissertation; April 1st: committee confers, decides if the defense can proceed; April 28th: candidate submits revised draft of dissertation; May 5th: thesis defense; May 8th: approved dissertation goes for binding; May 14th: bound dissertation submitted to Registrar [Note: the dates given are for a degree awarded in May. Please see the Degree Calendar for specific dates.]

Doctor of Philosophy in Classical Archaeology

The field of Classical Archaeology is understood to cover Aegean, Greek, Etruscan, and Roman art and archaeology. Faculty will also arrange work on a cross-departmental basis in related fields such as Egyptian, Near Eastern, Anatolian, Punic, Byzantine, and other areas of European art and archaeology.

Prerequisites

Incoming students are expected to have competence in both Greek and Latin sufficient to take courses numbered above 100 in one of these languages (the “major language”), and above the beginning level of the other (the “minor language”). In exceptional circumstances and with the approval of the director of graduate studies, substitution of another ancient language in the place of the minor language may be arranged. Some preparation in German and either French or Italian should be undertaken before admission to the program.

Academic Residence

As for the PhD in Classical Philology.

Program of Study

Such as to foster knowledge of the archaeology and monuments of the classical world in their historical and social context.

(1) Proseminar. Taken in the first year, Pass/Fail.

(2) Classical Archaeology: four seminars, of which at least one shall be on a Greek topic and another on a Roman topic. One of the four may be in a related field.

(3) Languages and Literatures: three half-courses or above the 100 level, of which at least one shall be in the “major language” and another in the “minor language,” and one of which shall be a seminar.

(4) Ancient History: three half-courses, of which at least one shall be in Greek and another in Roman history. One of the three shall be a seminar.

(5) Other Fields: three half-courses, of which one must be in non-classical art history, and the other two are to be chosen from fields such as anthropology, art history, epigraphy, numismatics, palaeography, and papyrology, or a related field at the discretion of the director of graduate studies.

Modern Languages

As for the PhD in Classical Philology.

General Examinations

All students will, normally by the end of April of the second year, take General Examinations comprising three parts:

(1) A written three-hour examination on the “major language,” consisting of six passages for translation (three prose, three verse) from the works prescribed in the reading list for that language.

(2) A three-hour written slide-examination testing knowledge of major sites, monuments, and works of art in the Greco-Roman world from the Bronze Age to the Late Roman period (a reading list indicating the relevant material is available from the director of graduate studies).

(3) A one-and-one-half hour oral examination testing general knowledge of major sites, monuments, and works of art of the Greco-Roman world from the Bronze Age to the Late Roman period. This examination will include, but will not be confined to, the material contained in the reading list of relevant material, and may include original objects. The examining committee will consist of at least three faculty members, one of whom will be appointed to moderate the proceedings and to intervene at his or her discretion.

These examinations may be repeated only once in the event of failure. If a student fails only one part of the examination, then he or she need only repeat that part.

Reading List

The major language translation examination (see under General Examinations) will be based on the following list. Students are also urged to read widely in translation from authors and works not included in the list.

Greek Literature:
Aeschylus: Agamemnon
Aristophanes: Frogs
Aristotle: Poetics
Demosthenes: Philippikes
Epigrams (numbered as in Page, Epigrammata Graeca): Callimachus II-V, VIII, XI, XIV-XV, XXIX-XXX, XXIV, XXXVIII, XLIII, XLIV, LI-LIII, LVI, LIX, LXVII, Posidippus IX, XXIV
Euripides: Bacchae
Herodotus: 1
Hesiod: Theogony
Homer: Iliad I, 18, 22, 24; Odyssey 1, 7, 9, 19
Inscriptions: R. Meiggs and D. Lewis, A Selection of Greek Historical Inscriptions #23 (Themistocles Decree), 93 (epigram for a Lycian dynasty), J. H. Oliver, Greek Constitutions #2 (inscription on tomb-violation)
Lyric poetry; selections from Sappho, Alcaeus, Archilochus, and Simonides, as in D. Campbell, Greek Lyric Poetry
Lysias: 1
Pausanias: I, 5
Philostratus the Younger: Imagines
Plato: Symposium
Sophocles: Oedipus Tyrannus
Theocritus: 1, 7
Thucydides: 1; 6.72–105; 7.1-17, 21-24, 36–87
Latin Literature:
Augustus: Res Gestae
Cato (Catullus 63, 64, 66
Cicero: letters, as in D. R. Shackleton Bailey’s Select Letters; Fourth Venetian Oration
Horace: Satires I
Juvenal: 3
Lex de imperio Vespasiani, as in M. Crawford’s Roman Statutes
Livy: 1, 6
Martial: 1, 14
Ovid: Metamorphoses 10
Petronius: Satyricon 26.7–78
Pliny the Elder: Natural History 34-35
Pliny the Younger: Epistles 1.1, 3, 15; 2.1, 6, 17; 3.5, 6, 16, 19, 21; 4.28, 30; 5.6, 11; 6.16, 20; 7.24; 8.8; 9.7, 33, 36; 10.61, 62, 70, 71, 90, 91, 96, 97
Propertius 1
Scriptores Historiae Augustae: Life of Hadrian
Seneca: Epistulae Morales 7, 12, 47, 51, 56, 86, 88
Students may make substitutions of authors or works under the same conditions as students taking the degree in Classical Philology.

Special Examinations
All students will, normally at the end of the third graduate year, take a two-hour oral examination in three topics, of which at least one should be Greek and one Roman. The choice of topics should be submitted for approval by the graduate committee at the time of the General Examinations, or within a month following them. Preparation for this examination will be by independent study, with regular supervision by a faculty member for each part of the examination. These examinations may be repeated only once in the event of failure.

Travel
After passing the Special Examinations, students are expected to spend one year either in academic programs at the American School of Classical Studies in Athens or at the American Academy in Rome, or at other institutions abroad which house materials relevant to their major area of research. In addition, students are strongly encouraged to acquire fieldwork experience.

Dissertation
The regulations governing the dissertation are the same as for the PhD in Classical Philology.

Doctor of Philosophy in Classical Philosophy
The purpose of the program in Classical Philosophy is to provide the student with the basic training in both philosophy and classical philology necessary for work in this field. Students who wish their primary grounding to be in the classics should apply to the program in Classical Philosophy in this department; students who wish their primary grounding to be in philosophy should apply to the parallel program in the Department of Philosophy.

Prerequisites
Competence in Greek and Latin sufficient to allow the student to take courses number above 100 in Greek and above the beginning level in Latin upon entering graduate school.

Academic Residence
As for the PhD in Classical Philology.

Program of Study
Such as to foster expertise in:
1. The methodology covered in the Proseminar.
2. Greek and Latin literature and philosophy; to be tested in the General Examinations below.
3. Intensive exegesis. By the end of the second year, the candidate must take two half-courses designated “primarily for graduates” and given by the faculty of the Department. In addition, the candidate must, by the end of the second year, have taken courses requiring substantial papers, or have submitted independently written papers, in each of the following areas: Plato, Aristotle, and either Pre-Socratic or Hellenistic Philosophy.
4. Prose composition. This requirement is met by passing Greek K (or the equivalent) and Latin H before taking the Special Examinations.
5. Modern philosophy. Before taking the Special Examinations, the candidate must complete, with a grade of B or better, the following courses in the Department of Philosophy:
   a. one course in Formal Logic
   b. one course in Ethics, Political Philosophy, or Aesthetics
   c. one course in Epistemology, Philosophy of Mind, Metaphysics, or Philosophy of Science

Modern Languages
As for the PhD in Classical Philology.

General Examinations
All students will, normally by the end of their second year, take General Examinations comprising four parts, namely:
   a. two written examinations of three hours each in the translation of Greek and Latin authors; each examination will consist of six passages, including both prose and verse, of which two will be at sight.
   b. an oral examination of one-and-one-half hours, of which half will be on the history of either Greek or Latin literature, and half on Greek and Roman philosophy.

   These examinations may be repeated only once in case of failure. If a student fails only one part of the examination, then he or she need only repeat that part.

Reading List:
Greek Literature:
Aeschylus: Oresteia, Prometheus
Aristophanes: Acharnians, Birds, Clouds, Frogs
Aristotle: Categories 1–5; Physics I, II; Metaphysics A, L; Nicomachean Ethics I–III.5; Poetics
Callimachus: Aitia fr. 1–2, 67–75, 110, Hymns 2
Demosthenes: Olyntheis 1, On the Crown 199–end, Philippics 1
Diogenes Laertius: X 1–83, 117–154
Euripides: Bacchae, Hippolytus, Medea
Gorgias: Helen
Herodotus: I 1–130, III 1–87
Hesiod: Theogony
Homeric Iliad, Odyssey, Hymns 2 and 5
Isocrates: Panegyrics
Lyric Poetry: selections as in D. Campbell, Greek Lyric Poetry
Lysias: 1, 7, 12
Menander: Samia
Parmenides: all B fragments
Pindar: Olympians 1, 2; Pythians 1, 8, 10
Plutarch: Eteocles I 6
Plutarch: De Stoicorum Repugnantiss
 Sextus Empiricus: Pyrrh. Hyp. I
Sophocles: Ajax, Antigone, Oedipus Tyrannus
Theocritus: I, 2, 7, 11, 13
Thucydides: I, II 34–65, III 35–85, V 26, 84–116, VI 8–23, VII 84–87, VIII 1
Xenophon: Memorabilia
Latin Literature:
Apuleius: De Deo Socratis
Augustinus: De Magistro
Caesar: Bellum Gallicum I, Bellum Civile III
Catullus: all
Cicero: In Catilinam 1–4; Pro Caelio; Philippics 1; Academica; De Finibus; De Oratore I; Brutus; letters, as in D.R. Shackleton Bailey’s Selected Letters
Ennius: all fragments
Horace: Odes, Epodes, Satires I, Epistles I, II 2
Juvenal: I, 3, 4, 6, 10
Livy: I, XXI, XXXIII
Lucretius: I, II 1–293, III, IV 1058–1287, V, VI 1138–1286
Martial: I
Ovid: Amores I, Heroides I, 4, Metamorphoses I, VII, VIII, Tristia I
Persius: I
Plautus: Amphitruo, Pseudolus, Rudens
Pliny: Epistulae I 1, 20, II 1, III 5, 7, 16, 19, 21, IV 14, V 8, VI 16, 20, VII 17, 27, 33, X 96, 97
Propertius: I, II 1, 8, 10, 12, 13B, 15, 26A, 34, III 1–5, IV 3, 7, 8, 9, 11
Quintilian: X 1
Sallust: Catiline
Suétone:  Tiberius
Terence:  Heauton Timorumenos, Adelphoe
Virgilio:  Eclogues, Georgics, Aeneid

Students may make substitutions of authors or works under the same conditions as students taking the degree in Classical Philology.

Special Examinations
By the end of the third or, at the latest, the fourth graduate year the candidate must take a two-hour oral examination in two special authors, one Greek and one Latin, and one special field, which will in this case be a period or area of ancient philosophy. The candidate will be expected to know the historical background and manuscript tradition of the chosen authors. The choice of authors and field should be submitted for approval at the time of the General Examinations or as soon thereafter as possible. These examinations may be repeated only once in the event of failure.

Dissertation
The regulations governing the dissertation are the same as for the PhD in Classical Philology.

Doctor of Philosophy in Ancient History
Prerequisites
A bachelor’s degree in Classics (or one in History combined with substantial study of Greek and Latin) represents the best preparation for the study of Ancient History, which is here understood to mean Greek history from the Mycenaean period to Roman times, and Roman history from the beginnings to late antiquity. Students applying to study Ancient History in the Department of the Classics must have competence in both Greek and Latin sufficient to take departmental courses numbered above 100 (“upper-level courses”) in one of these languages (the “major language”), and above the beginning level in the other (the “minor language”). However, they will be tested equally in both Greek and Latin, normally by the end of the second year (see General Examinations [1]). Those wishing to study Ancient History at Harvard with less emphasis on languages and texts, and more on other fields of history such as Medieval or Byzantine, should note that the Department of History also offers Ancient History as a field in its PhD program.

Some preparation in German and either French or Italian is also advised before admission to the program. In addition, incoming students should also have taken the equivalent of two one-term introductory surveys in Greek history and in Roman history.

Academic Residence
As for the PhD in Classical Philology (see above).

Program of Study
Such as to foster knowledge of Greek and Roman history and historiography, in association with fields such as philology (in the broad sense), archaeology, epigraphy, and numismatics. Exemptions from specific courses required below may be granted in particular cases on the basis of work already completed elsewhere.

1) Theoretical and/or methodological approaches a) Classical Philology 350, and b) one appropriate half-course in theoretical and/or methodological approaches to history, normally to be chosen from those offered by the Department of History, to be completed by the time the prospectus is approved.

2) Ancient History and Historiography: Four half-courses, of which two shall be in Greek and two in Roman; at least one Greek course and one Roman course shall be a graduate seminar. These four courses shall ordinarily be taken in the first two years of graduate study.

3) Languages and Literatures: Such courses as may be recommended by the graduate committee in order to ensure a high level of competence in both Greek and Latin, to be taken before the General Examinations.

4) Archaeology: One half-course, to be taken before the Special Examinations.

5) Epigraphy, Numismatics: Two half-courses, to be taken before the Special Examinations.

6) Modern Languages: Two examinations involving translation (with the aid of dictionaries) from German and either French or Italian. This requirement must be fulfilled before the Special Examinations are taken. Tests are normally administered in September, February, and April.

7) Study abroad: Students are required to spend a summer or a semester in an academic program such as the American School of Classical Studies in Athens (for which they should apply for the Charles Eliot Norton Fellowship), the American Academy in Rome, or other programs (including archaeological excavations) which provide the opportunity of working closely with ancient material culture. This period of study should be completed before taking the degree, and preferably before the student commences work on the dissertation.

General Examinations
All students will, normally by the end of April of their second year, take examinations comprising two parts as follows:

1) Language translation examinations, comprising two written exams of two hours each. Each exam will contain passages for translation taken from the list of ancient authors below. Each of these examinations may be repeated only once in the event of failure. Students are also urged to read the ancient authors widely in translation.

2) Oral examination of one-and-one-half hours on Greek and Roman history and historiography. This examination will be based on the reading list below, and will also involve a general knowledge of the outlines of Greek and Roman history. The examining committee will consist of one faculty member chiefly responsible for Greek history; one chiefly responsible for Roman history; and an additional one to moderate the proceedings and to intervene at his or her discretion.

Reading List
The language translation examination (see under General Examinations) will be based on the following list. Students are also urged to read widely in translation from authors and works not included on the list.

Greek Literature:
Aeschylus: Persians
Appian: BC 1
Aristophanes: Acharnians
Aristotle: Constitution of the Athenians
Cassius Dio: 53
Demosthenes: Philippics 1
Dionysius of Halicarnassus: On Thucydidès
Herodotus: 1
Homer: Iliad 1, 2, 18; Odyssey 2, 9, 11
Isocrates: Philip
Lucian: Quomodo historia conscribenda sit
Lyly: Against Eratosthenes
Macciabeus 2
Plato: Symposium, Apology
Plutarch: Pericles, Antony, De Herodoti
Polybius: 1
Ps.-Xenophon: Constitution of the Athenians
Sophocles: Oedipus Tyrannus
Thucydidès: 1, 234-65, 3,35–85, 5,26, 84-116, 6,8-23, 7,84-87, 8,1
Fragmentary historians: Hellanicus in F. Jacoby, Die Fragmente der griechischen Historiker

Latin Literature:
Annamvius Marcellinvs: 22
Augustus: Res Gestae
Caesar: 2 books from Bellum Gallicum or Bellum Civile
Cicero: Pro Milone; De re publica; letters, as in D.R. Shackleton Bailey's Selected Letters
Ennius: fragments of Annales as in Skutsch's edition
Fronto: Princpia historiae
Horace: Odes 3.1–6 (Roman Odes)
Juvenal: Satires 1, 3, 10
Livy: 1, 21, 22
Lucan: 1
Pliny the Younger: letters, as in A. N. Sherwin-White's Fifty Letters of Pliny
Quintilian: Institutio oratoria 10.1
Sallust: Jugurtha or Catiline; selected fragments of the Histories
Scriptores Historiae Augustae: Hadrian
[Seneca]: Octavia
Suetonius: Julius Caesar or Augustus and one other
Tacitus: Histories 1; Annals 4; either Agricola or Germania
Virgil: Aeneid 4, 6, 8
Fragmentary historians: Cato in H. Peter, Historicon Romanorum Reliquiae

Students may make substitutions of authors or works under the same conditions as students taking the degree in Classical Philology.

Special Examinations
All students will, normally by the end of their third year, take Special Examinations as follows:

One oral examination of two hours. The exam will cover three areas for questioning, one on a specific topic selected from within one of the seven fields listed below, the other two covering two entire fields more generally (one Greek and one Roman, and both different from the field within which the specific topic has been selected).

Greek history: 1) Minoan and Mycenaean Greece; 2) Dark Age and Archaic Greece; 3) Classical Greece; 4) The Hellenistic World.
Roman history: 5) Early Rome and the Roman Republic; 6) The Roman Empire; 7) Late Antiquity.

In preparation for these examinations students will normally take three year-long courses (numbered 302) with members of the department in the two terms prior to their taking the examinations. The departmental members will be responsible for setting and grading the examinations in the relevant fields. At least one of the examination fields selected by the student must be in Greek history, and one in Roman history. With the permission of the graduate committee, which will confer with those members of the department teaching ancient history before giving such permission, students may elect topical rather than chronological fields (e.g., women in antiquity, Roman religion, etc.) for examination. Such permission will be granted only if the three chosen fields ensure sufficiently broad coverage of Greek and Roman history.

Dissertation
The regulations governing the dissertation are the same as for the PhD in Classical Philology.

Doctor of Philosophy in Medieval Latin
Prerequisites and Academic Residence
As for the PhD in Classical Philology.

Program of Study
As well as acquiring close familiarity with Medieval Latin, candidates will be expected to continue their study of both Greek and classical Latin. Programs of study will be determined on an individual basis in consultation with a faculty director in Medieval Latin. The program will be such as to foster expertise in:

1) The methodology covered in the Proseminar or its equivalent in Medieval Studies (one required).
2) Classical and Medieval Latin language and literature, to be tested in the General Examinations (see below).
3) Advanced interpretation. To this end, before taking the Special Examinations, candidates must pass four half-courses designated “primarily for graduates” and given by faculty of the department or half-courses on medieval topics given outside the Department. Two of these half-courses will normally be in Classical Latin, two in Medieval Latin.
4) Prose composition. This requirement is met by passing Latin K (or the equivalent) and Greek H; it must be fulfilled before the Special Examinations are taken (see below).
5) Historical linguistics. This requirement is met by passing Latin 134 or equivalent work; it must be fulfilled before the Special Examinations are taken (see below).
6) Latin palaeography (which may be met by passing Classical Philology 299 or equivalent work).

Modern Languages
As for the PhD in Classical Philology.

General Examinations
All students will, normally by the end of the April of their second year, take General Examinations comprising four parts, namely:

1) Two written examinations of three hours each in the translation of classical Latin and Medieval Latin authors; each examination will consist of six passages (half prose and half verse) of which two will be at sight.
2) An oral examination of one-and-one-half hours on the history of classical and Medieval Latin literature. The examinations will be based on two reading lists in classical and Medieval Latin which will be approximately the same in length as those in classical Greek and Latin literature required for the PhD in Classical Philology (see above). These examinations may only be repeated once in the event of failure. If a student fails only one part of the examination, then he or she need only repeat that part.

Special Examinations
By the end of the third or, at the latest, the fourth year the candidate must take a two-hour oral examination devoted to (a) an ancient Latin author, with attention to the author’s influence on medieval literature or thought; (b) a Medieval Latin author, including the manuscript tradition of the author’s works and historical background; and (c) a special subject to be selected from the following fields: medieval history, philosophy, theology, law, art, Latin palaeography, Latin grammar and metrics. The choice of authors and subject should be submitted for approval at the time of the General Examinations or within a month following them. Preparation for this examination will be by independent study, with regular supervision by a faculty member for each part of the examination (Classical Philology 302). These examinations may be repeated only once in the event of failure.

Dissertation
The regulations governing the dissertation are the same as for the PhD in Classical Philology.

Doctor of Philosophy in Byzantine Greek
Prerequisites and Academic Residence
As for the PhD in Classical Philology.

Program of Study:

Within the Department: It is expected that before General Examinations all candidates will take courses in the department in order to improve their knowledge of Greek (classical and Byzantine) and Latin (classical and medieval), acquire familiarity with those ancient Greek authors who were widely read or imitated in Byzantium, and learn the Hellenistic and Roman backgrounds of Byzantine civilization. In choosing the relevant courses for the degree program and thereafter, candidates should consult their supervisor in Byzantine Greek. Between the beginning of the second year and the time of the General Examinations, candidates should become familiar with the history of Byzantine liter-
Literary development; middle or low style, with attention to subsequent antique models, or a Byzantine author writing in genre in high style, with special attention to their verbal examination devoted to Byzantine art. The choice of author (or genre) and subject should be submitted for approval at the time of the General Examinations or as soon thereafter as possible. These examinations may be repeated only once in the event of failure.

Dissertation
The regulations governing the dissertation are the same as for the PhD in Classical Philology.

Program of Study
In addition to close analysis of modern Greek texts, all candidates will be expected to take courses, and/or undertake programs of guided reading, prior to the General Examinations, in order to improve
(a) knowledge of the history and development of the Greek language, including study of the katharevousa and the principles of modern dialect differentiation;
(b) mastery of the rudiments of postclassical history pertinent to modern Greek;
(c) familiarity with ancient and Byzantine texts relevant to the study of modern Greek culture, including palaeography and the study of Greek manuscripts and early printed editions;
(d) understanding of major cultural trends from the Renaissance to the present day; and
(e) awareness of current theoretical approaches.

While programs of study will be determined on an individual basis in consultation with the supervisor, two half-courses each for (a) through (c) and at least one half-course for (d) and (e) are recommended. The curriculum is designed to foster expertise in (1) and (2) and at least two of (3) through (6):
(1) The study of the modern Greek language, its history and development from the Hellenistic koine to the present day;
(2) The study of modern Greek literature, from the twelfth century to the present day;
(3) Literary criticism, with emphasis on the poetry and prose of the nineteenth and twentieth centuries;
(4) Textual criticism, with emphasis on vernacular texts from the twelfth to fifteenth centuries and on Cretan Renaissance poetry and drama from the fifteenth to seventeenth centuries;
(5) Comparative analysis in ancient Greek mythology and modern Greek folklore;
(6) Social and anthropological approaches to modern Greek culture.

Languages
In addition to a reading knowledge of ancient Greek (to the level of Greek B or the equivalent), and of Byzantine Greek (two courses or equivalent), a reading knowledge of two other languages relevant to the program of study (e.g., Latin, Ottoman/Turkish, French, German, Italian, Russian), one of which should be either French or German. Requirements may be satisfied either by coursework, or by examination (with the aid of dictionaries). This requirement must be fulfilled before the Special Examinations are taken. Tests are normally administered in September, February, and April.
General Examinations
All students should normally, by the end of the April of their second year, take three General Examinations, namely:

(1) two written examinations of three hours each, covering (a) translation, explication and commentary on prepared and unprepared texts from the twelfth century to the present day, and (b) explication and commentary on prepared texts from a specified field;

(2) an oral examination of one-and-one-half hours, to be conducted in Greek and English. These examinations may be repeated only once in the event of failure.

Special Examinations
By the end of the third, or at the latest, the fourth year, the candidate must take a two-hour oral examination devoted to at least one modern Greek author in relation to a genre and/or special subject to be selected from the fields of language, literature, and ethnography. Choice of author(s), genre/subject to be submitted for approval at the time of the General Examinations, or as soon thereafter as possible. This examination may be repeated only once in the event of failure.

Dissertation
The regulations governing the dissertation are the same as for the PhD in Classical Philology, except that the dissertation may be submitted (with approval) in modern Greek.
Higher Degrees in Comparative Literature

Harvard University has offered courses in comparative literature since 1894. The Department of Comparative Literature was established by vote of the Faculty of Arts and Sciences on April 10, 1906, and was reorganized upon its present basis in 2007 with the merging of the graduate department of Comparative Literature and the undergraduate Literature Concentration to form a unified department. The Department’s students and faculty pursue studies in the history, theory, and criticism of literature extending beyond the limits set by national and linguistic boundaries. Our PhD program is designed to provide for the needs of students who wish to develop a unified program of study that involves literature in three or more languages. Students take a combination of Comparative Literature courses and courses in the departments of their elected literary fields. Courses in other disciplines may be included when appropriate in individual programs. Most of the department’s faculty also participate in one of the other departments of language and literature; members of those departments are regularly engaged in the work of this department and are generally available upon request for consultation.

All graduate students in the department are required to take the Proseminar (Comp. Lit. 299ar) during their first year of residence; candidates for the doctorate are encouraged also to take at least one further course in theory and method, critical, historical, or linguistic. During the first two years of graduate study, the prospective candidate for the doctorate in Comparative Literature is expected to fulfill the residence requirements by taking courses offered in this and other departments of the University (thus also discharging the requirements for the master’s degree), and to submit the Second-Year Paper (due by the end of the G-2 year) and develop reading lists and prepare for the PhD Orals Examination (taken in the Spring of the G-3 year). After passing these examinations, candidates may continue to engage in seminars and attend courses, but their primary task thereafter will be the completion of a dissertation.

**The Master of Arts (AM) Degree**

Students already in the program may receive the AM degree, but application for admission must be made to the PhD program. The only exception to this policy is for undergraduates in Harvard College with advanced standing who may apply to work toward a combined AB/AM degree.

To obtain this degree the candidate must complete eight half-courses. One of these half-courses must be the Proseminar, another one must be in Comparative Literature, and the remaining six must include three in the first literature and two in the second literature. No more than one of the eight half-courses may be a reading course. Candidates are required to have at least as many 200-level as 100-level courses, and only in rare exceptions will courses below the 100-level be allowed to count toward the degree. The candidate must demonstrate proficiency in three languages, one of which may be English.

**The Doctor of Philosophy (PhD) Courses**

The number of courses required for the PhD in Comparative Literature is sixteen, of which at least eight should be graduate (200-level) seminars. Candidates may arrange to produce extra work, typically in the form of a graduate-style research paper, so as to receive 200-level credit for courses that are listed at the 100-level in the Courses of Instruction. The remaining eight courses may include 100-level courses, 300-level “Reading and Research Courses”, or language courses. With permission of the Director of Graduate Studies (DGS), up to four language courses may be counted toward the degree. Such students wishing to receive 200-level course credit for a 100-level course should make the necessary arrangements early in the term when the course is being taken because they must be approved by the course instructor and the DGS. The necessary approval form is available from the departmental office or may be downloaded from our website.

Each candidate is normally expected to balance coursework in the following manner: at least four courses in the Department of Comparative Literature; three in a first literature; two in a second literature; and two in a third literature. The first literature must have a historical component, whatever the student’s area of specialization, that is, it must include at least one course in a period different from the others. The remaining coursework may include relevant courses in a number of areas, including: other literatures; language study; philosophy, anthropology, religion, linguistics, art, economics and so forth.

Each degree candidate is expected to fulfill the sixteen-course requirement by including a significant dimension of comparative historical or cross-cultural study. This dimension can be met by taking a minimum of three courses with a chronological or regional focus different from the candidate’s primary area of focus. It is important that these three courses be distinctly different from the main period and/or culture in the candidate’s program. Thus a candidate concentrating on European modernism would not be able to fulfill this requirement with three courses in the European nineteenth century; either a greater historical depth or else a significant cultural range (for example, modernism in East Asia) would be expected. Many candidates will declare a chronological focus on a particular period. However, candidates may request a focus that covers a genre or field of study if it is followed throughout a very broad historical or cultural range, e.g., tragedy or lyric poetry in languages ancient and modern, or comparative cross-cultural poetries. In addition, all candidates are welcome to identify a special interest in a particular literary form (such as drama, lyric, narrative, and the like) or a topic of substantial scope in literary theory (poetics, literature in its social context, the relation between literature and one of the other arts, and so forth). Whatever choice the candidate makes, the decision must be communicated to the Director of Graduate Studies (DGS) by April 1 during the first year of study. If candidates can identify their focus at the outset of their programs, they may do so.

**Languages**

Candidates should have knowledge of at least four languages variously related to their course of study and long-term interests. One language may be studied for instrumental reasons and at least one must be studied because it stands in a useful “cross-cultural” or “diachronic” relationship to others:

**Instrumental Language:** One of the four languages may be an “instrumental” means for reading criticism, or an access to philological and/or historical issues, or a first step toward eventually studying the literature. Candidates may exercise this option by taking an upper-level language course or by passing a language exam in reading knowledge administered under the auspices of the department. The instrumental language is an option that may appeal to candidates who seek in three languages a command that may extend to include speaking, listening, and writing, and in one language reading knowledge only; other candidates may choose to develop full command of all four languages.

**Premodern or Cross-cultural Language:** One of the four languages must be either premodern (diachronic) or cross-cultural. The term “premodern” implies that this language stands in a historically foundational or, in certain cases, diachronic relationship to one of the other languages. Foundational languages would include...
classical Latin and Greek, biblical Hebrew, classical Arabic, Chinese, Armenian and Sanskrit. Normally this language is not simply the "Old" form of a modern language which is studied in Old, Middle or Medieval, and Modern forms. In the event of uncertainty, candidates and/or their advisors should consult the DGS. There are inevitably languages which are difficult to classify in this system. A case in point is classical Japanese. The department has considered this case twice and has decided both times that although classical Japanese differs substantially from modern Japanese, the distinction is closer to a "Medieval vs. Modern" distinction that could be found in other traditions (even English, since Old English differs sharply from Modern English). As a result, the Department has resolved that the standard foundational language for Japanese is classical Chinese; but the requirement can be satisfied by the ability to read kambun.

The term "cross-cultural" implies that this language is from another linguistic-cultural group than the others. Usually a candidate working primarily on European languages and literatures, and choosing not to study a premodern language, would need to study a language such as Chinese or Arabic to meet this requirement. Normally, English will not count as a cross-cultural language.

Addendum
Candidates whose program of study requires more than the language and related study outlined in previous sections of the regulations, especially those involving coursework, may design in advance appropriate arrangements in consultation with the DGS.

Grades
Candidates are required, in a given year, to receive more As than Bs and no grade lower than B-. Candidates are not permitted to take an Incomplete in the Proseminar nor may they take more than one Incomplete a term. Any Incomplete must be completed before the end of the term following that in which the course was taken, unless the student is given an earlier deadline by the instructor.

Second-Year Paper
In the Spring of the G-2 year each student submits a Second-Year Paper of 25–30 pages on a comparative topic. This can be an expanded version of a seminar paper being written that semester or from a previous semester, or it can be developed on the basis of an individual reading course guided by a faculty member. Writing a Second-Year Paper will demonstrate your ability to do a serious comparative project as you complete coursework. You will receive active guidance on making the transition from seminar papers to the writing of articles. Your faculty advisor (typically the instructor of the relevant seminar) and a secondary reader will provide a pass/fail grade and written comments.

The Third Year and Beyond
The third and fourth year requirements in the PhD. program in Comparative Literature will comprise two parts, a written PhD Orals Examination and a Prospectus Conference.

Students are requested to begin formulating orals fields and lining up examiners during the Spring semester of their second year. They should have all three lists drawn and approved by the end of May.

The PhD Orals Examination: this exam must be taken in the spring of the G-3 year. It has a tripartite structure, consisting of a one-hour major field and two half-hour minor fields, each with one examiner.

The major field involves three (or more) languages, with a reading list of some 40 books (or shorter works adding up to a comparable amount of reading), selected in consultation with the examiner to give the student's personal take on the likely field of specialization. The major field should provide a broad context for the eventual dissertation topic, while also enabling students to demonstrate a solid knowledge of the primary field, of the sort they might be asked to draw on in creating a survey lecture course.

The two minor fields will each involve a reading list of about 20 books or their equivalent. One minor field could be geared directly to the likely dissertation topic, when known; one could have a predominantly theoretical or interdisciplinary cast. If the major field concerns literature of a single period, one of the minor fields should be based in another period.

The orals fields and lists will be reviewed and approved by the DGS once the three examiners have approved their lists. During the third year, students are expected to meet periodically with their three examiners, on whatever schedule suits their preparation, but making sure to have at least one meeting every two or three weeks with one or another examiner.

Preparation for the PhD Orals Examination is designed to help build interaction with faculty (most likely with some direct overlap with the subsequent dissertation committee), and the examination itself will create an occasion that approximates aspects of a job interview or the collegial interactions of a campus visit.

Prospectus Conference: Following the successful completion of the PhD orals examination, the candidate develops a dissertation prospectus of 10–12 pages (plus bibliography). The prospectus should be completed not later than November 15 of the G-4 year, at which point the department office will schedule the prospectus conference, to be held if possible by the end of the fall semester. The conference is a meeting between the student and three faculty members. The conference will be a discussion of a fairly broad range of reading undertaken by the student in preparation for work on the dissertation. The conference will include a detailed discussion of the dissertation prospectus itself, with the aim of ensuring that the student is well prepared to move forward with the project and has developed both a viable conceptual structure and an appropriate outline of the chapters that will comprise the dissertation. Typically, the examiners for the PhD Orals Examination will also serve as the three faculty participants in the Prospectus Conference—but this is a recommendation rather than a requirement. Ordinarily, the three faculty participants in the Prospectus Conference will be three readers of the dissertation.

Acceptance of Dissertation Prospectus
After the prospectus conference, the prospectus, revised if necessary, will be circulated to all department members. At a department meeting convened by the chair it will be discussed and voted on. Where appropriate, the first reader will communicate any further suggestions for changing the prospectus and the bibliography directly to the candidate.

Submission of the Dissertation
It is expected that students will submit chapters to their dissertation committee regularly. A Chapter Meeting will be held upon completion of a full draft of each chapter of a dissertation, involving the three committee members in conversation with the student. The chapter meeting will be scheduled by the department at the time a draft is circulated, and will be held if possible about two to three weeks after the submission of a chapter. These meetings should supplement rather than replace written feedback, which can be sent in advance of the meeting or handed over at that time. When substantial revisions are requested, committee members should provide timely written comments, though a second meeting on the chapter won’t usually be needed.

A full version of the dissertation must be submitted to every member of the dissertation committee at least 6 weeks prior to GSAS Registrar’s deadline for submitting dissertations for a particular degree period. This deadline will allow committee members to make final suggestions and give their approval before the manuscript is printed in its final, formal version. It is extremely important for students who are in the final stages of dissertation preparation to allow ample time to gather the signatures required on
the acceptance certificate and to ensure that the certificate is submitted by the proper due date.

A final two-hour oral defense will be scheduled upon completion of the dissertation, conducted by the dissertation committee and open to students and faculty, held at least two weeks before the deadline for deposit of the dissertation in a given degree cycle.

**The PhD in Comparative Literature with a Special Program in the Study of Oral Tradition and Literature**

**Courses**

As for the PhD in comparative literature, with the following amendments: The number of required courses for the PhD in comparative literature with a special program in the Study of Oral Tradition and Literature is 16, of which only two may be reading courses; at least 14 are to be letter-graded courses (i.e., not reading courses). Any question regarding the nature of courses taken should be resolved with advisors from the departmental Committee on the Study of Oral Tradition and Literature before submission of study cards. If candidates or members of the departmental Committee have questions, they should pose them to the Curriculum Committee.

Each candidate will normally be expected to balance coursework in the following manner: four courses in the Department of Literature and Comparative Literature or in other departments as deemed appropriate by the departmental Committee on the Study of Oral Tradition and Literature; three in a first literature; two in a second literature; and two in a third literature.

**Languages**

As for the Doctor of Philosophy (PhD) in Comparative Literature. In addition, one of the languages offered as one of the candidate’s three literatures must be represented by (or at least include) a substantial corpus that is independent of written transmission and is derived from collections of performances recorded under strictly supervised conditions of fieldwork. A major resource for such purposes is the Milman Parry Collection at Harvard University.

**Common Essay**

As for the PhD in Comparative Literature.

**The Third Year**

As for the PhD in Comparative Literature.

**Acceptance of Dissertation Prospectus**

As for the PhD in Comparative Literature.

**Requirements for a Secondary Field in Comparative Literature**

The Department of Comparative Literature offers "Comparative Literature" as a secondary field in GSAS to enrich the background of PhD students in other departments who seek to do research and teach across the institutional boundaries of national languages and literatures. Students in the various departments of literary studies may eventually be called upon to teach comparative courses or courses in general or world literature. The secondary field in comparative literature introduces students to basic issues in the field as well as provides a graduate literary theory course for students who have not already taken such a course in their primary department.

While we recognize the degree to which literatures in a single language constitute a coherent tradition, the Department of Literature and Comparative Literature seeks to develop an awareness of how literary works move across language borders, both in the original language and in translation. We seek to call attention to theoretical issues shared across not only the boundaries of languages but across very different traditions.

**Preliminaries**

An ability to work in literatures in at least three languages. Normally this will be demonstrated by coursework in which at least some of the primary readings are in the language. In certain circumstances (for example, if one of the languages is the student’s native language) the DGS may waive the requirement that competence in a language be demonstrated by coursework. If English is used as one of the languages, the other two languages should show some breadth; that is, they may not be closely allied, either linguistically or by academic convention (e.g., Spanish and Portuguese, Urdu and Hindi, classical and modern Chinese, or Greek and Latin). The judgment regarding what can legitimately count for the set of three languages will be at the discretion of the DGS.

**Prerequisites**

Four courses, one of which should be the Comparative Literature Proseminar and two of which must be Comparative Literature seminars at the 200 level. The remaining course requirements will be met by either seminars in Comparative Literature or 100-level Literature courses (which normally count for graduate credit in Comparative Literature).

Successful completion of the Second-Year Paper on a comparative topic, as prescribed for students in Comparative Literature, by the end of the Spring semester of the second year.

Contact the DGS for any further questions.

**Faculty**

Daniel Albright, Ernest Bernbaum Professor of Literature
Homi K. Bhabha, Anne F. Rothenberg Professor of the Humanities
Svetlana Boym, Curt Hugo Reisinger Professor of Slavic Languages and Literatures and Professor of Comparative Literature
Julie A. Buckler, Professor of Slavic Languages and Literatures, Harvard College Professor
Joaquim-Francisco Coelho, Professor Emeritus
Verena A. Conley, Visiting Professor of Comparative Literature and of Romance Languages and Literatures
David Damrosch, Ernest Bernbaum Professor of Comparative Literature
James Engell, Gurney Professor of English Literature and Professor of Comparative Literature
Luis M. Girón Negrón, Professor of Romance Languages and Literatures and of Comparative Literature
John T. Hamilton, Professor of Comparative Literature (Chair)
Biodun Jeyifo, Professor of African and African American Studies and of Comparative Literature
Christie McDonald, Smith Professor of French Language and Literature and Professor of Comparative Literature
Sandra Naddaff, Senior Lecturer in Comparative Literature and Director of Studies in Literature
Gregory Nagy, Francis Jones Professor of Classical Greek Literature and Professor of Comparative Literature
Stephen Owen, James Bryant Conant University Professor
Martin Puchner, Professor of English and Comparative Literature

Panagiotis Roilos, Professor of Modern Greek Studies and of Comparative Literature

Judith Ryan, Robert K. and Dale J. Weary Professor of German and Comparative Literature

Marc Shell, Irving Babbitt Professor of Comparative Literature and Professor of English

Werner Sollors, Henry B. and Anne M. Cabot Professor of English Literature and Professor of African and African American Studies

Diana Sorensen, James F. Rothenberg Professor of Romance Languages and Literatures and Professor of Comparative Literature

Susan R. Suleiman, C. Douglas Dillon Professor of the Civilization of France and Professor of Comparative Literature

Karen Thornber, Assistant Professor of Comparative Literature (DGS)

William Mills Todd III, Harvard College Professor, Harry Tuchman Levin Professor of Literature, and Professor of Comparative Literature

Justin Weir, Professor of Slavic Languages and Literatures

Ruth R. Wisse, Harvard College Professor, Martin Peretz Professor of Yiddish Literature, and Professor of Comparative Literature
Higher Degrees under the Department of Earth and Planetary Sciences

Introduction
Understanding our planet will be a fundamental challenge for the scientific community over the next century. Almost every practical aspect of society—population, environment, economics, politics—and will be increasingly impacted by our relationship with the Earth. Facing these challenges requires approaches that transcend disciplinary boundaries. The Department of Earth and Planetary Sciences (EPS) uses an integrative scientific approach that encompasses and includes many aspects of physics, chemistry, astronomy, and biology.

In addition to the collaborative exchange with other Harvard departments such as astronomy, chemistry and chemical biology, organismic and evolutionary biology, and the School of Engineering and Applied Sciences, EPS has reciprocal arrangements with Massachusetts Institute of Technology and the Woods Hole Oceanographic Institution for graduate students to take and receive credit for courses.

The laboratories and lecture rooms of the Department of Earth and Planetary Sciences are housed in the University Museum and in the David and Arnold Hoffman Laboratory of Experimental Geology. The School of Engineering and Applied Sciences is housed in Pierce Hall, across Oxford Street from the Hoffman Laboratory. The department operates and maintains a seismological station at the Harvard-Adam Dniezowski Observatory in Harvard, Massachusetts, about 25 miles west of Cambridge.

Laboratory facilities are available for sample preparation, mineral separation, organic geochemistry and molecular biology, microbial and isotope Geobiology, radiogenic and stable isotope geochemistry, trace element geochemistry, shock compression, geophysics, X-ray diffraction analysis, mineral analysis with an automated electron microprobe, scanning and transmission electron microscopy, and spectroscopy. The department is home to a 3D stereo visualization facility. State-of-the-art high performance parallel computing facilities are used by several groups in the department. The specimen collections in mineralogy, petrology, and paleontology are among the best in the world.

Degrees Offered

Doctor of Philosophy (PhD)
The Department of Earth and Planetary Sciences admits students for the PhD only; EPS does not admit students for the Master of Arts (AM) degree. The program may award the AM degree incidentally to PhD candidates.

Master of Arts (AM)
Graduate students enrolled in a PhD program may apply for the AM degree upon the satisfactory completion of the required eight half-courses as outlined in the EPS Handbook.

Bachelor of Arts–Master of Arts (AB-AM)
Harvard Advanced Standing students have an opportunity in their fourth year to pursue the AM in EPS. Policies for this degree are administered by the EPS Graduate Studies Committee (GSC). The AB-AM degree is intended for strong science or engineering students with an interest in the earth sciences. An undergraduate who wishes to apply for this degree must apply online for admission to the graduate program in EPS in their third year. Interested students should contact the department as early as freshman year to learn about the degree and program requirements.

Admission Requirements
Requirements for admission are highly flexible and each application is judged on its own merits. Preparation in the related sciences of biology, chemistry, mathematics, and physics is as important as a solid background in geology. Students with backgrounds in biology, chemistry, Earth sciences, engineering, physics, and related fields are strongly encouraged to apply. The department requires prospective applicants to take the Graduate Record Examination (GRE).

Entering graduate students are expected to arrive with an appropriate math preparation depending on their field of study. Students in geophysics, climate, ocean and atmospheric dynamics and other math-intensive research areas are expected to have successfully completed applied math courses to the level of ordinary and partial differential equations. Students in less mathematically-oriented research areas are expected to have successfully completed basic college-level calculus and linear algebra at the level of Applied Math 21a, 21b or Math 21a, 21b. If not, these should be taken in addition to the department’s math requirement, and incoming students should be aware that this represents a significant additional commitment. Students are expected, in the course of graduate work, to complete the second and third year of college mathematics (intermediate and advanced calculus and differential equations). Students with a strong math and physics background doing theoretical work are expected to take higher-level graduate mathematics courses.

We ask applicants to list one to three EPS faculty whose research fields seem closest to his or her interests. For a list of faculty, see Study Opportunities on the EPS Graduate Study website.

Financial Aid
The Department of Earth and Planetary Sciences guarantees full financial support for four years to all PhD candidates. Funding for the fifth year and beyond is considered on a case-by-case basis. Financial support for graduate students comes from a combination of research assistantships, teaching fellowships, and department funds.

Each graduate student is required to teach two sections for two different courses or for the same course in two different years. This requirement is generally completed during the second and third year of graduate work. Funding from this required teaching is a part of the overall support package.

In addition, special summer scholarship funding is often available for students to do research-related fieldwork, subject to the approval of the Graduate Studies Committee (GSC). Prospective students are encouraged to apply for outside funding from agencies such as the National Science Foundation, the Fannie and John Hertz Foundation, Department of Defense, Department of Energy, and NASA. International students often apply for outside funding such as the Fulbright and Knox fellowships before coming to the United States. Information on these agencies is available in more detail in a separate booklet issued by the Graduate School of Arts and Sciences, Financing Graduate Study.

Degree Requirements

Residence
Minimum of two years; see The Graduate School of Arts and Sciences Handbook. Students should normally plan to complete all requirements for the PhD degree within four years of their enrollment at Harvard.

Appointment of Advisors and Plan of Study
In September, all new students are assigned a preliminary advisor who along with the Graduate Studies Committee (GSC) will help first-year students decide which courses to take during the fall term. Toward the end of the spring term,
first-year students submit a Plan of Study listing the courses they plan to take to meet academic requirements and proposing their choice for an advisor and advisory committee (usually three faculty from the department). Each student will meet with one of the co-directors of Graduate Studies to review the Plan of Study, to finalize the appointment of the advisor and advisory committee, and to discuss summer research plans. Members of the advisory committee are selected by the student in consultation with their advisor. As students’ research interests evolve, the composition of their advisory committee can be adjusted.

Course Requirements
All students are required to take at least eight graduate-level courses in fulfillment of the PhD degree. Four of these courses must be letter-graded at the 200 level in earth and planetary sciences or related courses at a suitable level in other disciplines such as applied mathematics, applied physics, astronomy, biology, chemistry, engineering sciences, mathematics, or physics. Two letter-graded math courses are required; please see the EPS Handbook (http://eps.harvard.edu/pages/study-opportunities) for details.

To ensure that graduate students gain exposure to the many areas of earth sciences, they must fulfill a breadth requirement. Students are required to take at least two letter-graded EPS courses outside of their main area of research interest. These courses must be approved by the student’s advisor. By petition to the GSC, courses with an earth or planetary science component in other departments at Harvard may count towards the breadth requirement, provided the course is a lecture course with an exam or a term paper designed for graduate students.

The requirements outlined above are a minimum standard and students will usually take additional courses in both their selected field and others. Students normally satisfy the eight-specified course requirements in the first two years of graduate study in preparation for their qualifying oral examination; however, students need not fulfill these requirements before beginning research and should not put off research on this account.

All degree candidates must maintain an average equivalent to B or better to continue in the program.

Field Trip
All graduate students are required to participate in at least one department-sponsored field research trip during their time at EPS. Annual trips are organized by EPS graduate students and are approved by the GSC. Students learn about the relevant earth science in a particular area and gain experience in planning field trips—from developing an itinerary to preparing a budget to executing and reporting on the trip. Alternately, students may be a leader on one of the undergraduate field trips, as appropriate, or may carry out other department-sponsored fieldwork. Students who are unable to take part in a trip should complete a waiver form by the end of their fifth year.

Qualifying Oral Examination
All candidates for the PhD degree are expected to take the qualifying oral examination by the end of their fourth semester in the program. The purpose of the oral examination is to determine a student’s depth and breadth of scholarship in a chosen area of specialization (not necessarily their prospective dissertation research), as well as the student’s originality, capacity for synthesis and critical examination, intensity of intellectual curiosity, and clarity of communication.

Progress Reports
In the third and subsequent years of study, students and their advisory committees are required to file an annual Progress Report. This form is intended to keep the student, advisors, and the GSC aware of the student’s progress toward the degree.

By the end of the sixth term, students are required to submit to the department, via their advisory committee, the subject and general objectives of their proposed dissertation research. Details may be modified as the dissertation progresses, but any major change in the subject and scope of the dissertation must be approved by the advisory committee. Students in their fourth year and beyond should meet with their entire committee to review the student’s progress.

Final Examination/Dissertation Defense
The object of the dissertation is to show that candidates have technical mastery of the field in which they present themselves and that they are capable of independent research. The subject should be distinct and limited, and the writer should be able to formulate conclusions modifying or enlarging some aspects of present knowledge. Candidates must submit the dissertation not more than five years after having passed the Qualifying Oral Examination.

The final exam is usually held within a month after the dissertation has been submitted. There are two components to the final exam: the first is a private defense before a small faculty committee; the second is a public presentation to the department as a whole.

Additional Information
To learn more about courses, programs of study, and faculty research interests, please visit our website (www.eps.harvard.edu) or write to Sarah Colgan (colgan@eps.harvard.edu), Department of Earth and Planetary Sciences, 20 Oxford Street, Harvard University, Cambridge, MA 02138. Information about admission and financial aid may be obtained by writing to the Office of Admissions and Financial Aid, Harvard Graduate School of Arts and Sciences, Holyoke Center, 3rd floor, 1350 Massachusetts Avenue, Cambridge, MA 02138. We require online submission of the application. See www.gas.harvard.edu.

Recent EPS PhD Students and Dissertation Titles
Atreyee Bhattacharya, “Application of the Helium isotopic system to accretion of terrestrial and extraterrestrial dust through the Cenozoic”

Hilary Close, “Size-related Isotopic Heterogeneity in Lipids from the Marine Water Column”

Jessica Creveling, “Sedimentology, Geochemistry, and Geophysics of the Cambrian Earth System”

John Crowley, “On the Dynamics of Plate Tectonics: Multiple Solutions, the Influence of Water, and Thermal Evolution”

Kate Dennis, “Clumped isotope paleothermometry and its application to Earth’s history”

Jenny Fisher, “Atmospheric pollution in the Arctic: Sources, transport, and chemical processing”

Allison Gale, “Perspectives on Ocean Ridge Basalts from the Segment to the Global Scale”

Judith Hubbard, “Mountain Building, Fault Structure, and Seismic Hazard in the Tibetan Plateau and Southern California”

Amanda Hughes, “Insights into contractional fault-related folding processes based on mechanical, kinematic, and empirical studies”

Eric Kiser, “Earthquake characteristics as imaged by the back-projection method”

Ben Kotrc, “Evolution of Silica Bionomineralizing Plankton”

Rick Kraus, “On the Thermodynamics of Planetary Impact Events”

Greg Santoni, “Fluxes of atmospheric methane using novel instruments, field, measurements, and inverse modeling”

Jessica Smith, “The sources and significance of stratospheric water vapor: Mechanistic studies from Equator to Pole”


Programs of Study
Earth and Planetary Sciences Faculty

James G. Anderson, Philip S. Weld Professor of Atmospheric Chemistry. Gas-phase kinetics of free radicals; catalytic processes in the atmosphere controlling global change of ozone; high-altitude experiments from balloons and aircraft; development of laser systems for stratospheric and tropospheric studies; development of high-altitude, long-duration unmanned aircraft for studies of global change.

Jeremy Bloxham, Mallinckrodt Professor of Geophysics; Dean of Science. Planetary magnetic fields, dynamo theory, structure and dynamics of the earth’s core and lower mantle, inverse theory, mathematical geophysics.

Brian F. Farrell, Robert P. Barden Professor of Meteorology. Explosive development of tropical and mid-latitude cyclones, predictability of weather regimes, dynamics of glacial and equable paleoclimates.

Peter Huybers, Professor of Earth and Planetary Sciences. Paleoceanography to include glacial cycles, ocean circulation, and Earth’s surface temperature explored through observational analysis and mathematical models.

Maika Ishii, Associate Professor of Earth and Planetary Sciences. Internal structure of the earth, seismic source imaging, signal processing, theoretical seismology, and geodynamics.

Daniel J. Jacob, Vasco McCoy Family Professor of Atmospheric Chemistry and Environmental Engineering. Air pollution, atmospheric transport, regional and global atmospheric chemistry, biosphere-atmosphere interactions, climate change.

Stein B. Jacobsen, Professor of Geochemistry. Isotope geochemistry and cosmochemistry; the formation and early differentiation of the terrestrial planets; the chemical evolution of Earth’s crust-mantle system; Earth systems evolution and environmental geochemistry.

David Johnston, Assistant Professor of Earth and Planetary Sciences. Isotope geochemistry and historical geobiology. Reanimating ancient ecosystems and ocean chemistry using stable isotope systems, chemical speciation techniques, modern microbial experiments (for calibration) and theoretical considerations.

Andrew H. Knoll, Fisher Professor of Natural History and Professor of Earth and Planetary Sciences. Paleontolgy and sedimentary geology of Precambrian terrains; evolution of vascular plants in geologic time.

Zhiming Kuang, Gordon McKay Professor of Atmospheric and Environmental Science. Tropical convection and large scale atmosphere-ocean dynamics.

Charles H. Langmuir, Higgins Professor of Geochemistry. The solid earth geochemical cycle, petrology, volcanology, ocean ridges, convergent margins, ocean islands, composition and evolution of the earth’s mantle.

Francis Macdonald, Assistant Professor of Earth and Planetary Sciences. Earth history; field geology; tectonics; co-evolution of the crust, the ocean, climate, and life as revealed through field and geochemical studies of the stratigraphic record.

Scott T. Martin, Gordon McKay Professor of Environmental Chemistry. Atmospheric particles, cloud formation, and climate change; energy, pollution, and climate; mineral origins of life; energy technology; biosphere-atmosphere feedbacks.

Janes J. McCarthy, Alexander Agassiz Professor of Biological Oceanography. Biological oceanography, phytoplankton ecology, nitrogen nutrition of phytoplankton.

Michael B. McElroy, Gilbert Butler Professor of Environmental Studies. Chemistry of the atmosphere and oceans, and interactions with the biosphere, evolution of planetary atmospheres.

Brendan Meade, Associate Professor of Earth and Planetary Sciences. Active tectonics; dynamics of fault systems and plate boundary zones; theoretical geomorphology.

Jerry X. Mitrovica, Professor of Geophysics. Ice age geodynamics, plate tectonics, mantle dynamics and structure, paleo- and modern climate, sea level change, planetary rotation, space geodesy.

Sujoy Mukhopadhyay, Associate Professor of Geochecmistry and co-Director of Graduate Studies. Noble gas geochemistry; record of terrestrial and extraterrestrial dust fluxes from sediments and corals, production rates of cosmogenic nuclides and application to surface exposure dating, chemical evolution of the mantle-crust-atmosphere system.

Richard J. O’Connell, Professor of Geophysics. Geodynamics: mantle flow, convection and plate tectonics; models of tectonic processes; elasticity and rheology of rocks and minerals.

Ann Pearson, Murray and Martha Ross Professor of Environmental Sciences and co-Head Tutor. Carbon isotope biogeochemistry; compound-specific d13C and D14C analysis of lipids and RNA; global organic carbon cycle; microbial metabolism in anoxic marine systems; sources of carbon to marine sediments.

James R. Rice, Mallinckrodt Professor of Engineering Sciences and Geophysics. Theoretical mechanics in seismology, tectonophysics and surficial processes; physics of earthquakes, environmental geomechanics.

Daniel Schrag, Sturgis Hooper Professor of Geology and Professor of Environmental Science and Engineering; Director of Harvard University Center for the Environment. Geochemical oceanography, paleoclimatology, stable isotope geochemistry.

John H. Shaw, Harry C. Dudley Professor of Structural and Economic Geology and Harvard College Professor; Department Chair. Structure of the earth’s crust, active faulting and folding, earthquake hazards assessment, petroleum exploration methods, and remote sensing.

Sarah T. Stewart-Mukhopadhyay, Professor of Earth and Planetary Sciences and co-Head Tutor. Experimental and computational study of impact processes; collisional processing and evolution of comets, asteroids and planetary surfaces; physical properties of planetary materials.

Eli Tziperman, Pamela and Vasco McCoy, Jr. Professor of Oceanography and Applied Physics and Co-Director of Graduate Studies. Large scale climate and ocean dynamics, including El Ninio, thermohaline circulation, abrupt climate change, glacial cycles and equable climates.

Steven C. Wofsy, Abbot Lawrence Rotch Professor of Atmospheric and Environmental Science and Area Dean for Environmental Science and Engineering. Chemistry of the atmosphere on global and regional scales, including stratospheric and tropospheric chemistry.
Graduate Degree Programs in the Study of East Asia

AM in Regional Studies — East Asia
PhD in East Asian Languages and Civilizations
PhD in History and East Asian Languages
PhD in History with a Special Field in East Asian History
PhD in East Asian Languages and another discipline

General
Harvard University over the years has developed a number of training and research programs and facilities concerning the languages and societies of Asia. The University’s principal resources are in the East Asian field, but Central Asia, the Near and Middle East, India, and Russia in Asia are all receiving increasing attention. One primary resource is the Harvard-Yenching Library, an outstanding collection, which has been built up over six decades. There are also significant collections of East Asian publications in the Fogg Art Museum, the Peabody Museum of Archaeology and Ethnology, and the Harvard Law School. Western language works on East Asia are housed most extensively in the University’s central collection, the Widener Library.

This publication is designed to indicate briefly the opportunities for study and research on East Asia offered in the various departmental disciplines and in the several programs at Harvard designed specifically for the study of East Asia. The language instruction offered at Harvard includes Chinese, Japanese, Korean, Manchu, Mongolian, Tibetan, Uighur, and Vietnamese. The departments in which the study of East Asia is pursued include Anthropology, East Asian Languages and Civilizations, Economics, History of Art and Architecture, Government, History, Linguistics, Music, and Sociology.

In the following pages, information is given concerning admission, degree requirements, fellowships, libraries, museums, research activities, and publications. Courses are described in the Official Register of Harvard University entitled Courses of Instruction, Faculty of Arts and Sciences.

Admission
Application forms for admission to AM and PhD programs in the study of East Asia may be obtained only from, and must be submitted to, the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center, 3rd floor, 1350 Massachusetts Avenue, Cambridge, MA 02138 (not the Committee on Regional Studies — East Asia or any academic department). Applicants must have, or have in near prospect, a bachelor’s degree from a recognized institution (or a satisfactory equivalent), with a superior academic record and other indications of promise. See www.gas.harvard.edu for online submission of the application.

The holder of a bachelor’s degree who for special reasons may wish to pursue East Asian studies without intending to take a higher degree should apply to the Office of Special Students and Visiting Fellows, Harvard University, Holyoke Center, 3rd floor, 1350 Massachusetts Avenue, Cambridge, MA 02138. Special Students may be admitted to part-time as well as full-time study, and the tuition is the same as in the Graduate School. The University awards no fellowships or financial aid to Special Students.

Degree Requirements
Graduate students may pursue programs leading to higher degrees in several different subjects relating, directly or indirectly, to East Asia. The specific requirements for higher degrees in such subjects as anthropology, comparative literature, economics, history of art and architecture, linguistics, music, political science, and sociology, in any of which the student may emphasize work on East Asian materials, are listed below. The specific requirements for advanced degrees in the East Asian field follow.

Higher Degrees in East Asian Studies

AM in Regional Studies — East Asia
Administered by the Committee on Regional Studies — East Asia, the A.M. degree program provides basic preparation for specialization in the field of East Asian studies, both for future PhD candidates and for those preparing for nonacademic careers.

Admission. Admission is based on the applicant’s previous record, general ability, and promise. The typical applicant will have an undergraduate background in the study of East Asia and/or previous experience in East Asia itself. The GRE, TOEFL, if applicable, and an academic writing sample are required. Although knowledge of an East Asian language is not a prerequisite, such training is also taken into consideration.

Residence. RSEA is normally a two-year program. GSAS requires students to be registered and pay tuition for a minimum of one-year as a full-time student.

Program of Study. Programs are flexible to meet individual needs but typically consist of the following:
First year: eight-half courses (four per semester) that may include advanced language courses in Chinese, Japanese, or Korean, or, for students who have not previously studied the language, an appropriate beginning course; and six-half courses on East Asian history; political, social, and economic developments; literature or other cultural expressions, or approved courses offering methodological or comparative insights on East Asia.
Second year: eight-half courses, that may include Chinese, Japanese, or Korean language courses; a seminar devoted to the writing of a research paper or the thesis on a chosen topic; and other approved half-courses.

Language Requirement. Minimum language proficiency is ordinarily defined as the satisfactory completion of a third-year level course. For students without prior language background, it usually will be necessary to continue formal language study, at Harvard or elsewhere, through the summer following the first year in residence in order to meet this requirement.

Thesis. The thesis is developed under the guidance of the thesis advisor and must demonstrate original research utilizing primary sources.

Further information regarding the AM in Regional Studies — East Asia may be obtained by consulting the website at www.fas.harvard.edu/~rsea/.

Graduate Programs in East Asian Languages and Civilizations

The Department of East Asian Languages and Civilizations offers instruction in the Chinese, Japanese, Korean, Manchu, Mongolian, and Vietnamese languages; its faculty also offers Literary Tibetan in the South Asian Studies Department. The principal fields of study are Chinese, Japanese, and Korean literature, East Asian Buddhism, and Chinese, Japanese, Korean, and Inner Asian history. Instruction in Chinese, Japanese, and Vietnamese history is also offered in the History Department. A rough division of emphasis places Chinese and Japanese history after 1800 in the History Department...
and most courses in earlier periods in East Asian Languages and Civilizations. Faculty holding joint appointments with other departments include specialists in Chinese history, Vietnamese history, Buddhist studies, Chinese archaeology, and Japanese history.

**PhD in East Asian Languages and Civilizations**

**Admission.** Strong preference will be given to applicants who achieved distinction in their undergraduate or graduate work, and who are adequately prepared to meet the language requirements of the doctorate. The GRE General test and a writing sample are required. The TOEFL is required of international applicants, the exception being those who have a BA degree from an institution where English is the primary language of instruction.

**Residence.** Minimum of two years of full-time study (16 half-courses or equivalent). For financial residence requirements, see the GSAS Guide to Admission and Financial Aid.

**Program of Study.** Each student is required to engage in a program of study that involves at least three fields of knowledge. One of these fields should be chosen to demonstrate breadth in regard to a different area, discipline, or period. The program will be determined in consultation with the student’s advisor. Courses in other departments may be included whenever appropriate. Two research seminar papers with a grade of A- and above, one of which must be in the student’s primary field, are required of all students prior to taking the General Examination.

**Language Requirement.** The department sets specific language requirements for the degree that are intended to ensure that all students are proficient in the primary language(s) needed for professional scholarly research in the field. These requirements are the same for EALC and HEAL PhD candidates.

The minimal language requirements for the PhD involve mastery of one East Asian language and advanced work in a second East Asian language. What those languages are depends upon a student's regional and disciplinary specialization, and there is variation across the department. Standard requirements are defined for the different regional specializations as follows:

- **China:** Fourth-year level in modern Chinese; second-year level in literary Chinese; third-year level in modern Japanese or, in exceptional cases, equivalent ability in another East Asian language.
- **China/Inner Asia:** The same as for China, with the addition of two years’ study of one or more of the spoken or literary languages of Inner Asia (Manchu, Mongolian, Tibetan, Uyghur, Chaghatai).
- **Japan:** Fourth-year level in modern Japanese; first-year level in classical Japanese; second-year level in literary Chinese for students of pre-modern Japan; first-year level in literary Chinese for students of modern Japan. Note: In exceptional cases, a second year of classical Japanese may be substituted for the fourth year of modern Japanese.
- **Korea:** Third-year level in modern Korean; third-year level in modern Japanese; first-year level in literary Chinese for students of modern Korea; second-year level in literary Chinese for students of pre-modern Korea.
- **Tibet:** Third-year level in literary Tibetan; first-year level in modern Tibetan; combined three years’ study of literary and modern Chinese, depending on specialty. Note: In some cases, the equivalent background in either Manchu or Mongolian may be substituted for Chinese.

**General Examination.** The student must pass a two-hour oral examination in at least three fields. In addition to the oral examination, the student will be required to demonstrate proficiency in the primary language to be used in his or her research. Each subfield within the department will determine the means to test such proficiency.

**Prospectus.** A prospectus of a student’s dissertation, of 15–25 pages, will be required by the end of the academic term after the General Examination has been passed. At the end of the G-4 year, students are normally expected to present their prospectuses at a conference of faculty and students.

**Dissertation.** The dissertation, which must make an original contribution to knowledge, may deal with any subject approved by the department. It must demonstrate the student’s capacity to make critical use of source material in one or more East Asian languages.

**Dissertation Defense.** To qualify for the degree of doctor of philosophy, students are required to present their dissertation at a public defense. As of May 1994, an overall Graduate School policy has been established that students ordinarily will not be allowed to register beyond their tenth year in the Graduate School. If after ten years a candidate has not completed all the requirements for the degree, he or she will be withdrawn from candidacy. A candidate who has been withdrawn can be reinstated only by formal readmission to the Graduate School and to the department for the purpose of getting the degree.

Further information regarding courses and programs of study in East Asian languages and civilizations may be obtained by visiting the department’s website at http://ealc.org or by writing to the chair, Department of East Asian Languages and Civilizations, 2 Divinity Avenue, Cambridge, MA 02138.

**PhD in History and East Asian Languages**

The Department of East Asian Languages and Civilizations also administers a PhD in History and East Asian Languages. (This replaces the degree in History and East Asian Languages formerly administered by the Standing Committee on the Degree of Doctor of Philosophy in History and East Asian Languages, which ceased to admit new students in 2006.) The degree is designed to accommodate the needs of students who desire a more language-intensive program of study of East Asian history.

**Admission.** Candidates are expected to have demonstrated special aptitude and competence for advanced work in East Asian history. Admission will be based primarily on distinction in undergraduate or graduate work, including evidence of high achievement in history or related fields, and evidence of adequate preparation in one of the East Asian languages. The GRE General test and a writing sample are required. The TOEFL is required of international applicants, the exception being those who have a BA degree from an institution where English is the primary language of instruction.

**Residence.** Minimum of two years of full-time study (16 half-courses or equivalent). For financial residence requirements, see the GSAS Guide to Admission and Financial Aid.

**Program of Study.** Students working toward this degree are all required, at an early stage in their preparation, to submit a plan to their advisor showing the fields of study (normally three, but sometimes four) they propose for their general examination. The student’s program is built around these fields, which may be drawn from the lists of fields for either EALC or the Department of History. Each student must do honors work in two half-year history seminars. Students who can submit a Master’s thesis in a relevant area are required to complete one substantial research paper, normally as part of a regular seminar.

**Language Requirement.** (See Language Requirements under PhD in East Asian Languages and Civilizations.)

**General Examination.** The student must pass a two-hour oral General Examination in at least three fields, ordinarily chosen from those listed among the requirements for the PhD in History.
(see Higher Degrees in History). One of these fields must be in premodern history. In some cases, fulfilling these requirements may entail taking a fourth field. The General Examination normally must be taken before the beginning of the student’s fourth year in the department.

Prospectus. A prospectus of a student’s dissertation, of 15–25 pages, will be required by the end of the academic term after the General Examination has been passed.

Dissertation. The dissertation must be in a field of East Asian history and must demonstrate the candidate’s capacity to do original research work, utilizing one or more of the East Asian languages.

Dissertation Defense. To qualify for the degree of doctor of philosophy, students are required to present their dissertation at a public defense.

Further information regarding courses and programs of study in history and East Asian languages may be obtained by writing to the Chair, Department of East Asian Languages and Civilizations, 2 Divinity Avenue, Cambridge, MA 02138; http://ealc.org

PhD in History (with Special Field of East Asian History) This PhD degree program is administered by the Department of History. The student must apply to the Department of History and must consequently conform to the requirements of the PhD in history, as given in Higher Degrees in History.

The requirements for this degree are:

Admission. Please refer to Higher Degrees in History.

Residence. Minimum of two years of full-time study (16 half-courses or equivalent). For financial residence requirements, see the GSAS Guide to Admission and Financial Aid.

Program of Study. The student’s program is built around four “fields of study” selected by the student from a list of fields contained in Higher Degrees in History.

Language Requirement. The student must demonstrate a reading knowledge of two East Asian languages, or one East Asian language plus German, French or Russian by passing examinations administered by the Department of History, which are ordinarily given in September and January. See also Higher Degrees in History.

General Examination. All students must take a two-hour oral examination, covering four fields of study (see above under Program of Study), ordinarily in May of the fourth term of graduate work.

Dissertation. Please see Higher Degrees in History for rules regarding the makeup of the dissertation committee, the timing of the dissertation proposal, and submission of the dissertation.

Further information regarding courses and programs of study in history may be obtained by writing to the Director of Graduate Studies, Department of History, Robinson Hall, Cambridge, MA 02138; http://ealc.org.

Joint Degrees between the Department of East Asian Languages and Civilizations and Other Departments

After a full year of graduate study, a student whose subject of study is geographically limited primarily to East Asia but who is specializing in some branch of knowledge other than linguistics, literature, or history may, with the approval of the departments concerned, become a candidate for the PhD degree under a special ad hoc committee representing the department of the special discipline and the Department of East Asian Languages and Civilizations. The procedure for requesting the formation of such an ad hoc committee is outlined in The Graduate School of Arts and Sciences Handbook. The requirements for a PhD degree under such a committee are separately determined in each individual case, but the Department of East Asian Languages and Civilizations will normally expect the candidate to meet its usual language requirements. In recent years such ad hoc degrees have been administered to students working in the fields of anthropology, history of art and architecture, and sociology, among others.

Financial Aid

Applications for admission and for financial aid should be made as early as possible in the fall preceding the year of desired entrance into the Graduate School and prior to January 2 of that year.

Applicants who expect to rely on financial aid from Harvard at any stage in their graduate studies should file the appropriate application for financial aid at the time they apply for admission. Detailed instructions are contained in the GSAS Guide to Admission and Financial Aid.

Course assistants and teaching fellows are selected by the various departments and committees, and in most departments these posts are not normally open to first-year graduate students.

Foreign Language and Area Study Fellowships (FLAS)

The fellowships are annually assigned to Harvard University by the US Department of Education under the National Defense Education Act (Title VI) for language and area studies in East Asia at Harvard and approved Asian universities; specifically, Inter-University centers in Beijing, Tokyo, or at the ICLP in Taipei. Applicants must be American citizens or permanent residents of the United States.

Harvard-Yenching Institute Fellowships

Harvard-Yenching Institute Fellowship, primarily for Asian nationals who plan to return to Asia to teach, is awarded for graduate study at Harvard University in the humanities and social sciences. The nomination comes from East Asian studies PhD programs or from the Regional Studies (East Asia) admissions committee. The nominees can be applicants who are not directly admitted to a doctoral program, but are judged to be potentially competitive for admission to a doctoral program after completing an MA degree under faculty supervision. Upon successful application, students will be granted a two-year fellowship from the Harvard-Yenching Institute to complete their MA degree. If successfully admitted to a doctoral program at Harvard or other appropriate university upon completion of the MA, one year of additional fellowship support will be provided toward completion of the doctoral degree. Further information may be obtained from the Program Office, Harvard-Yenching Institute, 25 Francis Avenue, Suite 20, Cambridge, MA 02138; www.harvard-yenching.org

Traveling Fellowships

Social Science Research Council Fellowships for International Doctoral Research (formerly known as the Foreign Area Fellowship Program), funded by the Ford Foundation, support study in the United States and Asia. Inquiries should be addressed to the Social Science Research Council, 605 Third Avenue, New York, NY 10016; info@ssrc.org.

Harvard students wishing to study in Hong Kong, Japan, Korea, or Taiwan may also apply for either a US Office of Education-administered Fulbright-Hays Doctoral Dissertation Research Abroad Fellowship or a Fulbright Grant for Graduate Study Abroad administered by the Institute of International Education for the US Department of State. Applications for these two awards may be obtained from the Fulbright coordinator at the Graduate School of Arts and Sciences in Holyoke Center.

There are also travel grants among the Harvard General Scholarships, under the Kennedy, Knox, and Sheldon Traveling Fellowships and
The Harvard-Yenching Institute
The Harvard-Yenching Institute is an independent nonprofit corporation (with a Board of Trustees and an executive director) primarily concerned with education in Asia. However, the location at this University of the Harvard-Yenching Library (which the institute founded and still helps to support), together with the institute’s headquarters for its administration, publications, fellowships, and program of visiting scholars from East Asia, makes the institute a major factor in resources for and activities in East Asian studies at Harvard. Although it contributes to the University’s Department of East Asian Languages and Civilizations, the institute itself is a foundation and not a teaching organization.

The institute publishes the Harvard Journal of Asiatic Studies. It also supports the publication of various books through the Harvard University Press or in conjunction with the Council on East Asian Studies.

The Harvard-Yenching Library
The Harvard-Yenching Library is the largest university library for East Asian research in the United States and one of the most distinguished collections in East Asian languages outside Asia itself. In addition to materials in Chinese, Japanese, and Korean, it also contains holdings in Manchu, Mongolian, Tibetan, Vietnamese, and Western languages. Thus, the library is both a subject collection on East Asia and a general collection of works in the East Asian languages.

The library, after having been known primarily for its outstanding collections on the classical and traditional literatures, histories, religions, and philosophies of China and Japan, has gone through a vigorous expansion of Chinese holdings and is now also being built into a major repository on contemporary East Asia, while continuing to grow from strength in its original fields.

The library’s collection consists of over 980,000 volumes. It also boasts an outstanding periodical collection of more than 14,000 titles, and a newspaper collection consisting of some 700 titles. Recent years have seen a rapid growth in the library’s microfilm and microfiche collection to its present size of approximately 80,000 reels and 18,000 fiche. Electronic resources are also being added to its collection.

The library is open to all Harvard faculty and students and to other qualified scholars. A fee is assessed for borrowing privileges by non-Harvard users. (For the fee schedule, inquire at the circulation desk.)

Bibliographical records of all Chinese, Japanese, and Korean-language materials cataloged since 1989 are included in HOLLIS, as are the records for the entire Western-language collection. Chinese, Japanese, and Korean-language materials cataloged prior to 1989 are listed in separate printed book catalogues.

Registered users are permitted entry into the stacks. Study carrels are available in the library stacks. They are assigned as available upon application at the circulation desk.

The library sponsors the Harvard-Yenching Library Bibliographical Series under which research aids in East Asian studies are published. For more information consult the library’s website at www.hcl.harvard.edu/harvard-yenching/.

Museums
The Harvard University Art Museums contain a distinguished representation of different branches of the archaeology and fine arts of China, Korea, and Japan, housed in the Arthur M. Sackler Museum. The collections of ancient Chinese bronzes, jades, and Buddhist sculpture, and Japanese woodblock prints are among the finest in the world. The museum also houses an extensive working library, a large slide collection, and a substantial photographic archive.

Harvard’s Peabody Museum of Archaeology and Ethnology has long been a leading center for research in the anthropology as well as the archaeology of Eastern Asia.

The Boston Museum of Fine Arts possesses balanced collections of Indian, Chinese, and Japanese art that are among the finest in the world. Chinese numismatics and Japanese ethnology may be advantageously studied in the Essex Institute and the Peabody Museum of Salem.

The Council on East Asian Studies
Established in 1972, the Council on East Asian Studies was formed to coordinate all teaching and research in East Asian studies at Harvard University. The council is currently administered through the Asia Center.

The Fairbank Center for Chinese Studies
The Fairbank Center for Chinese Studies, originally called the Center for East Asian Research and renamed as the John K. Fairbank Center for East Asian Research in 1977, was founded in 1955 by Professor John King Fairbank, a leading scholar in modern and contemporary China studies.

The center’s primary objective is to facilitate research and publication on China, with particular emphasis on contemporary issues. At the same time, the center’s program of activities reflects the underlying premise that China today can best be understood in the light of its historical background and in its geographical and cultural context.

Although the center does not offer instruction, it provides assistance to postdoctoral researchers who are preparing manuscripts for publication, and to graduate and undergraduate students traveling to Asia. In addition, the center invites senior researchers from American and foreign institutions to come as visiting scholars, research associates or fellows to work on selected projects.

For more information consult our website at www.fas.harvard.edu/~fairbank.

The Edwin O. Reischauer Institute of Japanese Studies
First established in 1973 as the Japan Institute, the Reischauer Institute has a University-wide mandate to develop and coordinate activities concerning Japan among the various faculties at Harvard, through the advancement of instruction and research in the social sciences and humanities. Moreover, the Institute seeks to expand and coordinate Japan-related connections with other Harvard departments, centers, and research institutes, and to respond to scholarly and public interest in Japan from outside Harvard through outreach activities such as lectures, conferences, symposia, exhibitions, and films.

The institute contributes to (1) support for new teaching positions in the field of Japanese studies; (2) support for research, publications, library, and administrative costs related to institute programs; (3) undergraduate, graduate, and postdoctoral fellowships and grants; (4) other activities designed to stimulate interest in the study of Japan.

The Korea Institute
The Korea Institute is Harvard’s only organization devoted solely to the development and support of Korean studies at the university. Established in 1981 under the aegis of the Fairbank Center, the Institute became an independent organization within the Faculty of Arts and Sciences (FAS) in 1993. The Korea Institute’s purposes are to give heightened visibility and direction to Korean Studies activities throughout Harvard, and to serve as a focal point of involve-
ment for scholars and others outside the Harvard community to conduct research with Harvard faculty, students, and resources. The Institute’s programs include seminars, workshops, conferences, exhibits, films and cultural events. The Institute also coordinates a growing array of undergraduate, graduate, and postdoctoral fellowships, representing fields in the humanities and social sciences. The Institute supports publications in the Korean studies field, including a series on Korean literature, studies and translations, sponsored by the Sunshik Min Endowment for the Advancement of Korean Literature.

More information on the Korea Institute is available at: www.fas.harvard.edu/~korea, including a link for prospective students.

The Harvard University Asia Center

The Harvard University Asia Center was established in 1997 to facilitate teaching and research in East Asian Studies throughout Harvard University. In addition, the Center will prepare for expanded programs in Southeast and South Asia. Some of the goals of the Asia Center are (1) to promote research, teaching and other programs that study Asia in comparative terms (particularly projects involving more than one Asian country); (2) to support cooperative projects involving participants from more than one Faculty of the University; and (3) to develop and support programs which link scholarship on modern Asia to contemporary issues on government, business, law, society, culture, and other fields.

The Center currently administers Harvard’s National Resource Center for East Asia and publishes the Harvard East Asian Monograph Series, the Harvard-Hallym Series, and the Harvard-Yenching Institute Monograph Series. The Center also supports faculty, graduate, and undergraduate research through its grants and fellowships programs.
Higher Degrees under the Department of Economics

The graduate program of the Department of Economics is addressed to students of high promise who wish to prepare themselves in teaching and research or for responsible positions in government, research organizations, or business enterprises. Admission to the program is limited to candidates for the PhD. Students are expected to devote themselves full-time to their program of study. Students who seek the AM degree only cannot be admitted.

There are six major requirements for the doctoral degree. They are (1) taking a written examination in economic theory, (2) satisfying course requirements in distribution and in quantitative methods, (3) writing a research paper in the second year, (4) taking an oral examination on two special fields selected by the student, (5) presenting a seminar on the student’s research, and (6) preparing a doctoral dissertation.

The student is expected to satisfy the first four requirements within two years of residence. The department does not assume that students will have completed their professional training by that time, but does expect them to have formed an appreciation of the discipline of economics, to have settled on their personal fields of interest, and to have learned to apply their discipline to those fields. The examinations are designed to verify that the candidate has attained a broad integration of this sort.

Course of Study

Several kinds of knowledge are required of a professional or academic economist. An economist must understand the nature of long-term changes in the economy (economic history); the best thinking about the ways in which economic units interact with each other and with their environment, respond to change, and develop over time (economic theory and its intellectual development); and the techniques by which economic data are assembled, evaluated, and analyzed (statistical method and its application). In addition an economist needs the discipline and versatility gained by detailed study of some economic problems and policy areas (the optional fields).

Admissions Requirements

Concentration in economics is preferred but not required. Students will need a strong undergraduate training in both economics and mathematics. All applicants are required to take the GRE. If English is not the candidate’s native language, there are two acceptable ways to demonstrate English proficiency: (1) Hold a degree from an institution at which English is the language of instruction; (2) A minimum score of 80 on the Internet based test (IBT) on the TOEFL administered by the Educational Testing Service (ETS), Box 899, Princeton, NJ 08541.

Mathematics Requirement

Students are expected to have a strong background in linear algebra and calculus upon entering the program; knowledge of differential equations, real analysis, probability, and statistics is also very helpful.

To request an application for admission, write to the Admissions and Financial Aid Office, Harvard Graduate School of Arts and Sciences, Holyoke Center, 3rd floor, 1350 Massachusetts Avenue, Cambridge, MA 02138; or visit www.gas.harvard.edu.

Admissions Information 2012–2013

Number of Applications Received: 650
Number Admitted: 35
GRE Scores (Admitted Applicants)
Quantitative: 780 – 800
Average: 797
Analytical: 3.5 – 6
Average: 5.0

On-campus interviews are not granted. The application for admission is the basis for evaluation of each candidate. It is essential that the Admissions Office receive all admissions materials by the due date. Incomplete applications will not be reviewed.

Financial Aid

The department has limited funding for financial support of graduate study, based both on need and merit. The program is administered by the Graduate School. In order to be admitted, a student must normally have adequate resources for the first two years of graduate study, either from outside public or private sources, or in the form of financial support (financial aid) from the University up to a minimal level of need, as determined by the Graduate School. After the first two years, financial support takes the form, largely, of teaching and research assistantships.

Teaching Fellowships

The Department of Economics offers teaching fellowships to degree candidates to provide both financial support and experience in teaching under supervision. Teaching is considered part of the training for the PhD, and students who have completed two years in the program are encouraged to apply.

Degree Requirements

Academic Residence Requirement

Two years of full-time study (16 half-courses or equivalent) are required.

Plan of Study

During the first year of graduate study, graduate students are normally required to take formal courses in advanced microeconomic and macroeconomic theory in preparation for the required examination in economic theory. In addition, they should satisfy the course requirements in quantitative methods and may begin work on fulfillment of the distribution requirement.

In preparation for the General Oral Examination, described in more detail below, students are encouraged to choose from a very large selection of courses offered each year in the department and pertinent courses offered in other departments. In some fields, but not all, there is a two-term sequence of courses intended as the basic preparation for an oral examination in the field. A student may wish to take more than two terms’ work in the field chosen for the examination, including a research seminar or a reading program under the guidance of a member of the faculty.

Written Examinations

There are two written examinations in economic theory—one each in microeconomics and macroeconomics—which are administered in the spring and fall. Students must pass each examination with a grade of B or better. They ordinarily take the examinations in the spring term of the first year of graduate study. In preparation, students must normally enroll in Economics 210a-b, Advanced Microeconomic Theory, and Economics 210c-d, Advanced Macroeconomic Theory. However, they will be excused from one or more of these courses by passing the corresponding part of the theory examination with a grade of B or better when they enter in the fall.

Course Requirements

Students satisfy the econometrics methods requirement by completing Introduction to Applied Econometrics, Economics 2120 (with a grade of B or better). Economics 2120 is offered in the spring term. Students should take Quantitative Methods, Economics 2110, in the fall. This is a prerequisite for Economics 2120. The econometrics requirement may be satisfied by a more advanced course with the approval of the instructor. This requirement normally is completed during the first year of graduate study.
The distribution requirement is fulfilled by passing one course (with grade of B+ or better) from a list of courses available in the Graduate Office. The purpose of the requirement is to ensure that students are exposed to non-standard ways of thinking about issues central to economics. This is normally done by taking a course in economic history, a course involving non-standard approaches to economics, or a course in disciplines of social inquiry (anthropology, government, history, philosophy, psychology, sociology, etc.) that deals with economic topics from the perspectives of those disciplines.

This requirement is frequently satisfied in the first year. The course must be taken during the time students are enrolled in the graduate program. (Courses taken as an undergraduate or in other graduate programs will not be considered.) Courses offered primarily for undergraduates may be acceptable provided there is a provision for graduate students to take the course with additional requirements.

Second-Year Research Paper

In the spring term of the second year, students must enroll in Economics 3000 (Research Paper) and begin work on the second-year paper under the supervision of a member of the faculty of the department. Students must complete the research paper to the satisfaction of their faculty supervisor and receive a grade of SAT in Economics 3000 before they may take the General Oral Examination.

General Oral Examinations

The General Examination is a one-hour oral examination. One half-hour is devoted to each of two optional fields. A student must complete the written examination in economic theory, the course requirements in quantitative methods and economic history, and the second-year research paper before taking the oral examination. This examination is normally taken between the second and third years of graduate study.

In selecting fields for the oral examination, the candidate must choose at least one field from the following list:

- Economic Theory
- Experimental Economics
- Economic Development
- Public Economics
- Industrial Organization
- Labor Economics
- Political Economics
- Econometrics
- Macroeconomics
- Economic History
- International Economics
- Financial Economics
- Behavioral Economics
- Markets
- Political Economy
- Industrial Organization
- Financial Economics
- Macroeconomics
- Public Economics
- International Economics
- Educational Attainment and Employment of
- Political Economy
- Industrial Organization and Technological Change
- Essays on International Capital Markets
- Essays on Finance, International Economics, and National Security
- Disasters and the Lucas Orchard: Essays in Finance and Macroeconomics
- Essays in Political Economy
- Essays on Unemployment and Expectation in Macroeconomic Models
- Essays on the Political Economy of Public Good Provision in Developing Countries
- Topics in International Economics
- Essays in Taxation and International Relations
- Essays on the Economics of Crime and Criminal Justice
- Essays in International Finance and Macroeconomics
- Topics in the Economics of Health and Aging
- Essays in Development Economics
- Essays on Governance, Population, and Political Stability
- Estimation and Inference Under Non-Stationary Data
- Essays in Monetary Economics
- Essays in Applied Game Theory
- Essays on Public and Labor Economics
- Three Essays on Development Economics and Political Economy
- Essays on Matching and Market Design
- Essays on Careers in U.S. Labor Markets: The Interaction of Internal and External Labor Markets
- Essays in Applied Microeconomics & Applied Econometrics
- Essays in Applied Game Theory
- Essays on Public and Labor Economics
- Three Essays on Development Economics and Political Economy
- Essays on Matching and Market Design
- Essays on Careers in U.S. Labor Markets: The Interaction of Internal and External Labor Markets
- Essays in Applied Microeconomics & Applied Econometrics

Good Standing

Students enrolled in the PhD program may be subject to termination of candidacy if they fail to remain in good standing, as defined below:

1. Within three years of residence, the student shall complete the written theory examination, the course requirements in distribution and econometrics, the second-year paper, and the General Oral Examination.

2. Within three years of residence of completing all the requirements listed above in (1), the student shall complete the seminar requirements and the dissertation.

Students who fail to remain in good standing are not eligible for financial support or employment through Harvard, including employment as a teaching fellow. Exceptions to these requirements for good standing will be granted by the department only in very unusual circumstances on the basis of a petition by the student. The dissertation must be submitted in final form within five years of the date of the oral examination; otherwise, the student’s candidacy for the PhD automatically lapses.

Recent PhD Dissertation Titles

- Essays in Industrial Organization and Technological Change
- Essays on International Capital Markets
- Essays on Finance, International Economics, and National Security
- Disasters and the Lucas Orchard: Essays in Finance and Macroeconomics
- Essays in Political Economy
- Essays on Unemployment and Expectation in Macroeconomic Models
- Essays on the Political Economy of Public Good Provision in Developing Countries
- Topics in International Economics
- Essays in Taxation and International Relations
- Essays on the Economics of Crime and Criminal Justice
- Essays in International Finance and Macroeconomics
- Topics in the Economics of Health and Aging
- Essays in Development Economics
- Essays on Governance, Population, and Political Stability
- Estimation and Inference Under Non-Stationary Data
- Essays in Monetary Economics
- Essays in Applied Game Theory
- Essays on Public and Labor Economics
- Three Essays on Development Economics and Political Economy
- Essays on Matching and Market Design
- Essays on Careers in U.S. Labor Markets: The Interaction of Internal and External Labor Markets
- Essays in Applied Microeconomics & Applied Econometrics
Joint Programs

PhD in Business Economics
This program is administered by a standing committee composed of members of the Department of Economics and the Graduate School of Business Administration. It is described in the section of this publication entitled “The PhD in Business Economics.” Additional information can be found on the web at www.hbs.edu/doctoral. Inquiries about this program should be directed to DoctoralPrograms@bschool.hbs.edu or Harvard Business School, Doctoral Programs Office, Sherman Hall, Boston, MA 02163.

PhD in Political Economy and Government
This program is administered by a standing committee composed of members of the Departments of Economics, Government, and the Harvard Kennedy School and is described in a section of this publication entitled “The PhD Under the Committee on Political Economy and Government.” Written inquiries about this program should be sent to Director of Doctoral Programs, Harvard Kennedy School, 79 JFK Street, Cambridge, MA 02138.

Applications for admissions and for grants, together with information regarding admissions procedures, may be obtained by writing directly to the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138. We encourage online submission of the application. See www.gsas.harvard.edu.

Further information regarding courses and programs of study in economics may be obtained by writing directly to the Coordinator of Graduate Studies, Department of Economics, Littauer Center 201, Cambridge, MA 02138, or by visiting www.economics.harvard.edu.

Department of Economics
Faculty Research Interests

Aghion, Philippe. Economic theory, development, industrial organization
Alesina, Alberto. Political economy, monetary and fiscal policy, macroeconomics
Antràs, Pol. International economics
Barro, Robert. Economic growth, macroeconomics
Campbell, John. Asset pricing, macroeconomics
Chamberlain, Gary. Econometrics
Chaney, Eric. Economic history
Chetty, Raj. Public economics, applied microeconomics, macroeconomics
Chodorow-Reich, Gabriel. Macroeconomics
Cooper, Richard. International economics, international trade, international monetary economics, international environmental and energy issues
Cutler, David. Public economics, health economics
Dell, Melissa. Economic development
Farhi, Emmanuel. Macroeconomics
Feldstein, Martin. Public economics, taxation, social insurance, macroeconomics
Freeman, Richard. Labor economics and institutions, inequality, crime, philanthropy, European labor markets, computer simulation modeling, trade unionism
Friedman, Benjamin. Macroeconomics, monetary and fiscal policy
Fryer, Roland. Applied theory, applied microeconomics, labor economics
Fudenberg, Drew. Game theory, microeconomic theory
Glaeser, Edward. Urban economics, social economics, institutions
Goldin, Claudia. Economic history, labor economics
Golub, Benjamin. Networks, social learning, microeconomics
Gopinath, Gita. International macroeconomics, trade
Green, Jerry. Microeconomic theory
Hart, Oliver. Microeconomics
Helpman, Elhanan. International economics, economic growth, political economy
Hendren, Nathaniel. Public economics
Hornbeck, Richard. Economic history, economic development
Jorgenson, Dale. Econometrics
Kasy, Maximilian. Econometric methods, optimal policy choice and econometrics
Katz, Lawrence. Labor economics, applied econometrics, economics of social problems
Kremer, Michael. Development economics
Laibson, David. Macroeconomics, finance, psychology and economics, experimental economics
Lewis, Gregory. Industrial organization, microeconomic theory, applied econometrics
Mankiw, N. Gregory. Macroeconomics
Marglin, Stephen. Theory, history, development and methodology
Maskin, Eric. Theory
Melitz, Marc. International economics
Mullainathan, Sendhil. Psychology and economics, poverty, finance
Nunn, Nathan. International trade, development economics, economic history
Pakes, Ariel. Industrial organization, econometrics
Pallais, Amanda. Labor economics, applied microeconomics
Rogoff, Kenneth. International finance
Sen, Amartya. Economics, philosophy, decision theory
Shleifer, Andrei. Law and economics, corporate finance
Stein, Jeremy. Corporate finance, behavioral finance, money and banking
Stock, James. Macroeconomic forecasting, monetary policy, construction and use of leading and coincident economic indicators
Strzalecki, Tomasz. Decision theory, microeconomic theory
Summers, Lawrence H. Macroeconomics, international policy, finance, public finance, labor
Weitzman, Martin. Microeconomic theory, environmental economics
The PhD in Education, enrolling its first cohort in Fall 2014, is offered jointly by the Harvard Graduate School of Education (HGSE) and the Faculty of Arts and Sciences (FAS) and draws faculty from across the University’s graduate and professional schools. The program combines advances in the social sciences, sciences, arts and humanities with deep expertise in educational research, policy and practice, training students for careers as academics, researchers, policymakers, and leaders who will improve educational outcomes in the U.S. and around the world.

Candidates for the degree will be affiliated with one of three concentrations: Culture, Institutions, and Society (CIS); Education Policy and Program Evaluation (EPPE); or Human Development, Learning, and Teaching (HDLT). The program’s concentrations, curricular requirements, and milestones are structured to achieve four goals: to equip students with domain knowledge in education; to provide training in relevant disciplines; to ensure rigorous training in a range of research methods; and to promote the development of new research and knowledge with a transformative impact on education.

**Concentrations**

**Culture, Institutions, and Society (CIS):** Students in the CIS concentration will conduct research on the broader cultural, institutional, organizational, and social contexts relevant to education across the lifespan. Students may examine how, why, where, and when cultural, institutional, and social factors shape educational processes and outcomes, as well as how educational change can transform these broader cultural, institutional, and social structures. Examinations of individual and collective agency, as well as broader structural perspectives, are both valued in CIS. Work in this concentration will be informed by theories and methods from sociology, history, political science, and organizational behavior and management, as well as from related disciplines such as philosophy and anthropology. Students may consider contexts as diverse as classrooms, families, neighborhoods, schools, colleges and universities, religious institutions, non-profits, government agencies, or other settings to study topics such as education reform; organizational decision-making and effectiveness; stratification and institutional inequality; racial identities, attitudes, and bias; systems for instructional improvement and student support; values and purposes of education; governance and leadership within institutions; or social movements and community action in education.

**Education Policy and Program Evaluation (EPPE):** Students in the EPPE concentration will produce research on the conceptualization, implementation, and evaluation of educational and other public policies relevant to the domains of early childhood, K–12, and postsecondary education, in the U.S. and internationally. They may engage in program or policy evaluation and analysis, measurement and assessment, or the study of policy development, relating to issues such as access to education, teacher effectiveness, school finance, testing and accountability systems, school choice, financial aid, college enrollment and persistence, and more. Work in this concentration will be informed by theories and methods from economics, political science, public policy, and sociology, as well as from related disciplines such as history, philosophy, and statistics. Although students’ research may incorporate some of the same organizational and institutional contexts as the Culture, Institutions, and Society concentration, their work will be more consistently linked to public policy, programs, and large-scale reforms.

**Human Development, Learning and Teaching (HDLT):** Students in the HDLT concentration will study and produce research that focuses on the course and contexts of developmental change and the complex processes of learning and teaching. New advances in the science of learning and development, such as studies of the integration of biological, cognitive, and social processes, mechanisms through which technological forms alter learning, and contextual factors that explain socio-demographic and socio-cultural variation in learning and development are transforming the practice of teaching and learning in formal and informal settings. Whether studying behavioral, cognitive, or social-emotional development in children or the design and development of curricula, instructional methods, and learning technologies to maximize understanding, students will gain a strong background in human development, the science of learning, and contextual mechanisms, including pedagogy, disciplinary knowledge, and sociocultural factors that explain variation in learning and developmental pathways. Work in this concentration will be informed by theories and methods from psychology, cognitive science, sociology and linguistics, as well as from related disciplines, such as philosophy, the biological sciences and mathematics, and organizational behavior, to continue to advance the role of scientific research in transforming educational practice.

**Degree Requirements**

The PhD in Education program has the following components:

- Two years (generally) of coursework (minimum of 16 courses), including:
  - Program Core Course
  - At least four research methods courses, including 2 foundational quantitative methods courses, a foundational qualitative methods course, and one additional qualitative methods course selected from an approved list
  - Concentration Core Course
  - Structured Reading time (the equivalent of one course) for preparation for the General Exam
- Research Workshop / Lab, which students must attend throughout the program; in later years, they are required to present work-in-progress
- General Exam, which tests the student on both general and concentration-specific knowledge
- Qualifying paper on a topic of the student’s choosing
- Dissertation proposal
- Dissertation based on original research
- Oral defense

For more information on the program, please visit www.gse.harvard.edu/academics/doctorate/phd.

**Admissions**

Applicants to the PhD in Education program are welcome from a variety of disciplinary and professional backgrounds. Successful candidates for admission will have outstanding academic preparation and a deep commitment to the field of education, as demonstrated through prior research, work experience, and/or volunteer experience. Prior academic study in education is not required. We are strongly committed to increasing the diversity of education scholars and encourage applicants from all backgrounds to apply.

A complete application for admission includes: 1) online application form specifying concentration; 2) statement of purpose; 3) three letters of recommendation, submitted online; 4) resume or curriculum vitae; 5) transcripts from each postsecondary institution attended; 6) if applicable, a list of courses taken in intended and related fields of study; 7) official GRE scores; 8) official TOEFL scores (if applicable); and 9) supplemental form for the PhD in Education.

The online application for admission and financial aid is available on the Graduate School
Financial Aid

All PhD in Education students receive a multi-year funding package which includes tuition, fees, and a stipend for the first two years; tuition, fees, and a combination of teaching fellowships and research assistantships in the third and fourth years; and tuition for the fifth year. During the dissertation completion year, students receive a fellowship covering tuition, fees, and a stipend. Applicants are encouraged to apply for external grants and fellowships whenever possible. Students must be making satisfactory progress in order to maintain eligibility for financial aid.

Faculty

The faculty come from the Harvard Graduate School of Education (HGSE), the Faculty of Arts and Sciences (FAS), the Harvard Kennedy School (HKS), the Harvard Law School ( HLS), Harvard Medical School (HMS), and Harvard School of Public Health (HSPH). Each student’s primary advisor will be a member of the HGSE faculty. The PhD faculty includes, but is not limited to:

- **Susan Carey**, Henry A. Morss Jr. and Elisabeth W. Morss Professor of Psychology and Chair, Department of Psychology, FAS
- **Nadarajan Chetty**, Professor of Economics, Department of Economics, FAS
- **Christopher Dede**, Timothy E. Wirth Professor in Learning Technologies, HGSE
- **David Deming**, Assistant Professor of Education and Economics, HGSE
- **Sarah Dryden-Peterson**, Assistant Professor of Education, HGSE
- **Kathryn Edin**, Professor of Public Policy and Management, HKS
- **Catherine Elgin**, Professor of Education, HGSE
- **Richard Elmore**, Gregory R. Anrig Professor of Educational Leadership, HGSE
- **Günter Fink**, Assistant Professor of International Health Economics, Department of Global Health and Population, HSPH
- **Kurt Fischer**, Charles Bigelow Professor of Education, HGSE
- **Richard Frank**, Margaret T. Morris Professor of Health Economics, Department of Health Care Policy, HMS
- **Roland G. Fryer, Jr.**, Robert M. Beren Professor of Economics, Department of Economics, FAS
- **Archon Fung**, Ford Foundation Professor of Democracy and Citizenship, HKS
- **Nadine Gaab**, Assistant Professor of Pediatrics, HMS
- **Howard Gardner**, John H. and Elisabeth A. Hobbs Professor of Cognition and Education, HGSE
- **Hunter Gehlbach**, Associate Professor of Education, HGSE
- **Matt Gillman**, Professor of Ambulatory Care and Prevention and Director of the Obesity Prevention Program, HMS
- **Claudia Goldin**, Henry Lee Professor of Economics, Department of Economics, FAS
- **Joshua Goodman**, Assistant Professor in Public Policy, HKS
- **Tina Grotzer**, Associate Professor of Education, HGSE
- **Paul Harris**, Victor S. Thomas Professor of Education, HGSE
- **Thomas Hehir**, Silvana and Christopher Pascucci Professor of Practice in Learning Differences, HGSE
- **Takai Hensch**, Professor of Neurology, HMS

- **Monica Higgins**, Professor of Education, HGSE
- **Heather Hill**, Professor of Education, HGSE
- **Nancy Hill**, Professor of Education, HGSE
- **Andrew Ho**, Assistant Professor of Education, HGSE
- **Jennifer Hochschild**, Henry Labouisse Jayne Professor of Government and Professor of African and African American Studies, Department of African and African American Studies, Department of Government, FAS
- **Guido Imbens**, Professor of Economics, Department of Economics, FAS
- **Christopher Jencks**, Malcolm Wiener Professor of Social Policy, HKS
- **Andrew Jewett**, Associate Professor of History and Social Studies, Department of History, FAS
- **Stephanie Jones**, Marie and Max Kargman Associate Professor in Human Development and Urban Education Advancement, HGSE
- **Thomas Kane**, Professor of Education and Economics, HGSE
- **Lawrence Katz**, Elisabeth Allison Professor of Economics, Department of Economics, FAS
- **Ichiro Kawachi**, Professor of Social Epidemiology and Chair, Department of Society, Human Development, and Health, HSPH
- **Robert Kegan**, William and Miriam Meehan Professor in Adult Learning and Professional Development, HGSE
- **James Kim**, Associate Professor of Education, HKS
- **Gary King**, Albert J. Weatherhead III University Professor, Department of Government, FAS
- **James Kloppenberg**, Charles Warren Professor of American History and Chair, Department of History, FAS
- **Daniel Koretz**, Henry Lee Shattuck Professor of Education, HGSE
- **Michèle Lamont**, Robert I. Goldman Professor of European Studies and Professor of Sociology and of African and African American Studies, Department of African and African American Studies, Department of Sociology, FAS
- **Sara Lawrence-Lightfoot**, Emily Hargroves Fisher Professor of Education, HGSE
- **Nonie Lesaux**, Professor of Education, HGSE
- **Meira Levinson**, Associate Professor of Education, HGSE
- **Richard Light**, Carl H. Pforzheimer, Jr. Professor of Teaching and Learning, HGSE
Bridget Terry Long, Xander Professor of Education and Economics and Academic Dean, HGSE

Gigi Luk, Assistant Professor of Education, HGSE

Katherine Masyn, Assistant Professor of Education, HGSE

Eric Mazur, Balkanski Professor of Physics and Applied Physics and Area Dean for Applied Physics, Department of Physics, FAS

Jal Mehta, Assistant Professor of Education, HGSE

Louis Menand, Anne T. and Robert M. Bass Professor of English, Department of English, FAS

Martha Minow, Jeremia Smith, Jr. Professor of Law and Dean of the Faculty of Law, HLS

Mark Moore, Herbert A. Simon Professor in Education, Management, and Organizational Behavior, HGSE and Hauser Professor of Nonprofit Organizations, HKS

Charles Nelson, Professor of Pediatrics and Neuroscience and Richard David Scott Chair in Pediatric Developmental Medicine Research, HMS

Matthew Nock, Professor of Psychology, Department of Psychology, FAS

Paul Peterson, Henry Lee Shattuck Professor of Government and Director of the Program on Education Policy and Governance, Department of Government, FAS

Maria Polinsky, Professor of Linguistics, Department of Linguistics, FAS

Fernando Reimers, Ford Foundation Professor of International Education, HGSE

Julie Reuben, Professor of Education, HGSE

Robert Sampson, Henry Ford II Professor of the Social Sciences and Director of the Social Sciences Program at the Radcliffe Institute for Advanced Study, Department of Sociology, FAS

Robert Selman, Roy Edward Larsen Professor of Education and Human Development, HGSE

Tommie Shelby, Professor of African and African American Studies and of Philosophy, Department of African and African American Studies, Department of Philosophy, FAS

Jack Shonkoff, Julius B. Richmond FAMRI Professor of Child Health and Development, HGSE and HSPH

Judith Singer, James Bryan Conant Professor of Education, HGSE, Senior Vice Provost for Faculty Development and Diversity

Jesse Snedeker, Professor of Psychology, Department of Psychology, FAS

Catherine Snow, Patricia Albjerg Graham Professor of Education, HGSE

Doris Sommer, Ira Jewell Williams, Jr. Professor of Romance Languages and Literatures and of African and African American Studies, Department of Romance Languages and Literatures, Department of African and African American Studies, FAS

Jon Star, Nancy Pforzheimer Aronson Associate Professor in Human Development and Education, HGSE

Mary Steedly, Professor of Anthropology, Department of Anthropology, FAS

Paola Uccelli, Associate Professor of Education, HGSE

David Urton, Associate Professor of Neurology and Director of the Division of Service Learning, HMS

Gary Urton, Dumbarton Oaks Professor of Pre-Columbian Studies, Department of Anthropology, FAS

Tyler VanderWeele, Associate Professor of Epidemiology, HSPH

Natasha Warikoo, Assistant Professor of Education, HGSE

Felix Warneken, Assistant Professor of Psychology, Department of Psychology, FAS

Mary Waters, M.E. Zukerman Professor of Sociology, Department of Sociology, FAS

Martin West, Assistant Professor of Education, HGSE

William Julius Wilson, Lewis P. and Linda L. Geysers University Professor, Department of African and African American Studies, Department of Sociology, FAS

Christopher Winship, Diker-Tishman Professor of Sociology, Department of Sociology, FAS
Higher Degrees in the School of Engineering and Applied Sciences

The School of Engineering and Applied Sciences (SEAS) offers doctoral and master’s degree programs that lie at the interfaces of engineering, the applied sciences (from biology to physics), and technology. Particular areas of academic focus include applied mathematics, applied physics, bioengineering, computer science, electrical engineering, environmental sciences and engineering, and mechanical engineering and materials science.

In keeping with the interdisciplinary nature of modern research, SEAS does not have traditional academic departments and does not award degrees by specific research area.

Students may instead work towards a Master of Science, Master of Engineering, and Doctor of Philosophy degree in one of four subjects: Applied Mathematics, Applied Physics, Computer Science, and Engineering Science. Students make also work toward a Master of Science or a Master of Engineering in Computational Science and Engineering. Currently there is not a doctoral degree option for Computational Science and Engineering.

The faculty members in the SEAS, nearly 30 percent of whom have joint appointments in other research areas, have close ties with the science departments (especially Physics, Biology, Chemistry, and Earth and Planetary Sciences) in the Faculty of Arts and Sciences and increasing ties to Harvard’s professional schools (including business and medicine). Students may also pursue collaborative options through the Medical Engineering and Medical Physics (MEMP) program, which is part of the Harvard-MIT Division of Health Sciences and Technology.

The majority of the course offerings, most of which span across disciplines, are listed in the Courses of Instruction under the following broad headings: applied mathematics, applied physics, applied computation, computer science, and engineering sciences. In addition to lecture courses and seminars, students may take directed reading and research courses in connection with their dissertations and, on occasion, use them to explore topics not covered in regular courses. Programs that include considerable work in one or more science departments are common. Students may supplement their studies by cross-registering in other Harvard graduate schools or at the Massachusetts Institute of Technology. (Certain limitations apply.)

Degree Requirements

We strongly encourage any student who is considering ultimately pursuing the PhD at Harvard to apply directly to the PhD program. Students in our masters programs are not given preferential treatment in admission to the PhD program and generally do not continue on to the PhD.

Master of Science (SM)

The master of science (SM) degree is awarded for the successful completion of eight semester length courses at Harvard. The SM degree is non-research based degree and no dissertation, foreign language, or general examination is required. Upon successful completion of the SM degree, any student planning to pursue the PhD degree must formally apply to the PhD program (see below). No preferential treatment is given to SM degree holders seeking admission to the PhD program. Students admitted to the PhD program can apply for and receive SM on completion of the requirements for the master’s degree.

Master of Engineering (ME)

Students who wish to pursue more advanced formal training without undertaking the research required for the PhD degree may earn the M.E. degree by successfully completing eight half courses, plus eight additional research-oriented courses at the 300-level that result in the completion of the required ME thesis. These requirements imply that an ME student will be expected to take eight non-300 level courses (including up to one 299r) and eight 300 level research courses. ME students may take additional non-300 level courses if doing so is helpful for the student’s thesis; the ME advisor must support the enrollment in these additional courses and doing so may not extend the time to degree beyond two years.

Doctor of Philosophy (PhD)

The PhD requires a minimum academic residency of two years beyond the bachelor’s degree. Programs are individually tailored and approved by a committee on higher degrees. Normally, students spend one-and-one-half to two years on coursework—10 semester length courses, including at least eight disciplinary courses, are required. Depth and breadth of knowledge are important guiding principles in the PhD program.

The first year is ordinarily spent principally on coursework, although some students may begin research. The second year is usually divided between coursework and research, with coursework completed during the third year if necessary. As soon as coursework is completed, students conduct research full time. Original research culminating in the dissertation is usually completed in the fourth or fifth year. No foreign language is required.

Oral Qualifying Examination: Preparation in the major field is evaluated in an oral examination by a qualifying committee. The examination has the dual purpose of verifying the adequacy of the student’s preparation for undertaking research in a chosen field and of assessing the student’s ability to synthesize knowledge already acquired.

Dissertation: Upon successful completion of the qualifying examination, a committee chaired by the research supervisor is constituted to oversee the dissertation research. The dissertation must, in the judgment of the research committee, meet the standards of significant and original research.

Final Oral Examination: This public examination devoted to the field of the dissertation is conducted by the student’s research committee. It includes, but is not restricted to, a defense of the dissertation itself.

Part-Time Study

Under unusual circumstances, full-time candidates for graduate degrees may petition for permission to study part-time, ordinarily at a rate of two half-courses per term. Similarly, candidates for the master’s degree who need fewer than four semester-length courses to complete the requirements for the degree can arrange to be charged tuition on a per course basis. Visa regulations prohibit foreign nationals who are not permanent residents of the US from registering for part-time study.

Admission

Students with bachelor’s degrees in the natural sciences, mathematics, or engineering are invited to apply for admission. Since the undergraduate programs of incoming students are diverse, the courses students must take to round out their training are extremely varied, and a committee on higher degrees helps students design appropriate plans of study. Many students enroll in programs that lead to careers only peripherally related to their undergraduate majors.

Students begin graduate study only in the fall term. Completed applications should be submitted as early as possible in the fall of the preceding academic year and not later than December 16, our application deadline. SEAS does not accept late applications. Applications for admission for the spring term are not ordinarily accepted.

Applicants must take the Graduate Record Examination (GRE) general test. Although the GRE Subject Test is not required, performance
on the relevant GRE Subject Test will be considered if it is available. Our experience indicates that the results of this test can be especially helpful in the case of foreign applicants. Students whose native language is not English and who have not received a degree from an institution where English is the language of instruction must submit, as part of their application, the results of the test of English as a foreign language, administered by the Educational Testing Service, Princeton, New Jersey.

Applications from minorities and women are particularly welcome. SEAS requires electronic submission of the application and strongly prefers electronic submission of the letters of recommendation. Please visit www.gsas.harvard.edu for more information about the application process and to link to the application.

NOTE: For prospective students interested in applying/entering S.M./M.E. programs in the Fall of 2014:

- All SEAS areas will continue to admit A.B./S.M. applicants from Harvard College.
- Applied Math, Applied Physics, and Bioengineering WILL NOT be admitting S.M. or M.E. students.
- Computer Science, Electrical Engineering, and Environmental Sciences and Engineering, and Computational Science and Engineering, will be admitting S.M. and M.E. students.
- Mechanical Engineering will be admitting S.M. and M.E. students only in solid mechanics. Mechanical Engineering WILL NOT be admitting S.M. or M.E. students in robotics or biomechanics.

There are NO exceptions to the above.

**Financial Aid**

Typically all students admitted to the PhD program in the School of Engineering and Applied Sciences receive full financial support, comprising tuition, fees, and a cost of living stipend ($2,686 per month before taxes in 2013–14), independent of need as long as they are in good academic standing and making satisfactory progress toward their PhD degree. Students are expected to complete their PhD requirements in four to six years.

All PhD students participate in the School’s educational program for about ten hours a week for one term—usually as a quarter time teaching fellow.

To provide full support throughout the program for all PhD candidates, SEAS anticipates that a certain number of incoming students will gain financial support from sources outside of Harvard. Applicants are therefore expected to apply for all non-Harvard scholarships for which they are eligible.

SEAS’s offer of financial support will necessarily be modified if a student receives a National Science Foundation Fellowship, or other open, competitive fellowship funding support. Students who bring in open, competitive external fellowships that are equal to 50% or more of total their support (tuition/fees + stipend) will receive a supplemental fellowship of $3,000 in the first year of the external fellowship.

Recipients of partial fellowships made on the basis of open competition may receive a supplemental fellowship of $1,000 in the first year of the award.

The Graduate School of Arts and Sciences (GSAS) and SEAS require that all students accept any outside aid they are awarded. Students are required to formally notify GSAS of any such aid at the time they receive it. This aid will be applied toward the student’s tuition and/or stipend support. Aid that is paid directly to the student must be disclosed upon receipt of funds.

Financial support takes several forms: grants-in-aid (fellowships), teaching fellowships, and research assistantships. Ordinarily, first-year PhD students are supported with full fellowships so that they may devote all their time to coursework. Beyond the first year, when students are in a better position to teach and assist in research, support is ordinarily provided through research assistantships, or a combination of a teaching fellowship and a research assistantship.

Candidates for PhD and master’s degrees can occasionally be employed as technical assistants on one of the numerous research projects in the SEAS or in a similar capacity in other parts of the University. During the academic year, full-time students may not accept employment inside or outside the University, other than teaching fellowships or research assistantships, which involves a commitment of more than ten hours per week without special permission.

Candidates for master’s degrees are not eligible for financial aid from SEAS.

**Part-Time Master’s Program**

The SEAS admits a limited number of part-time students as candidates for the SM degree to study at a rate of one or two half-courses per term. Under unusual circumstances, full-time candidates for graduate degrees may petition for permission to study part-time, ordinarily at a rate of two half-courses per term. Similarly, candidates for the master’s degree who need fewer than four half-courses to complete the requirements for the degree can arrange to be charged tuition on a per course basis. Visa regulations prohibit foreign nationals who are not permanent residents of the US from registering for part-time study. Part-time SM students are expected to complete the degree in 2–3 years.

**Collaborative Programs with the Harvard-MIT Division of Health Sciences and Technology**

**Medical Engineering and Medical Physics Program**

The five- to six-year Medical Engineering and Medical Physics (MEMP) program leads to the PhD or ScD in Medical Engineering or Medical Physics awarded by MIT, or the PhD awarded by Harvard’s Graduate School of Arts and Sciences.

The MEMP curriculum gives students hands-on experience in biomedical sciences and engineering to allow them to explore the fundamental principles underlying human biology and diseases, discover new diagnostic and therapeutic approaches, and ultimately ameliorate human suffering. The range of interests of students in the program is vast; a small sampling of topics includes molecular biology, modeling of biological systems, medical imaging and visualization, instrumentation, biomaterials, and cellular biomechanics.

**Requirements and Dissertation:** Although pathways through the MEMP program are intended to be individualized and therefore vary widely, there is a broad curricular and administrative structure that is common to all paths within MEMP. Curricular requirements fall roughly into three segments: prequalifying, clinical, and dissertation. Curricular tracks within MEMP are Cellular and Molecular Medicine and Systems Physiology and Medicine.

**Applying to MEMP through Harvard**

Harvard collaborating departments include the following: Biophysics, the School of Engineering and Applied Sciences (SEAS), and Physics. To apply to MEMP through Harvard’s School of Engineering and Applied Sciences, use the standard application available from the Graduate Schools of Arts and Sciences’ (GSAS) website. Submit one original application to the GSAS Admissions Office and a copy of the application, plus original transcripts, letters, and other supporting documentation, to HST Admissions, MIT E25-518, Cambridge, MA 02139.

Please note that applicants are responsible for knowing the application deadline to HST, which may be different than SEAS’s application deadline. All MEMP applications via Harvard must be received at HST by the HST application deadline.

**Special Students**

Courses offered by the SEAS and departments in the Faculty of Arts and Sciences are open to students who hold a bachelor’s degree or its equivalent, who are able to present evidence of fitness for admission at the graduate level, but...
who are registered as Special Students and are advised by the director of Special Students, GSAS, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138; 617-495-5392. Special Students are not degree candidates. Credit for a limited number of acceptable semester-length courses can, however, be transferred into a degree program if the student is later admitted to graduate study. Special Student status ordinarily is limited to a maximum of two terms, with extension possible only by reapplication.

Further Information

Further information regarding programs of study, research, financial aid, and admission may be obtained by calling 617-496-4702; by e-mailing admissions@seas.harvard.edu; or by visiting www.seas.harvard.edu.

SEAS Supplemental Application – Fall 2014

All applicants to the School of Engineering and Applied Sciences (SEAS) must submit the Supplemental Application Form as part of their completed application.

This information is used to help us determine which faculty should review your application. Please think very carefully about which faculty you list below, as they are likely the faculty who will be reviewing your application. One criterion for admission into the SEAS PhD program is a good fit of interests between student and faculty, so it is important that we are able to identify the appropriate people to review your materials.

Please rank, in order of interest, the three sub-areas in which you are interested. (1 = most interested, 2 = interested, 3 = somewhat interested). Please do not select more than three sub-areas in total and elucidate your selection(s) in your Statement of Purpose.

A. Applied Mathematics: __ Theoretical & Computational Biology; __Mathematical Biology; __Mathematical Geophysics; __Numerical Analysis; __Physical & Engineering Mathematics; __Other: ____________

B. Applied Physics (*including a Materials Science track): __Theory and Simulation; __Biophysics; __Electronic/Magnetic Systems and Devices; __Materials Science; __Optics, Electromagnetics, and Light-Matter Interactions; __Soft Matter; __Surface and Interface Science; __Energy Science and Technology; __Other: ____________

C. Bioengineering/Quantitative Biology: __Biomechanics; __Cell and Tissue Engineering; __Drug Delivery; __Neuroengineering; __Instrumentation and Robotics; __Biomaterials; __Biophysics; __Biomolecular Engineering; __Other: ____________

D. Computer Science: __Architecture; __Artificial Intelligence, Linguistics, Machine Learning, Robotics; __Economics and Computation; __Graphics, Visualization, Computational Science; __Human-Computer Interaction; __Languages, Compilers, & Tools; __Security & Privacy, including Law & Policy; __Systems (Networking, OS, Databases); __Theory of Computation; __Other: ____________

E. Electrical Engineering: __Circuits and VLSI; __Communication and Signal Processing; __Computer Engineering; __Intelligent Systems & Computer Vision; __Photonics & Optical Devices; __RF, Microwaves & Antennas; __Stochastic Systems; __Systems & Control; __Other: ____________

F. Environmental Sciences and Engineering: __Atmospheric Chemistry; __Climate Dynamics & Physical Oceanography; __Environmental Chemistry; __Environmental Microbiology; __Geomechanics; __Meteorology and Atmospheric Dynamics; __Environmental Systems, Resource Management & Planning; __Energy and Environment; __Other: ____________

G. Materials Science and Mechanical Engineering (*including a Materials Science track): __Materials Science; __Solid Mechanics; __Mechanics of Materials; __Fluid Dynamics; __Robotics; __Other: ____________

*Note about Materials Science:

There are two tracks for applicants interested in Materials Science. One track is through the Applied Physics area and one is through the Mechanical Engineering area. Applicants should decide for themselves which area (Applied Physics or Mechanical Engineering) is most appropriate for them based on their interests and apply to that area.
Higher Degrees in English

The Graduate Program in English leads to the degrees of Master of Arts and Doctor of Philosophy. The AM is an integral part of the doctoral program, and therefore only students who intend to pursue the PhD are eligible for admission to the Graduate Program in English.

The Program

The program takes from four to seven years to complete, with the majority finishing in five or six years. The first two years are devoted to course work and to preparation for the PhD qualifying exam (the “General” exam) at the beginning of the second year. The second and third years are devoted to preparing for the dissertation qualifying exam (the “Field” exam) and to writing the dissertation prospectus. The fourth, fifth, and, when necessary, sixth years are spent completing the doctoral dissertation. From the third year until the final year (when they are generally supported by Dissertation Completion Fellowships), students also devote time to teaching and to developing teaching skills. Students with prior graduate training or those with a demonstrated ability may complete their dissertations in the fourth or fifth years. Students are strongly discouraged from taking more than seven years to complete the program, except under the most exceptional circumstances.

The program aims to provide the PhD candidate with a broad knowledge of the field of English, including critical and cultural theory. Additional important skills include facility with the tools of scholarship—ancient and modern foreign languages, bibliographic procedures, and textual and editorial methods. The program also emphasizes the ability to write well, to do solid and innovative scholarly and critical work in a specialized field or fields, to teach effectively, and to make articulate presentations at conferences, seminars, and symposia.

Residence

The minimum residence requirement is two years of enrollment in full-time study, with a total of at least fourteen courses completed with honor grades (no grade lower than B). The minimum standard for satisfactory work in the Graduate School is a B average in each academic year.

Courses

- A minimum of 14 courses must be completed no later than the end of the second year.
- At least 10 courses must be at the 200- (graduate) level, and at least 6 of these 10 must be taken within the department. Graduate students in the English department will have priority for admission into 200-level courses.
- The remaining courses may be either at the 100- or the 200-level.
- Students typically devote part of their course work in the first year to preparing for the “General” exam, focusing increasingly on their field in the second year.

Independent Study and Creative Writing

- Students may petition to take one of the 100-level courses as independent study (English 399) with a professor, but not before the second term of residence.
- Other independent study courses will be permitted only in exceptional circumstances and with the consent of the professor and director of graduate studies (DGS).
- Only one creative writing course, which counts as a 100-level course, may be taken for credit.

Credit for Work Done Elsewhere

Once the student has completed at least three 200-level courses with a grade of A or A-, a maximum of four graduate-level courses may be transferred from other graduate programs, at the discretion of the DGS.

Transferred courses will not count toward the minimum of ten required 200-level courses, but will be counted as 100-level courses.

Incomplete

No more than one Incomplete may be carried forward at any one time by a graduate student in the English Department. It must be made up no later than six weeks after the start of the next term.

In applying for an Incomplete, students must have signed permission from the instructor and the DGS, or the course in question may not count toward the program requirements. If students do not complete work by the deadline, the course will not count toward the program requirements, unless there are documented extenuating circumstances.

Language Requirements

A reading knowledge of two languages is required. Students will be expected to show proficiency in either two ancient languages, or two modern languages, or one ancient and one modern language. Normally, Latin, Greek, French, German, Spanish, and Italian are the accepted languages. Other languages may be acceptable if deemed relevant and appropriate to a student’s program of study.

Students may fulfill the ancient and modern language requirements:
1. by passing a two-hour translation exam with a dictionary,
2. by taking a one-term literature course in the chosen language,
3. or (for the ancient requirement) by taking two terms of elementary Latin or Greek.

Any course taken to fulfill the language requirement must be passed with a grade of B- or better. Literature-level language courses count for course credit; elementary language courses do not.

The (Non-Terminal) Master of Arts Degree

In order to apply for the AM degree, students must complete, with a grade of B or better, no fewer than a total of seven courses, including a minimum of four English courses, at least three of which must be at the graduate (200) level, and one additional course that must be taken at the graduate level, but may be taken in another department. Students must also fulfill at least one of their departmental language requirements.

General Exam

At the beginning of the second year, students will take a 75-minute oral exam, based on a list of authors and/or titles which the department will make available for each entering class in the summer prior to its arrival. The examiners will be three regular members of the department (assistant, associate, or full professors), whose names will not be disclosed in advance.

Candidates whose performance on the exam is judged inadequate will be marked as “not yet passed” and must retake the exam at a time to be determined. If candidates do not pass on the second attempt, they will not be able to continue in the program.

Note: Students must fulfill at least one language requirement by the end of the first year in order to be eligible to take the General Exam.

Field Oral Exam

The purpose of the Field Oral is twofold: to examine students’ preparation in primary teaching and scholarly fields they mean to claim, and to explore an emerging dissertation topic.

The two-hour examination is taken by February of the third year of graduate study, and is conducted by a three-person examination committee, chosen by individual students no later than September of the third year, normally from
among the tenured and ladder faculty of the English department.

One faculty member acts as chair of the committee and assists students in selecting its other members. This committee, or some part of it, will likely continue to serve as individual students’ dissertation advisors.

During the exam, students are asked to demonstrate an adequate knowledge of both of the major primary works and selected scholarly works in their chosen fields, and to give a first account of a dissertation project.

Those two purposes—representing the chosen field and giving a first account of a dissertation project—are represented by two separate lists, each consisting of primary and scholarly works, drawn up by the student in consultation with the examination committee.

Each committee meets with its advisee at least four weeks before the exam (i.e., before the Thanksgiving break) to finalize fields lists and discuss the exam format.

This exam is graded Pass/Fail.

**Dissertation Prospectus**

The dissertation prospectus, signed and approved by three advisors (one of whom may be the DGS), is due in the Graduate Office by May 15 of the third year.

The prospectus is neither a draft chapter nor a detailed road map of the next two years’ work, but a sketch, no longer than seven to ten pages, of the topic on which students plan to write. It gives a preliminary account of the argument, structure, and scope of the intended treatment of the topic. The overview will be followed by a bibliography.

The prospectus is written in consultation with the dissertation advisors, who will meet students at least once in the spring of the third year to discuss the prospectus and to draw up a timetable for the writing of the dissertation.

In planning a timetable, students need to bear in mind (1) that two draft chapters of the dissertation must be completed by the middle of their fourth year, if they are to be eligible to apply for completion fellowships in their fifth year, and (2) that students generally enter the job market in the fall of the fifth or sixth year, with at least two final chapters and a third draft chapter completed. They should also remember that term-time fellowships and traveling fellowships may be available to them in the fourth year, but should edit the sample themselves so that it is more like a teacher than a student.

The form of the defense is as follows:

- the event will start with a 15–20 minute presentation by the student and last at most 90 minutes in all
- if a student has left Cambridge and cannot return easily for this purpose, we will arrange for a video-link discussion
- arrangements will be overseen by the Graduate Office but conducted by the student (as per the Fields examination)

The meeting for a May degree must take place any time after advisors have signed off on the dissertation and at least a week before Commencement. In practice, however, the student will need to defend after advisors have signed off and before advisors disperse. That period will normally be between 1–14 May, and most probably in the early days of May.

Students will be required, in order to be recommended for the degree by the department, to submit to the Graduate Office a form specifying the defense date. The form will be available online on the departmental web site. Candidates should print out this form and set to work on establishing the defense date well before the degree application and defense forms are due. This form will be signed by the Chair of the advisory committee and must be submitted along with the requisite Application for Degree.

**Teaching**

Students begin teaching in their third year. Ordinarily they teach discussion sections in courses and in the department’s program of tutorials for undergraduate honors majors.

Preparation for a teaching career is a required part of students’ training, and Teaching Fellows benefit from the supervision and guidance of department members.

Teaching fellows are required to take English 350, the Teaching Colloquium, in their first year of teaching and are encouraged to avail themselves of the facilities at the Bok Center for Teaching and Learning.

**General Guidelines for Admission**

The following is a set of general guidelines for the English department’s admissions process. It should be noted that while several areas are emphasized here, the Admissions Committee carefully examines the overall profile of each applicant, taking these and other aspects of the application into consideration:

**The Writing Sample:** The writing sample is one of the most important portions of the application. Candidates should submit only one double-spaced, 15- to 20-page paper, in 12-point type with normal margins. The writing sample must be an example of critical writing (rather than creative writing) on a subject directly related to English. Applicants should not send longer papers with instructions to read an excerpt or excerpts, but should edit the sample themselves so that they submit only up to twenty pages. Candidates who know the field in which they expect to specialize should, when possible, submit a writing sample related to that field.

**Grades:** While candidates’ overall GPA is important, it is more important to have an average of no lower than A- in literature courses (and related courses). In addition, while we encourage applications from candidates in programs other than English, they must have both the requisite critical skills and a foundation in English literature for graduate work in English. Most of our successful candidates have some knowledge of all
the major fields of English literary study and advanced knowledge of the field in which they intend to study.

**Letters of Recommendation:** It is important to have strong letters of recommendation from professors who are familiar with candidates’ academic work. Applicants who have been out of school for several years should try to reestablish contact with former professors. Additional letters from employers may also be included. Recommenders should comment not only on the applicant’s academic readiness for our PhD program but also on the applicants’ future potential as teachers and scholars.

**GREs:** High scores in the Verbal (166, or 700 in the old scoring system) and Subject tests (650 in English Literature) are positive additions to the application but are by no means the most important aspect of one’s candidacy. (The Quantitative and Analytical scores carry less weight than the Verbal and Subject scores.) Applicants should make timely plans to take these examinations in order to ensure that the scores arrive by the January application deadline. Scores received after mid-January may be too late to be considered.

**Statement of Purpose:** The Statement of Purpose is not a personal statement and should not be heavily weighted down with autobiographical anecdotes. It should focus on giving the admissions committee a clear sense of applicants’ individual interests and strengths. Applicants need not indicate a precise field of specialization, if they do not know, but it is helpful to know something about a candidate’s professional aspirations and sense of their own skills, as well as how the Harvard English department might help in attaining their goals. Those who already have a research topic in mind should outline it in detail, giving a sense of how they plan their progress through the program. Those who do not should at least attempt to define the questions and interests they foresee driving their work over the next few years.

**Languages:** While there are no specific prerequisites for admission, a strong background helps to strengthen the application, and students who lack it should be aware that they will need to address these gaps during their first two years of graduate study.

**Please Note:** Applicants should make every effort to ensure that all supporting materials (e.g., recommendations, transcripts, etc.) arrive by the application deadline.

No applications for admission in this field will be accepted after the deadline set by the Graduate School of Arts and Sciences.

### Faculty of the Harvard English Department

**Daniel Albright,** Ernest Bernbaum Professor of Literature. BA 1967, Rice University; MPhil 1969, PhD 1970, Yale University. Interests: 20th-century literature, music, and painting; 19th-century literature, music, and painting; theory of comparative arts; lyric poetry; drama; science and literature.

**David J. Alworth,** Assistant Professor of English Education. BA 2006, New York University; PhD 2012 University of Chicago. Interests: 20th-century American literature and culture; visual art; social theory.

**Josh Bell,** Briggs-Copeland Lecturer on English Education. BA 1994, Indiana State University; MA, 1997 Southern Illinois University, Carbondale; MFA 1999 University of Iowa Writers’ Workshop; PhD 2013 (Exp.) University of Cincinnati. Interests: Poetry, creative writing.

**Homi K. Bhabha,** Anne F. Rothenberg Professor of the Humanities. BA 1970, University of Bombay; MPhil, MA, DPhil 1990, Christ Church, University of Oxford. Interests: colonial and post-colonial theory; cosmopolitanism; 19th- and 20th-century British and other English-language literatures.

**Stephen Burt,** Professor of English. BA 1994, Harvard University; PhD 2000, Yale University. Interests: poetry, especially but not only 20th and 21st-century; science fiction; literature and geography; contemporary writing; comics and graphic novels; literature alongside other arts.

**Glenda R. Carpio,** Professor of English and of African and African American Studies. BA 1991, Vassar College; PhD 2002, University of California at Berkeley. Interests: literature, history and culture of New World slavery; African American visual art and popular culture; Anglophone Caribbean literature; Latino/a US literature and culture; theories on memory and textuality; gender and cultural studies.

**Amanda Claybaugh,** Professor of English. BA 1993, Yale University; PhD 2001, Harvard University. Interests: 19th-century US literature; 19th-century British literature; transatlantic literary relations.

**Daniel Donoghue,** John P. Marquand Professor of English. BA 1978, University of Dallas; MPhil 1981, University College Dublin; PhD 1986, Yale University. Interests: Old English; Middle English; history of the language.

**James Engell,** Gurney Professor of English Literature and Professor of Comparative Literature. BA 1973, PhD 1978, Harvard University. Interests: 18th-century and restoration; romanticism; criticism and critical theory; rhetoric.

**Philip Fisher,** Harvard College Professor, Felice Crown Reid Professor of English. AB 1963, University of Pittsburgh; MA 1966, PhD 1971, Harvard University. Interests: American novel; English novel; cultural theory; modernism; American art and its cultural institutions; the philosophy and literature of the passions.

**Darcy Frey,** Briggs-Copeland Lecturer on English. BA 1984, Oberlin College. Interests: narrative journalism; essay; memoir; travel writing; literary science writing.

**Marjorie Garber,** William R. Kenan Jr. Professor of English and of Visual and Environmental Studies. BA 1966, Swarthmore College; MPhil, PhD 1969, Yale University. Interests: Shakespeare; modern drama, dramatic theory, and performance; cultural studies; psychoanalysis and literature; Renaissance drama; gender theory; visual studies; media studies; detective fiction; the history and theory of the profession; animal studies.

**Henry Louis Gates Jr.,** Alphonse Fletcher University Professor. BA 1973, Yale University; MA 1979, PhD 1979, University of Cambridge. Interests: African and African American literature; cultural theory.

**Jorie Graham,** Boylston Professor of Rhetoric and Oratory. BA 1973, New York University; MFA 1978, University of Iowa. Interests: English poetry; American poetry; contemporary poetics; film theory; painting.

**Stephen Greenblatt,** Cogan University Professor of the Humanities. BA 1964, Yale University; MPhil 1966, University of Cambridge; PhD 1969, Yale University. Interests: Shakespeare; early modern literature and culture; literature of travel and exploration; religion and literature; literature and anthropology; literary and cultural theory; literary biography.

**Katherine Gustafson,** College Fellow in the Department of English. BA 2000, Kenyon College; PhD 2012, University of Pennsylvania.

**Joseph C. Harris,** Francis Lee Higginson Professor of English Literature and Professor of Folklore. BA 1961, University of Georgia; BA 1967, University of Cambridge; MA 1963, PhD 1969, Harvard University. Interests: Old English; Old Norse-Icelandic; folklore and mythology.

**Amy Hempel,** Briggs-Copeland Lecturer on English. San Francisco State University. Interests: short fiction; short-short stories/prose poems.

**Bret Johnston,** Senior Lecturer on English. BA 1996, Texas A&M University; MA 2000, Miami University; MFA 2002, University of Iowa. Interests: fiction writing.

**Ju Yon Kim,** Assistant Professor. BA 2002, Yale University; PhD 2011, Stanford University. Interests: Asian American literature, film, and
performance; comparative ethnic American literatures; American theater; modern and contemporary drama; performance theory; interdisciplinary studies of race and ethnicity; theories of the everyday.


Elisa New, Professor of English. BA 1980, Brandeis University; MA 1982, PhD 1988, Columbia University. Interests: American poetry; American literature–1900; religion and literature; Jewish literature.


Martin Puchner, Professor of English. PhD 1998, Harvard University. Interests: drama (especially modern); literature and philosophy; world literature.

Steven Rozenski, College Fellow in the Department of English. BA 2002, Northwestern University; MTh 2003, University of Glasgow; PhD 2012, Harvard University. Interests: Middle English mysticism and devotion; the translation and reception of German and Dutch religious literature in medieval and early modern England; medieval drama; Richard Rolle, Henry Suso, and Catherine of Siena.

Peter Sacks, John P. Marquand Professor of English. BA 1973, Princeton University; M. Phil. 1976, University of Oxford; PhD 1980, Yale University. Interests: English language lyric poetry; writing of poetry; art and literature; poems.

Robert Scanlan, Professor of the Practice of Theater. BS 1971, M.I.T.; MA 1974, Rutgers University; PhD 1976, Rutgers University. Interests: Theatre directing; formal theory; development of new work for the stage; contemporary plays and performance; playwriting; dramaturgy; Samuel Beckett.


Marc Shell, Irving Babbitt Professor of Comparative Literature and Professor of English. BA 1968, Stanford University; PhD 1975, Yale University. Interests: Economics and literature; kinship and language; nationalism; renaissance.

Michael Shinagel, Senior Lecturer on English; Dean of Continuing Education and University Extension School. AB 1957, Oberlin College; AM 1959, PhD 1964, Harvard University. Interests: 18th-century English literature; rise of the novel; satire.

James Simpson, Donald P. & Katherine B. Loker Professor of English. BA 1976, University of Melbourne; M. Phil. 1980, University of Oxford; PhD 1996, University of Cambridge. Interests: Late Medieval Western European literature, 1150–1550; images and idolatry; hermeneutics and the history of reading; history of idleness.

Werner Sollors, Henry B. and Anne M. Cabot Professor of English Literature and Professor of African and African American Studies. DPhil 1975, Freie Universität Berlin. Interests: American literature; African American studies; ethnicity; comparative literature; themes and motifs.

John Stauffer, Professor of English and of African and African American Studies. BSE 1987, Duke University; MALS 1991, Wesleyan University; MA 1993, Purdue University; PhD 1999, Yale University. Interests: American literature and culture (especially the 19th-century); American studies; civil war; slavery and abolitionism; protest literature; religion and literature; American novel; autobiography.

Gordon Teskey, Professor of English. BA 1976, Trent University; MA 1977, PhD 1981, University of Toronto. Interests: English Renaissance poetry, especially Spenser, Donne, and Milton.

Helen Vendler, Arthur Kingsley Porter University Professor. AB 1954, Emmanuel College; PhD 1960, Harvard University. Interests: English, American, and Irish lyric poetry.

Andrew Warren, Assistant Professor of English. BA 2001, Dartmouth College; PhD 2009, University of California at Irvine. Interests: romanticism; the gothic novel; 18th- & 19th-century British literature; philosophy & critical theory; satire; postcolonial theory & novel.

Nicholas Watson, Professor of English. BA, MA 1980, University of Cambridge; MPhil 1984, University of Oxford; PhD 1987, University of Toronto. Interests: Medieval English literature, theology, and intellectual history; poetry; hagiography; medieval Latin; mysticism; visionary writing; magic; medieval women’s writing and literary culture.

Leah Jane Whittington, Assistant Professor of English. BA 2002, Harvard; PhD 2011, Princeton. Interests: Early Modern English Literature; Classical Tradition and Reception; Continental Renaissance; Neo-Latin; Milton.

James Wood, Professor of the Practice of Literary Criticism. MA 1988, Jesus College, University of Cambridge. Interests: 20th-century literature; religion and literature.
Higher Degrees in Film and Visual Studies

In the past quarter century, the study of film has undergone dramatic changes and expansions. Current historical and theoretical research addresses the social, aesthetic, and economic importance of cinema for the twentieth century. And at the beginning of a new century, television, video, and the digital arts, as well as new forms of performance, design, and contemporary art, are transforming and enriching cinematic expressive possibility. The global reach of the film/media industries challenges us to comprehend how the screen arts inform our understanding of culture and society, and how cultural knowledge and experience abide in moving images. The impact of new imaging technologies on science is equally important, offering exciting new modalities for the study of image making in the post-millennial era.

Since the 1990s, advanced research in film studies has assumed a broader investment in visual culture at large. The founding vision of the Carpenter Center for the Visual Arts at Harvard—which already in the 1950s recognized the interrelatedness of film, video, mixed media, design, architecture, performance, and installation art in the visual and performing arts—has thus proved to be prescient. Recent years have also witnessed a compelling institutional and intellectual convergence between the history and philosophy of art and the cultural study of space on one hand, and film history and theory on the other. This convergence is motivated by an idea of visual culture with three inextricable bound research emphases: one object-based (visual media and their interrelationships), one institutional (the emergence of visual studies as an international and cross-disciplinary mode of research), and one theoretical (the philosophical interrogation of the social nature of vision and visuality, especially in its cinematic forms).

The first emphasis recognizes commonalities between visual media—painting, sculpture, photography, cinema, and video—and the critical theories that elaborate them. It concerns itself primarily with spatial media deployed in two- and three-dimensional environments—painting, photography, architecture—as well as time-based spatial arts such as cinema, electronic and digital media (including video, television and the varieties of new media), and installation art. In this focus on the arts of vision, vision is an active, complex process rarely takes place in the absence of other perceptual information. Spatial media, along with their histories and theories, cannot be considered independently of literature and the performing arts.

Contemporary manifestations of visual culture are also increasingly defined by the interdependence of media. For example, the moving image today is not only projected on cinema screens; it is also deployed in cinema multiplexes, on home television, portable computers and other types of personal displays as well as in public spaces such as airports or on building facades, and worked into installation art and live performance. In each instance, conditions of perception, interpretation, and evaluation shift as the image cycles through different social contexts and technologies of presentation. The study of film and visual culture is thus motivated by a renewed concern with images and their seminal role in the representation and formulation of knowledge in past and contemporary societies.

Art history and aesthetics likewise draw inspiration from the renewed currency of the visual in the present era while recognizing both the power and complexity of cinematic and electronic imaging. At the same time, film studies, art history, the history of science, and architectural theory have initiated a sophisticated dialogue concerning what the "visual" means and how it functions in contemporary society.

From its first appearance on the Harvard campus, film studies has been conceived as the multidisciplinary foundation for a broader study of visual experience. From Paul Sachs’s incorporation of film into the academic and curatorial focus of the fine arts to Rudolf Arnheim’s consideration of the medium in his investigations of visual thinking, and from Hugo Münsterberg’s forays into the psychological reception of moving images to Stanley Cavell’s groundbreaking philosophical reflections on the medium, Harvard has maintained a long tradition of engaging cinema through the cultural, visual, spatial, and philosophical questions it raises. This tradition is a source of strength for the department and its resources. It continues today in the various film courses offered through departments of language that investigate cultural and historical aspects of the medium to courses in Visual and Environmental Studies that focus on film’s relationship to spatiality and architecture.

In recognition of film’s centrality to contemporary visual culture, the graduate program in Film and Visual Studies seeks to transcend an approach solely fixated on the workings of a single medium and its history. Interdisciplinary in its impetus, the program draws on course offerings both in Visual and Environmental Studies and in other departments of the Faculty of Arts and Sciences (FAS). Broadly influenced by the unique cultural context of the Carpenter Center for the Visual Arts and the Harvard Film Archive, the graduate program fosters an awareness of the interactions between the making of and thinking about film and video; between studio art, performance, and visual culture; and between different arts and pursuits whose objects are audio-visual entities.

The PhD Program in Film and Visual Studies takes advantage of the resources offered by Harvard’s Film Study Center (FSC). Established in 1957, the FSC provides production equipment, post-production facilities, technical support, and funding for non-fiction works that interpret the world through images and sounds. Among the many important films to have been produced through the Film Study Center are John Marshall’s The Hunters (1956), Robert Gardner’s Forest of Bliss (1985), Susan Meiselas, Alfred Guzzetti, and Richard Rogers’ Pictures from a Revolution (1991), Irene Lusztig’s Reconstruction (2001), Robb Moss’s The Same River Twice (2002), Ross McElwee’s Bright Leaves (2003), and Lucien Castaing-Taylor/Verena Paravel’s Leviathan (2012). Students in the Film and Visual Studies Program are eligible to apply to the FSC for fellowships, awarded annually to graduate students and faculty in support of original film, video, and photographic projects.

Objectives of the PhD Program

1. To provide strong and rigorous training in film and visual studies with a blend of theoretical, analytical, and historical perspectives while drawing on the unique interdisciplinary strengths of the FAS course offerings, the Harvard Film Archives’ vast holdings of films and documents, and the rich resources of Harvard museums, galleries, and libraries.

2. To cultivate forms of awareness that are particularly attentive to the place of moving images within larger histories and their connections to both traditional and emerging arts, disciplines, and fields of endeavor.

3. To foster advanced research skills in the history and theory of moving images that build on and augment the increasing concern with visuality and the visual arts in a broad range of Faculty of Arts and Sciences departments and schools of graduate study including, among others, African and African American Studies, Anthropology, East Asian Languages and Civilizations, English and American Literature and Language, Germanic Languages and Literatures, History, History of Art and Architecture, History of Science, Literature and Comparative Literature, Philosophy, Romance Languages and Literatures, Slavic Languages and Literatures, and Sociology.

Programs of Study
4. To develop an advanced research program of study that also profits from the creative context of the Carpenter Center for the Visual Arts and its ongoing dialogues between artists, critics, curators, historians, and theorists of the arts and of film, video, and performance.

The Curriculum

The PhD in Film and Visual Studies is a research degree that emphasizes the theory and history of moving images in relation to the visual arts. The Program does not admit candidates for a terminal AM degree. Students may apply for a master’s degree after advancing to PhD candidacy by satisfactorily completing their coursework and exams as indicated below. The expected timetable for completion of the degree is five to six years.

Residence and academic standing. Two years of enrollment for full-time study are a minimum requirement, with a minimum of at least fourteen courses completed with honor grades (no grade lower than B).

Courses. A minimum of fourteen courses must be completed no later than the end of the second year. Normal progression would include eight courses in the first year and six courses in the second in order to provide time for preparation for the general examination as well as flexibility to pursue course work in neighboring fields of study.

- Of these fourteen courses, two are required: VES 270, the Proseminar in Film and Visual Studies: History; and VES 271, Proseminar in Film and Visual Studies: Theory. The Proseminars are normally taken in the first year of study.
- At least seven of the fourteen courses must be at the 200 (graduate) level.
- In addition, at least seven of the courses must be chosen from a list of courses approved for credit by the Film and Visual Studies Committee.
- The remaining courses (including courses in other departments, or transferred from other schools) may be either at the 200 or 100 level.
- One of the non-200 level courses may be taken as an independent study with a professor, but not before the second term of residence. Other independent studies courses will be permitted in exceptional circumstances, and with the concurrence of the professor that the work is essential to the student’s program and not offered elsewhere in the existing curriculum.

Language Requirements. A reading knowledge of two languages is required. Normally, French or German should be one of these two languages. Other languages may be acceptable if deemed relevant and appropriate to the student’s program of study. Proficiency may be certified either by a grade of B- or better on a proficiency exam administered by the relevant language department or by successful completion (B- or better) of a second-year or higher course taught in a foreign language. (Note: Elementary language courses do not count for course credit.)

(Non-Terminal) Master of Arts (AM). Students must complete at least eight half-courses in Film and Visual Studies, maintaining a minimum GPA of 3.5 (B+) in all classes.

- Two of these eight courses must be the Proseminars in Film and Visual Studies.
- Students are also required to have as many 200-level courses as 100-level courses.
- No more than one reading course is allowed for credit.
- Students must have fulfilled at least one language requirement.

Advancement to Candidacy

Advancement to candidacy for a PhD in Film and Visual Studies consists of three components: a qualifying paper, a written general examination, and an oral examination. The examinations are designed to test the student’s mastery of their scholarly fields and their ability to proceed to writing a dissertation. These will normally take place together in March during the second term of the third year of study, and will be supervised by an Examination Committee normally consisting of three faculty members of the Standing Committee for the Program in Film and Visual Studies. The timing of the general exam is meant to encourage students to take the exam as a cohort. Individually scheduled exams will be discouraged.

Qualifying paper. The qualifying paper is required of all students, including students who have completed a master’s thesis elsewhere. It is ordinarily developed from an existing seminar paper, research paper, or portion of a master’s thesis. It is about 5,000–10,000 words, including notes. The paper should demonstrate the student’s independence of thinking, ability to use primary source materials, and proficiency in writing and presentation. Following close consultation with their field advisors, students will submit to the DGS the proposed topic of the paper and a timetable for completion at the beginning of their third term of residence. The paper should be submitted two weeks before the general examination. A student may request that a master’s thesis written for another institution be substituted in lieu of a qualifying paper; this request must be approved by the DGS and two members of the Film Studies Committee.

General examination. The written examination is designed to test students’ mastery of their scholarly fields as well as general knowledge of the history and aesthetics of moving images in relation to the visual and performing arts. The examination consists of three parts, one relating to history, one to theory and aesthetics and one to a special topics field.

Dissertation Prospectus. After the successful completion of the general examinations, students are expected to constitute a dissertation committee and choose a topic for the dissertation.

The dissertation committee should consist of the thesis director and two additional readers. (This committee will typically correspond to the general exam committee.) The student will convey the proposed membership of the dissertation committee to the Director of Graduate Studies by April 15th of the third year of study. The DGS will confirm the committee’s membership and pass on this information to the graduate coordinator. S/he will in turn provide formal confirmation of all pertinent deadlines to members of the dissertation committee and the student.

After constituting the dissertation committee, students should confer with their advisors as they choose a thesis topic. Once they have done so, they should write a formal dissertation proposal. The expectations for the shape and substance of the prospectus will be determined by the advisor in conference with the student; the length of the prospectus will typically be about 3,000 words and include a working bibliography. In order to sustain satisfactory progress toward the degree, students will be expected to have their prospectus approved within five months after completion of the general examination. Doctoral candidates in Film and Visual Studies will normally submit their dissertation prospectus by September 30th of their fourth year of study.

The Thesis. After the prospectus has been approved, candidates will work closely with their thesis director and readers. The doctoral thesis is expected to be a substantial work of scholarship or criticism. The program will accept theses on a great variety of topics involving a broad range of approaches to film and related visual media. It sets no specific page limits, preferring to give students and directors as much freedom as possible.

Teaching. Students begin teaching in their third year. Ordinarily they teach discussion sections in courses in Film Studies and in Visual and Environmental Studies. It may also be possible to serve as Teaching Fellows for studio courses. Preparation for a teaching career is a required part of each student’s training, and teaching fellows benefit from the supervision and guidance
of department members. Teaching fellows are encouraged to avail themselves of the facilities at the Bok Center for Teaching and Learning.

Requirements for Admission. The following is a set of general guidelines for the application for admission.

• The Writing Sample: The writing sample is one of the most important materials in the application. Candidates should submit only one 15-20 page paper, in 12-point type, double-spaced, and with normal margins. The writing sample must be an example of critical writing (rather than creative writing) on a subject directly related to film, performance and/or visual studies. Applicants should not send longer papers with instructions to read an excerpt or excerpts, but should edit the sample so that they submit only up to 20 pages.

• Grades: While the overall GPA is important, it is more important to have an average of no lower than A- in courses related to film and visual studies or related fields. In addition, if a candidate has not majored in film studies or a related field, it is important to have sufficient background to enter the graduate program—a matter perhaps best determined by speaking with one’s undergraduate advisor.

• Letters of Recommendation: It is important to have three strong letters of recommendation from professors who are familiar with the candidate’s academic work. An applicant who has been out of school for several years should try to reestablish contact with former professors. Additional letters from employers may also be included.

• GREs: High scores in the Verbal (700) are positive additions to the application but are by no means the most important aspect of one’s candidacy. (The Quantitative and Analytical scores carry less weight than the Verbal score.) Applicants should make timely plans to take these examinations in order to ensure arrival of scores by the December application deadline. Scores received after January may be too late to be considered.

• Statement of Purpose: The Statement of Purpose should give the admissions committee a clear sense of the student’s individual interests and strengths. Applicants need not indicate what their field of specialization will be, but it is helpful to know something about a candidate’s aspirations, and how Film and Visual Studies at Harvard might help in furthering them.

• Languages: Strong foreign language background helps to strengthen the application, and students who lack it should be aware that they will need to repair these gaps during their first two years of graduate study.

The Standing Committee of the Program in Film and Visual Studies

Eric Rentschler, Arthur Kingsley Porter Professor of Germanic Languages and Literatures, Chair of the Standing Committee on Film and Visual Studies

Giuliana Bruno, Professor of Visual and Environmental Studies

Tom Conley, Abbot Lawrence Lowell Professor of Visual and Environmental Studies, and of Romance Languages and Literatures

Laura Frahm, Assistant Professor of Visual and Environmental Studies

Peter Galison, Joseph Pellegrino University Professor of the History of Science and of Physics

Haden Guest, Director of the Harvard Film Archive

Carrie Lambert-Beatty, John L. Loeb Associate Professor of the Humanities, Director of Graduate Studies for Film and Visual Studies

Jie Li, Assistant Professor of East Asian Languages and Civilizations

Jeffrey Schnapp, Professor of Romance Languages and Literatures, Affiliated Professor to the Department of Architecture

Amie Siegel, Assistant Professor of Visual and Environmental Studies

Justin Weir, Professor of Slavic Languages and Literatures

Alexander Zahlten, Assistant Professor, Department of East Asian Languages and Civilizations
Research and instruction in forest biology and ecology are centered at the Harvard Forest located in the town of Petersham, Massachusetts, some 70 miles west of Cambridge.

The Harvard Forest has been a center for ecological research and education since 1907 and was designated as one of 21 national centers for long-term ecological research by the US National Science Foundation in 1988. Research in this project focuses on forest ecosystem response to natural and human disturbance and stress and involves studies in physiology, population, community, and ecosystem ecology. The Forest consists of approximately 1,200 hectare representative of the “transition hardwood” forests of central New England, which have received a wide variety of silvicultural and experimental treatment, the history of which is thoroughly documented. Additional research sites owned by the Harvard Forest include the Pisgah Tract, an eight-hectare remnant of virgin forest centered in the 6,000 hectare Pisgah State Park, southwestern New Hampshire, and the Matthews plantations, 40 hectare of plantations and second growth forest in Hamilton, north of Cambridge.

Facilities at the Harvard Forest include laboratories for nutrient analysis, physiological and population ecology, isozyme and pollen analysis; greenhouses; herbarium; computer laboratory, including Geographic Information Systems; library; and the Fisher Museum of Forestry. Living quarters for staff and students are available in apartment houses owned by the Forest.

Available Degrees

Harvard does not have a forestry school in the usual sense, i.e., it does not offer any undergraduate forestry training nor a degree of doctor of philosophy in forestry. However, the following degrees are available:

Degree of Master in Forest Science (MFS)

Graduates of forestry schools or of colleges of liberal arts, and others who have had equivalent training in plant sciences, may be admitted to the Graduate School of Arts and Sciences to work toward the MFS degree. The program is designed primarily to train students for research in aspects of forest ecology and biology covered by members of the faculty.

Full-time registration for a minimum of one academic year is required. In addition, students are expected to work as paid research assistants for the summer immediately preceding their registration. Thus, students are able to participate in the research program at the Harvard Forest for three months, starting about June 1, before they register for the academic year.

Instruction at the Harvard Forest is informal and personal. No courses have to be attended and no formal examinations are held. However, a dissertation is required and will have to be defended.

Degree of Doctor of Philosophy (PhD)

Programs of study leading to the PhD in biology, with special reference to forest biology, may be arranged (see the section entitled Higher Degrees in Biology in this publication). After satisfying the requirements of the Department of Organismic and Evolutionary Biology, which normally involve one or two years of coursework in Cambridge, the student may complete the dissertation research at the Harvard Forest in Petersham.

Fields of Study

Special fields of interest to staff members vary but generally include: ecology, forest soils, forest dynamics, land-use history, paleoecology, wetland biology, tree physiology, and anatomy. Current research is available in detail in the Annual Report of the Harvard Forest. This publication is available at http://harvardforest.fas.harvard.edu or upon request.

Fellowships and Assistantships

The Harvard Forest awards fellowships through the Graduate School of Arts and Sciences.

Further Information

Further information about the Harvard Forest may be obtained at http://harvardforest.fas.harvard.edu or by writing to Director, Harvard Forest, 324 North Main Street, Petersham, MA 01366. Information on admission, financial aid, and related issues may be obtained from the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center, 3rd floor, 1350 Massachusetts Avenue, Cambridge, MA 02138. We encourage online submission of the application. See www.gsas.harvard.edu.
Higher Degrees in Germanic Languages and Literatures

Study for higher degrees in the Department of Germanic Languages and Literatures (this designation was instituted in 1897) is intended as preparation for a career in teaching and research, although graduates occasionally go on to careers in other areas of education, in public service, and in the business world; see “Careers” in the Graduate Program section of the department website. The emphasis is on literature and cultural studies rather than on the language itself. However, Germanic philology may be studied in courses on historic linguistics, and in conjunction with medieval literature in German and Scandinavian. The resources of the department make it possible for students interested in German literature, but with a secondary interest in another field, such as comparative literature, art history, philosophy, music, history, history of science, or film, to include those disciplines in their dissertation and in their program of courses.

German was first taught in Harvard College in 1825 when Carl (Charles) Follen, a young anti-monarchist and poet, who had fled from Giessen to escape political persecution, became an instructor in German. The impetus for this appointment came, in part, from George Ticknor and Edward Everett (later to become president of Harvard College), who had just returned from studies at the University of Göttingen. By 1850, several instructors were teaching German and by the 1860s, all sophomores were required to study the language. After such Harvard notables as George Ticknor, H. W. Longfellow, and J. R. Lowell had given some coverage to major German poets (from Walther von der Vogelweide to Goethe) in their lectures, a graduate program in German was organized in the 1870s, with the first PhD granted in 1880.

The most eminent scholar in the early years was Kuno Francke, professor of the history of German culture (d. 1929), who in 1903 established the Germanic Museum, now the Busch-Reisinger Museum. Its collections, particularly strong in 20th-century painting and sculpture, are a unique resource for the study of German literature and culture within the broader context of German and Central European art.

The library holdings in German literature had an auspicious beginning when Goethe, in 1819, presented to Harvard College an autographed copy of his Werke. Through informed selection and support by the University and generous donors (Karl Viktor among them), these holdings, housed mainly in Widener Library, have now grown into what many scholars consider the best German studies research collection in North America. It is supplemented by extensive holdings in Scandinavian and Dutch. This scholarly resource is augmented by manuscripts and rare printed books in Houghton Library, which, next to a number of medieval manuscripts and incunabula, contains the Nachlässe, papers, and letters of such major German poets as Hofmannsthal, Rilke, Brecht, and Heine.

The Harvard Film Archive houses an extensive collection devoted to German cinema, which includes 35- and 16-millimeter films, videocassettes, press booklets, and photographs.

Master of Arts (AM)

The department does not admit applicants who only wish to study for the AM degree. The AM is taken as a step toward the PhD. The requirements for the AM are described below.

Prerequisites for Admission — Undergraduate or graduate work in German approximately equal to the requirement for an AB degree at Harvard; deficiencies must be made up.

Academic Residence — Two terms of full-time study. For financial residence requirements, see the GSAS Guide to Admission and Financial Aid or the Graduate School of Arts and Sciences Handbook.

Program of Study — The satisfactory completion of an approved program of eight half-courses beyond the AM degree. All graduate students are required to take German 226r, the Proseminar (an introduction to literary research and theory). PhD students must also take at least two half-courses in Germanic philology, normally Germanic Philology 200 (Middle High German) and Germanic Philology 225 (History of the German Language). Linguistics 168 (Introduction to Germanic Linguistics) or Linguistics 247 (Topics in Germanic Linguistics) may be substituted for German 225. Not more than two half-courses from the group “For Undergraduates and Graduates” may be counted, including courses taken for the AM degree, unless the student arranges with the instructor to upgrade the course and completes the requisite form; all others must be “Primarily for Graduates.” Permission may be obtained from the director of graduate study to take a course in another department, including, among others, Comparative Literature, History, Philosophy, or Music. Such courses are expected to be relevant to the main study program in German and should serve to enrich and broaden the program. The maximum number of courses taken outside the department shall normally not exceed the number of courses required to complete a Secondary PhD Field in a related discipline.

The teaching methods course (Linguistics 200) and courses taken to fulfill language requirements are not included in the minimum requirement. The student must generally be a member of a seminar taught by a member of the German Department for at least three terms and earn a grade of A- in at least one of the seminars.

Students enrolled in the department’s PhD program may achieve formal recognition for completing one of a variety of Secondary PhD Fields offered by other departments in fields related to the student’s curriculum and scholarly plans, including, for example, a secondary field in Film and Visual Studies. Students interested in declaring this secondary field should consult with the director of graduate study both in the

Doctor of Philosophy (PhD)

Prerequisites for Admission — Permission to proceed, granted by the department on the basis of course work, performance in the AM examination, and scholarly potential as judged by the department. Alternatively, an AM degree or equivalent from another university.

Academic Residence — A minimum of two years of full-time study. Credit for graduate work done elsewhere may be granted in accordance with procedures detailed in the Graduate School of Arts and Sciences Handbook.

For financial residence requirements, see the GSAS Guide to Admission and Financial Aid or the Graduate School of Arts and Sciences Handbook.

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German department and in the department offering the secondary field as early as possible in their studies.

Languages — All students are required to demonstrate reading proficiency in French, normally achieved by passing French A1 (Reading French), offered by Harvard’s Department of Romance Languages and Literatures, with a grade of A or A-, or by passing a French A2 final examination, administered by the instructor of the course, with a grade of A or A- or through some other demonstration of sufficient proficiency, such as previous university-level course work.

Those students wishing to specialize (i.e., to write their dissertations) in philology (historical linguistics) or in the literature of the earlier periods (medieval, 16th century, the Baroque) must also demonstrate considerable reading ability in Latin. This requirement may be fulfilled by a departmental examination. The texts to be translated or summarized will be taken from Latin works of literary merit written by German authors, mainly during the medieval period. The requirement may also be fulfilled by an honor grade (B- or higher) in any course in medieval Latin or in any intermediate course of readings of classical authors given by the Harvard Classics Department.

Applicants are strongly urged to prepare themselves in French (and Latin where applicable) before entrance. Graduate students must satisfy the requirement in French and, where applicable, in Latin before they can be admitted to the PhD general examination.

Satisfactory Progress — Students must maintain a grade record showing more A’s than B’s, and no grade lower than B-

General Examination — After completing course work and meeting the language requirement, students must present themselves for the general examination. Students entering the program with an AM degree or equivalent from another university present themselves for the examination at the beginning of their fourth semester; students taking the AM degree at Harvard present themselves for the examination at the beginning of their sixth semester.

The written examination consists of two four-hour sessions, a week apart. The first covers any one of the following periods: (i) medieval literature, (ii) 1500–1750, (iii) 1750–1830, (iv) 1830–1910, (v) 1890–1945, (vi) 1945–present. The students will be responsible both for the principal literary texts in their chosen period and for the pertinent scholarship. The second examination will cover any one of the following fields: (i) lyric poetry, (ii) drama, (iii) narrative fiction, (iv) a special topic defined by the student in consultation with the examination committee, (v) Germanic philology (linguistics).

A two-hour oral examination follows within two weeks.

Dissertation — After passing the general examination, the candidate must present a dissertation on a subject that has been approved by the department and one that will normally fall within the area where the special period and special field converge. The object of the dissertation is to show the candidate’s ability to pursue independent research and to present the results of this research in a readable and convincing form.

Dissertation Prospectus — A prospectus of the doctoral thesis, 1,500–3,000 words in length, plus bibliography, that explains its intellectual motivation and scholarly aims and outlines in detail the progression of the argument through its chapters, must be completed, to the satisfaction of the dissertation committee, within three months of the completion of the General Examination. The committee (the Dissertation Director and two other members of the faculty) meets with the candidate to discuss the prospectus, after which it makes a recommendation on acceptance to the full faculty of the department.


Teaching Experience — Students are required to acquire experience teaching the German language or, in keeping with the student’s program of study, another Germanic or Nordic language. The expectation is that the student will teach, at the very least, one full year of Beginning German.

Admissions

Inquiries about admission and financial aid should be addressed to the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138-6531. Applications are submitted online; if necessary, arrangements can be made for an alternative form of submitting recommendations. See www.gas.harvard.edu.

Applicants wishing information regarding courses and programs not included in the materials accompanying application forms may write to the Director of Graduate Studies, Department of Germanic Languages and Literatures, Barker Center 365, 12 Quincy Street, Cambridge, MA 02138-3879; or visit www.fas.harvard.edu/~german/.

Financial Aid

Graduate students in the department have for some time benefited from the financial aid plan of the Graduate School of Arts and Sciences. During their first two years and their dissertation completion year, eligible students receive financial support adequate to meet both tuition and living costs. During the other years of graduate study, students supplement tuition grants by working as teaching fellows (see below). The department has set the median length of graduate study for the doctorate (excluding leaves) at five years. Eligible students are guaranteed adequate financial support (grants, teaching fellowships) for this period. Furthermore, the department is normally able to support graduate students through teaching fellowships for the duration of their graduate studies, although not beyond an eighth year.

Substantial additional benefits derive from three endowed competitive prizes reserved primarily for graduate students in the department:

1. The Bernhard Blume Awards for Excellence in the Study of German. Established in 1969 by an anonymous donor in honor of the late Bernhard Blume, Kuno Francke Professor of German Art and Culture, Emeritus. Two prizes award approximately $1,000 each to graduate students who have attained the best record in course work in the first three terms and the second three terms.

2. The Jack M. Stein Teaching Fellow Prize in German. An award of $1,000 sponsored annually by the Graduate School Fund and named in honor of the late Professor Jack M. Stein who was instrumental in raising the quality of language instruction in the department. The prize is awarded each year to a teaching fellow who, in the judgment of a faculty committee visiting classes, conducts undergraduate sections with the highest measure of pedagogical skills, linguistic proficiency, enthusiasm, and commitment to students’ learning and welfare.

3. The Esther Selhollm Walz Prize, established in 1977 by Hans G. Walz, Class of 1924, in memory of his mother. A prize of approximately $1,000 is “awarded annually to a graduate student pursuing studies in German or Scandinavian language with the intention of entering the teaching field, for the best paper or essay,” determined by a faculty committee.

Teaching

Graduate students may hold annual appointments as a teaching fellow, normally beginning in their third year of study. Opportunities to teach elementary and intermediate language classes, to tutor undergraduates in literature, and, upon application, to teach discussion sections of courses in literature and intellectual and cultural history given by members of the department are provided. Teaching fellows in the department may also participate in General Educa-
Other Faculty Offering Instruction in the Department

Joseph Harris, Francis Lee Higginson Professor of English Literature and Professor of Folklore. Old English and Old Norse literatures and cultures and their common Germanic backgrounds; folklore and mythology of Germanic lands; folklore theory

Jasenoff, Diebold Professor of Indo-European Linguistics and Philology. Indo-European and general historical linguistics; Germanic philology

Recent Dissertation Titles

Julie Allen, "Representations of Denmark in Fin-de-siècle German and Austrian Literature"


Daniel Bowles, "Satire after Satire: The Afterlife of Satiric Practices in German Literature and Literary Theories since 1950"

Elio Brancaforte, "Reading Word and Image: Representations of Safavid Persia in the Maps and Frontispieces of Adam Olearius (ca. 1650)"

Silke Brodersen, "Die Wirklichkeit im Hohlspiegel der Sinne": Adalbert Stifters Poetik der Wahrnehmung"

Andrea Deeker, "Locating the Image: Heiner Müller and the Acoustic"

Jillian DeMair, "Telling about the Truth: Negotiations of Credibility in German Narratives"

Charitini Douvaldzi, "Aesthetics of Retrospection: Life Narratives in Goethe, Rousseau, Moritz, and Keller"

Sara Eigen Figal, "Generating the Good: Fictions of Literature, Law, and Science in 18th-Century Germany"

Ian Fleishman, "An Esthetics of Injury: The Narrative Wound from Baudelaire to Haneke"

Patrick Fortmann, "Autopsy: Physiology of Love and Anatomy of Politics in Georg Büchner"

Mattias Frey, "Good Bye, Lenin? Postwall Germany’s Cinema of Retro-flection"

Mark Gagnon, "Celluloid Heros of the Adenauer Eras: Creating New Citizens in the War Films of the 1950s"

Sonja Gräber-Magocsi, "Die Vermessung ‘Neuseelands’: Schreibweisen der Psychologien in der deutschnsprachigen Literatur der Jahrhunder-twende"

Geraldine Grimm, “Peter Handke’s ‘Mein Jahr in der Niemandsbucht’: Narrative and Place”

Gundela Hachmann, “Blick in die Zeit: Optische Medien in deutschen Romanen der Postmodern”

Anjeana Hans, “Defining Desires: Homosexual Identities and Discourse in German Literature and Culture, 1900–1933”


Emily Jones, “Verschachtelte Räume: Writing and Reading Environments in W.G. Sebald”

Karin Johnson, “Revisiting Romanticism: Novels and Genres”

Joyce Kraus, “Science Functions: Musil, Kafka, Broch”

Pascale LaFountain, “Flaws, Mistakes, Misreadings: Error and the Human Sciences in Drama around 1800”

William Layher, “Queen Eufemia’s Legacy: Middle Low German Literary Culture, Royal Patronage, and the First Old Swedish Epic (1301)”

Robert Lemon, “Orientalism as Self-Critique in the Hapsburg Fin-de-siècle”

Joseph Metz, “Gendered States: On the Borders of Gender, Nation, and Identity in Stifter and Rilke”


Lena Normann, “Women’s Voices, Power, and Performance in Viking Age Scandinavia”

Michael Saman, “Goethe as a Reader of Kant, 1788–1832”

Claudia Sloboda, “Narrative Illusion: Textual Ambiguity and Problems of Seeing in Four Novellas of Heinrich von Kleist”

Brigitte Wagner, “Berlin Films and the Cultural Politics of Spatial Memory”

Joel Westerdale, “Nietzsche’s Aphoristic Dynamite”
Department of Government Program for Study, Teaching, and Research Leading to the PhD in Political Science

The graduate program of the Department of Government is designed to train students for careers in university teaching and advanced research in political science. The department does not offer an independent master’s program, the master of arts in political science being reserved for PhD candidates on the way to their final degrees.

Admission, Financial Aid, and Residence Requirements

A distinguished undergraduate academic record is a prerequisite for admission. The GSAS Guide to Admission and Financial Aid specifies the supporting documents to accompany applications for admission. Applicants are requested not to submit writing samples.

Applicants are required to submit Graduate Record Examinations (GRE). Applicants whose native language is not English must submit the Test of English as a Foreign Language (TOEFL). Failure to submit the TOEFL will ordinarily result in rejection unless an undergraduate transcript is submitted verifying a receipt of a degree at an institution at which English is the language of instruction.

Applications for admission and financial aid, together with information regarding admissions procedures, may be obtained at www.gsas.harvard.edu. The department requires the online submission of the entire application for admission. There is no interviewing process in this department.

Financial Aid

Financial aid is administered under the direction of the Graduate School of Arts and Sciences (GSAS). The department intends that all graduate students should have support adequate to enable them to complete their studies while enrolled full-time. Prospective students apply for financial aid at the same time they apply for admission and are also required to submit a Statement of Financial Resources. The financial aid package for government students typically includes tuition and fees plus stipend and a summer research grant for the first two years; tuition and fees plus guaranteed fellowship and a summer research grant for years three and four; and tuition and fees for year five; and tuition and fees plus stipend for the completion year. The department strongly encourages all eligible first-year students to apply for the National Science Foundation Graduate Research Fellowship. Additional information is available from http://www.nsfgrfp.org/.

Renewal of financial aid for the second year of study is contingent upon the student having received satisfactory first-year grades. All third- and fourth-year students who have passed the General Examination are awarded teaching fellowships; a normal teaching load is two-fifths.

Having teaching experiences in political science courses is an important part of the graduate experience and an essential part of graduate training. Therefore, to complete the PhD program, all graduate students will normally be required to teach a minimum of two sections in departmental courses sometime during the period that they are in residence. To ensure diversity of experience, one section will normally be in an introductory course and one section will be in an advanced course (such as a 1000-level course).

Residence Requirements

The Graduate School has a minimum academic residence requirement of two years; i.e., a student must do resident graduate work for a minimum of two full academic years, or the equivalent of 16 half-terms. Beyond the 12 courses required by the department, the remainder of the two-year residence may be devoted either to further courses or to special study under the direction of a department member of faculty rank.

It is expected that a student who chooses the latter option will attend a substantial number of courses and seminars as an auditor and do such other work as his or her advisor may suggest. For that portion of the residence requirement not covered by courses, a student registers in the Graduate School in terms of TIME.

Financial Residence Requirement — Every PhD candidate must be registered continuously until receipt of the degree. Students must pay two years at the full tuition rate and two years at the reduced tuition rate if the elapsed time from initial registration to the receipt of the degree is four or more years. After the payment of the required full and reduced tuition charges, candidates who continue to use Harvard facilities will be charged the facilities fee. Students who do not use Harvard facilities will be charged an active file fee. Students must pay a fee equal at least to the facilities fee in the term in which the dissertation is received and accepted by the department.

Reporting Requirement — Every student beyond their third year must submit a progress report by May 15, signed by a faculty advisor, to the director of graduate studies. Graduate students should report on their progress through the dissertation, their completion of any other pending requirements, teaching, and other professional activities within and outside Harvard.

Departmental Requirements Prior to General Examination

Candidates for the PhD in Government are expected to complete the required coursework during their first two years of graduate study and take the General Examination at the end of the second year. A typical schedule consists of these two years, followed by three or four years of work on a dissertation, combined with supervised teaching.

First-year students are not permitted to serve as teaching fellows. Second-year students may teach with permission of the director of graduate studies (DGS).

Courses — A student must successfully complete at least twelve half-courses of which eight must be in government. At least ten of these twelve half-courses and seven of the eight half-courses in government must be listed in the catalogue as 1000- or 2000-level courses.

Students must complete six half-courses by the end of their second term in residence and nine by the end of their third.

Every first-year student must enroll in the graduate seminar, Gov 3001: Approaches to the Study of Politics. The course, offered each fall, is to be taken pass/fail for a full semester of credit.

Incompletes — A grade of Incomplete can be converted into a letter grade if the student completes the work before the end of the term following that in which the course was taken. If an Incomplete has not been completed within the period, the student must have the instructor and DGS approve the petition for extension. No grade of Incomplete can be used to satisfy any departmental requirement.

Seminar Papers — In order to ensure that students secure adequate training in research and writing, at least three seminar-style research papers must be completed. The usual means is through enrollment in seminars, but the requirement may be satisfied also by reading or lecture courses in which papers of this type are written.

It is the student’s responsibility to obtain written verification from the instructor that the completed paper is of seminar quality.

Students who wish to submit graduate seminar papers written outside the government department should consult the director of graduate studies.
Quantitative Methods Requirement — Every student, during their first or second year, must successfully complete, with a grade of B or better, at least one graduate-level course in quantitative social science methods relevant to political science, from a list of appropriate Government Department and other Harvard/MIT courses regularly updated by the Graduate Policy Committee.

Political Theory Requirement — Every student must take a minimum of one graduate-level half-course (or section) in Political Theory, chosen from a list of courses approved by the Graduate Policy Committee.

Research Tools Requirement — Every student must submit to the director of graduate studies, by the end of his or her first year, a written Research Tools Plan outlining intentions to acquire tools and methodological expertise connected to his or her areas of research interest. The Tools Plan also should list the courses, modules or workshops the student intends to take in order to meet the research tools requirement (see below).

Every student must complete a minimum of 3.5 half-course-equivalent units of research tools and methods courses, modules or workshops by the end of their seventh term in residence (middle of the fourth year). The required seminar, “Approaches to the Study of Politics,” and the required graduate course in quantitative social science methods count for two units within this total. Students may count language training in various formats (e.g. semester courses; intensive summer sessions) toward fulfillment of this requirement. The Graduate Policy Committee will determine what counts for 1.0 or 0.5 units.

Research Workshops — The department offers a series of research workshops, in each of the four fields (American Government, International Relations, Comparative Politics, Political Theory), Applied Statistics, and Political Economy, for graduate students to present and discuss new work-in-progress. Every student should attend at least one research workshop, starting in their second or third term in residence. Research workshops do not count toward the requirement to complete twelve half-courses.

The General Examination

Every student will sit for a General Examination in May of their second year, with the exam administered orally by three faculty not known in advance. The ninety-minute exam will cover two of the four major substantive fields in political science. For the focus field, each student will submit by a date designated by the director of graduate studies a five to eight page statement outlining a special area for examination. This area may encompass a special literature; an area of the world; a realm of special interest spanning subfields or disciplinary boundaries; or a research approach.

The department regularly offers “field seminars” introducing each of the four major fields of the discipline. However, no examination field is co-terminus with any one course, or even with any group of courses. The student is responsible for preparation in the field and should not assume that satisfactory completion of a course or courses dealing with the material in the field will constitute adequate preparation for the examination. The student should consult faculty members in each field to ensure such preparation. All students who choose a field are responsible for the same range of materials.

The General Examination is scheduled in May of a student’s second year of study.

Progress Toward the Degree After the General Examination

Students in their third year and beyond spend most of their time researching and writing the PhD dissertation. These students are eligible for teaching fellowships, which enable them to participate in Harvard’s undergraduate tutorial program, teach sections in the introductory government courses, or assist undergraduates in middle-group courses by leading discussion sessions or directing senior theses. Some research assistantships are also available from individual faculty members and research centers.

In the third year, most teaching fellows devote two-fifths TIME to teaching, the remainder to work on the dissertation. The fourth year may be devoted entirely to writing the dissertation or to a combination of teaching and research. Students who have passed the General Examination may teach three-fifths TIME for four years, with the following exception: those who have taught fewer than 16 term-fifths may be appointed in a fifth year up to that total.

Requirements relating to courses, seminars (research) papers, languages, quantitative methods and political theory should normally be completed before the General Examination, that is, during the first two years of graduate work. In special circumstances, a student may defer fulfillment of two half-courses or two of the following until after the General Examination:

- one seminar paper
- one half-course

Within six months of passing the General Examination, the student must have fulfilled one of these deferred requirements. Within twelve months, he or she must have completed both deferred requirements.

Dissertation Prospectus

Following completion of the General Exam, each student will engage faculty advisors through a two-stage process of research exploration and prospectus approval, marked by two meetings as follows:

- An initial “Research Consultation Meeting” must convene in the fall semester of the third year, to discuss an approximately ten-page statement from the student, which, as appropriate, may either present a potential research question for the dissertation, or set forth alternative possible research questions for consideration and development. The student may consult the director of graduate studies to identify three or four appropriate faculty consultants, if these are not readily apparent.

- Involving the same three or four faculty or a different set where appropriate, the second “Prospectus Evaluation Meeting” will convene to discuss and approve the student’s written dissertation prospectus. These faculty members are chosen by the student with the approval of the director of graduate studies. The evaluation meeting will preferably be held in the spring semester of the third year and in no instance later than October 1 of the fourth year. Whenever this meeting is held, there may be a one month follow-up period for final changes in the prospectus. To be in good standing, therefore, all students must have an approved prospectus, with the dissertation title and name(s) of the advisor(s) registered with the director of graduate studies, by no later than early November of the fourth year.

By May 15 of each year, each student must submit a progress report, approved by his or her major faculty advisor, to the director of graduate studies.

If these conditions are not met, the student will be classified “not in good standing” by the Graduate School and the department and will become ineligible for a teaching fellowship, other financial aid, or employment within the University. After completing these requirements, the student may petition the department to be reinstated “in good standing.”

Dissertation and Final Examination

Dissertation — A student is required to demonstrate ability to perform original research in political science by writing a dissertation that makes a
significant contribution to knowledge in the field. The requirement may also be fulfilled, with approval of the dissertation committee, by a dissertation in the form of three publishable papers by approval of the dissertation committee. Dissertations must be approved by three committee members, two of whom must be members of the Harvard University Faculty of Arts and Sciences. The chair must be a member of the government department. Any member of the committee who is not a member of the department must be approved by the DGS. Before a student can defend, the dissertation committee must have received a copy of the dissertation and agree that it is ready to be defended. The final copies of the dissertation must conform to the requirements described in The Form of the PhD Dissertation. Any student who wishes to be considered for one or more of the available prizes should submit an extra copy of the completed dissertation to the department graduate office.

Special Examination — After the dissertation has been approved, and after all other degree requirements have been met, a student will take the “special” oral examination or defense. This examination is focused on the dissertation and on the relevant special field, which is ordinarily one of the fields which the student presented in the general examination, or an approved portion of that field. At the defense a student will be expected to show mastery of the special field, and such an acquaintance with the literature, general and special, hearing on it, as needed to qualify to give instruction to mature students. The defense of the dissertation is open to the faculty of the department. Unless the candidate prefers a closed defense, the defense of the dissertation will also be open to graduate students in the department. Questions of the candidate will be asked initially by committee members. Others in attendance may then ask questions as long as the defense does not exceed two hours in length. The dissertation defense is announced to faculty and students and a one-page abstract is circulated to the faculty in advance of the defense.

Students who defend their dissertation later than six years after taking the General Examination must retake the focus field of the General Examination. Students who defend their dissertations more than eight years after taking the General Examination must retake two fields of the General Examination. Approved parental leave extends this period by one year per child, but no other reason for leave does.

Depositing Dissertation Data — Students are required to make available to the Harvard-MIT Data Center all of the quantitative data that they have compiled in machine-readable form (together with accompanying explanatory materials) upon which the findings in their dissertations depend. These data will be made available to other users five years after receipt of PhD or sooner, if the PhD recipient permits.

The DGS will consider petitions for exemption from or modifications of this requirement, if reasonable extenuating circumstances are given.

Degrees

As stated in the introductory paragraphs of this announcement, the graduate program of the Department of Government is designed for students preparing for the PhD. Those seeking to enroll for the AM degree only will not be admitted. Active PhD candidates who wish to be awarded an AM in the course of their work towards the PhD must meet all the requirements for the PhD except the dissertation and the special examination.

Students who have met all the requirements for the PhD except the General Examination, the dissertation, and the special examination may also receive the master of arts in political science provided they state in writing that they shall not pursue the PhD degree any further. This option is available only within the thirty months after first matriculation.

Degrees are conferred three times during the academic year: in November, March, and at Commencement in May. Relevant due dates for degree application are published annually in the Graduate School of Arts and Sciences Handbook.

Related Joint Degree Program: Government and Social Policy

The Department of Government also offers a joint degree with social scientists in the Kennedy School of Government: the PhD in Government and Social Policy. This program is particularly suitable for students who wish to combine theoretical and methodological expertise in political science with policy training in such fields as urban poverty, inequality, segregation, and labor market studies. Details may be obtained by referring to the entry on PhD Programs in Social Policy in this publication. Students interested primarily in training for public service, and in a master’s program in public administration for this purpose, should contact Harvard’s Kennedy School of Government.

Research Facilities

The social science research collections of the Harvard libraries, especially those of Widener, Harvard Law School, and the Center for Government and International Studies (CGIS), are perhaps the best of any university in the world. They are readily available to graduate students in government.

The university maintains a wide variety of computer facilities for instruction and research. The government department maintains a data center and a data archives program, which make available for the research of graduate students, public opinion and voting data of the Inter-University Consortium for Political Research, the Roper Opinion Research Center, and other sources.

In addition, PhD candidates in political science frequently receive dissertation advice and support from the social science research centers of the university.

Professors of government participate in all of the following principal centers:
- Belfer Center for Science and International Affairs
- Center for American Political Studies
- Minda de Gunzburg Center for European Studies
- Center for Middle Eastern Studies
- Center for Science and International Affairs
- Committee on African Studies
- John K. Fairbank Center for East Asian Research
- Harvard-MIT Data Center
- The Institute for Quantitative Social Science
- The Institute of Politics of the John F. Kennedy School of Government
- Program in Ethics and the Professions
- Program in Political Economy
- Edwin O. Reischauer Institute of Japanese Studies
- Rockefeller Center for Latin American Studies
- Joan Shorenstein Center on the Press, Politics, and Public Policy
- The Weatherhead Center for International Affairs

Political Science at Harvard

If you are interested in graduate study in political science, Harvard University’s Department of Government offers exceptional resources. Our dedication to excellence in all fields of political science and our encouragement of diverse approaches are evident in both our faculty and our curriculum.

Throughout your graduate education you will have an opportunity to define and explore your own questions about politics and govern-
ment. This original research can be greatly facilitated by the resources of the government department and the university. Harvard has the largest university library in the world, together with an almost limitless array of research centers and institutes that bring together scholars and practitioners of government from around the globe.

The best way to sample the opportunities for studying political science at Harvard is to visit us, but this booklet can provide you with an introduction to our program.

The Curriculum
The Department of Government trains students for political science careers in university teaching and advanced research. The PhD degree we offer signifies mastery of a broad discipline of learning, together with competence in a specialized subfield within the discipline. (A master’s degree is not a prerequisite for the PhD program, and the department does not offer an independent master’s degree program. It is possible, however, to obtain a master’s degree in the department without additional work while completing the requirements of the PhD program.) Most students complete the program in approximately six years.

Field Seminars
Field seminars provide a graduate-level introduction to each of the main fields of political science: American politics, international relations, comparative politics, and political philosophy. Each field seminar is co-taught by two leading experts in the field, who represent somewhat different perspectives on the material. Enrollment is limited to graduate students in order to facilitate give-and-take about central issues in the discipline of political science. Field seminars provide the foundation for your subsequent graduate work. They help provide you with a menu for choosing more specialized and more advanced courses in each of the four fields.

Dissertation Research
After the second year of graduate study, students begin research on their PhD dissertations. Writing a dissertation is the most challenging aspect of graduate work, with the greatest opportunities for originality. Dissertation research is supervised by a committee of three faculty members; students typically work closely with their advisors. Many Harvard government department dissertations have appeared subsequently, in revised form, as books.

Major Fields of Study
Political Philosophy
Political philosophy is an essential element in our program, for this field poses the fundamental questions that have guided political scientists for centuries: What is the nature of man-kind? What standards of justice and liberty should guide political action? What is the best form of government?

Each year several lecture series (including the Shklar Lecture, the Olin Series, and the Tanner Lectures) bring outstanding political philosophers to the campus to discuss their work and to meet with students and faculty. The faculty of Harvard’s philosophy department, together with the members of the government department, offer one of the finest concentrations of political theorists in the world.

In addition to the Field Seminar, among the graduate seminars recently offered in the field of political philosophy are:
- Hobbes
- Political Theory and the Public Sphere
- Philosophical Foundations of Rational Choice Theory
- Classics of Social Theory

PhD dissertations completed recently by students in the department specializing in political philosophy include:
- "Just Work"
- "Political Offices and American Constitutional Democracy"
- "Friendship and Virtue in the Political Philosophy of Jean-Jacques Rousseau"
- "James Madison’s Social Compact and the Origins of American Constitutionalism"

American Politics
The major emphasis of this field is American political institutions and processes, including congress, the presidency, the judicial system, electoral behavior and public opinion, the media, and interest groups on local, state, and federal levels. Students concentrating in American politics benefit from the activities of the Center for American Political Studies within the department, as well as the many opportunities provided by the John F. Kennedy School of Government and its Institute of Politics.

For example, the Center for American Political Studies has recently sponsored research on presidential primaries, on congressional committees, and on government regulation of the economy. The Institute of Politics hosts numerous special visits to Harvard by men and women who have distinguished themselves in public life, from cabinet members and campaign managers to senators and Supreme Court justices.

In addition to the Field Seminar, among the graduate seminars recently offered in the field of American politics are:

- The New Political Economy of Federalism
- The Presidential-Congressional Nexus
- American Political Development
- Educational Politics and Policy

PhD dissertations completed recently by students in the department specializing in American politics include:
- “Taking Charge: Black Electoral Success and the Redefinition of American Politics”
- “The Moderation Dilemma: Legislative Coalitions and the Politics of Family and Medical Leave”
- “Just Leave It to the Courts: How, When, and Why Congress Abdicates Legislative Power”
- “Federalism and Distributive Politics: Towards a Unified Supply-Demand Model of the Politics of Federal Aid”

Comparative Government
The study of comparative politics encompasses not only area studies, such as Russian studies or Latin American studies, but also the cross-national comparison of political institutions and behavior, focusing, for example, on sources of political stability and instability, the origins of democracy and dictatorship, revolution, socialism, and economic development.

In addition to the Field Seminar, among the graduate seminars recently offered in the field of comparative politics are:
- Social Capital and Public Affairs: Research Seminar
- Comparative Politics of the Welfare State
- Comparative Politics of Post-Socialism
- Political Science and China

PhD dissertations completed recently by students in the department specializing in comparative politics include:
- "Legislative Instability: The Dynamics of Agenda Control in the Russian Parliament, 1990–1993"
- "From Market-Correctors to Market Creators: Executive-Ruling Party Relations in the Economic Reforms of Argentina and Venezuela"
- "Organizing Markets: Property Rights, Governance, and the Politics of Industrial Privatization in a Post-Communist Economy"
- "Shrinking the State in Mexico: The Puzzles of Successful Neo-liberal Reforms"
International Relations

While comparative government looks at political developments within various countries, international relations examines interactions across national boundaries. It examines such topics as why nations go to war, how nuclear arms can be controlled, and how one country’s economic policies influence another’s.

Among the important resources at Harvard for students of international relations are the many programs at the Weatherhead Center for International Affairs (WCIFA) and the Center for Science and International Affairs (CSIA).

In addition to the Field Seminar, among the graduate seminars recently offered in the field of international relations are:

- Global Politics in the Post-Cold War World
- US-Latin American Relations
- Critical Perspectives on Critical IR Theory
- International Political Economy

PhD dissertations completed recently by students in the department specializing in international relations include:

- “Revolutions in Sovereignty: On Ideas, Power, and Change in International Relations”
- “The Trade War at Home: Factor Mobility, International Trade, and Political Coalitions in Democracies”

Connections Among the Major Fields

The division of political science into four fields facilitates the organization of graduate work, but it does not mean that these fields are watertight compartments. For example, many faculty members and graduate seminars are associated with more than one of the four fields. Similarly, PhD dissertations frequently explore subjects that bridge two or more fields, such as American politics and political philosophy (as in the study of constitutional law) or comparative politics and international relations (as in the study of foreign policy).

Computer Facilities

Harvard University maintains a wide variety of computer facilities for instruction and research. The Harvard-MIT Data Center, located in the Center for Government and International Studies, manages our substantial computer resources.

The data center is also the University’s representative to the Inter-University Consortium for Political Research, the Roper Center for Public Opinion Research, the National Center for Health Statistics, and is a central contact point for many other archives and data suppliers. Government department graduate students are required to take at least one course in quantitative methods in our sequence, and in practice most take the entire sequence. With the help of the permanent staff of the data center, students gain access to data from hundreds of major social science studies. In addition, computing facilities are available in the center for students fulfilling the quantitative methods requirement or conducting their own research. More information about the data center is available at www.hmdc.harvard.edu.

Career Placement

The department has an excellent record of graduate placement. Recent graduates have obtained teaching positions at University of Michigan, Yale, Stanford, Princeton, MIT, and Duke, to name but a few institutions of higher learning.

Faculty

Timothy J. Colton, Morris and Anna Feldberg Professor of Government and Russian Studies (Chair)

James E. Alt, Frank G. Thomson Professor of Government

Stephen Daniel Ansolabehere, Professor of Government

Muhammad Ali Bas, Associate Professor of Government

Robert H. Bates, Eaton Professor of the Science of Government and Professor of African and African American Studies

Eric Beibohm, Frederick S. Danziger Associate Professor of Government and of Social Studies

Daniel P. Carpenter, Allie S. Freed Professor of Government

Jorge L. Dominguez, Antonio Madrero Professor for the Study of Mexico

Grzegorz Ekiert, Professor of Government

Ryan Enos, Assistant Professor of Government

Michael Frasier, Associate Professor of Government and of Social Studies

Jeffry Frieden, Stanfield Professor of International Peace

Claudine Gay, Professor of Government and of African and African American Studies (Director of Graduate Studies)

Adam Glynn, Associate Professor of Government

Peter A. Hall, Knapp Foundation Professor of European Studies

Michael J. Hiscox, Clarence Dillon Professor of International Affairs

Jennifer L. Hochschild, Henry LaBarre Jayne Professor of Government and Professor of African and African American Studies, Harvard College Professor

Stanley Hoffmann, Paul and Catherine Buttenwieser University Professor

Nahomi Ichino, Associate Professor of Government

Torben Iversen, Harold Hitchings Barbour Professor of Political Economy

Alastair Iain Johnston, Governor James Albert Noe and Linda Noe Laine Professor of China in World Affairs

Gary King, Albert J. Weatherhead III University Professor

Horacio Larreguy, Assistant Professor of Government

Steven R. Levitsky, Professor of Government

Roderick MacFarquhar, Leroy B. Williams Professor of History and Political Science, Emeritus

Harvey C. Mansfield, William R. Kenan, Jr. Professor of Government

Gwyneth McClendon, Assistant Professor of Government

Eric M. Nelson, Professor of Government

Elizabeth J. Perry, Henry Rosowsky Professor of Government

Paul E. Peterson, Henry Lee Shattuck Professor of Government

Susan J. Pharr, Edwin O. Reischauer Professor of Japanese Politics

Matthew B. Platt, Assistant Professor of Government

Robert D. Putnam, Peter and Isabel Malkin Professor of Public Policy

James Robinson, David Florence Professor of Government

Michael E. Rosen, Professor of Government

Stephen P. Rosen, Peter Michael Kanef Professor of National Security and Military Affairs

Nancy Lipton Rosenblum, Senator Joseph S Clark Professor of Ethics in Politics and Government

Michael J. Sandel, Anne T. and Robert M. Bass Professor of Government
Kenneth A. Shepsle, George D. Markham Professor of Government
Beth A. Simmons, Clarence Dillon Professor of International Affairs
Prerna Singh, Assistant Professor of Government
Theda Skocpol, Victor S. Thomas Professor of Government and Sociology
Daniel M. Smith, Assistant Professor of Government
James M. Snyder, Leroy B. Williams Professor of History and Political Science
Arthur P. Spirling, John L. Loeb Associate Professor of the Social Sciences
Dennis F. Thompson, Alfred North Whitehead Professor of Political Philosophy
Dustin Tingley, Associate Professor of Government
Richard Tuck, Frank G. Thomson Professor of Government
Cheryl Brown Welch, Senior Lecturer on Government (Director of Undergraduate Studies)
Daniel F. Ziblatt, Professor of Government
Graduate Study in Harvard Integrated Life Sciences (HILS)

In the 21st century, groundbreaking research and discovery in the life sciences are more interdisciplinary than ever. Recognizing this collaborative approach to scientific advancement, Harvard has created the Integrated Life Sciences (HILS) Graduate Program.

HILS is a federation of Harvard life sciences PhD programs, departments, and subject areas that facilitates trans-disciplinary academic and research collaboration, supports student mobility, and encourages extracurricular participation by its student, faculty, and staff.

HILS oversees all PhD education in the life sciences, and integrates life sciences graduate programs and subject areas across four Harvard faculties: the Faculty of Arts and Sciences, the Dental School, the Medical School, and the School of Public Health. This new structure allows the examination of emerging trends in the life sciences, and allows Harvard to respond rapidly to the world’s evolving scientific landscape—including the need for new interdisciplinary areas of study such as the recently launched PhD programs in chemical biology and systems biology.

For its students, then, HILS exists to enable the best and most appropriate training for each individual, and to encourage flexibility in life sciences PhD education and research.

HILS Areas of Study

HILS academic areas represent the depth and breadth of current thinking and research in the life sciences. HILS supports programs and subject areas leading to the PhD in:

• Biological and Biomedical Sciences (within the Division of Medical Sciences) includes the subject areas of biochemistry and proteomics, cellular and molecular biology, cancer biology, computational biology, developmental biology, genetics and genomics, human biology and disease, microbial biology and pathogenesis, physiology, pharmacology, stem cell and regenerative biology, structural biology, immunobiology, therapeutics, targets and discovery, and molecular neuroscience
• Biological Sciences in Dental Medicine
• Biological Sciences in Public Health
• Biophysics
• Chemical Biology
• Chemistry and Chemical Biology
• Immunology (within the Division of Medical Sciences)
• Molecular and Cellular Biology
• Neuroscience (within the Division of Medical Sciences)
• Organismic and Evolutionary Biology
• Systems Biology
• Virology (within the Division of Medical Sciences)

NOTE: There are two new interdepartmental subject offerings within the Division of Medical Sciences—Bioinformatics and Integrative Genomics (BIG) and The Program in Speech and Hearing Bioscience and Technology (SHBT)—that are admitting PhD students for Fall 2014 enrollment.

Admission applications to BIG and SHBT are accessible via the HILS application website and share the December 2, 2013 deadline; they will be received and processed by the Graduate School of Arts and Sciences (GSAS), and admissions decisionmaking will be managed by the Division of Medical Sciences (DMS).

For a detailed description of the BIG program, visit: http://www.gsas.harvard.edu/programs_of_study/division_of_medical_sciences_at_harvard_medical_school_dms.php#big or, for the SHBT program:
http://www.gsas.harvard.edu/programs_of_study/division_of_medical_sciences_at_harvard_medical_school_dms.php#shbt
and http://www.hms.harvard.edu/dms/shbt/index.html

Individual programs and subject areas within the HILS have their own admissions, curriculum, and advising processes. Students are admitted to only one program or subject area.

In those life sciences study areas where students are expected to do rotations, students arrange initial rotations within their own program; rotations in other programs in HILS can be arranged following consultation with the student’s home program. Please check the website of each HILS member program or study area for more details on arranging rotations.

After enrollment, students normally continue to be affiliated with the program or subject area to which they are admitted (their “home program”). The home program governs their curriculum requirements accommodating individual interests as much as possible; the preliminary qualifying examination, teaching requirements (if applicable), and their supervision and advising during the thesis period. It also determines the title of their degree. If a student chooses and is accepted by a thesis advisor in another HILS program or subject area, the two groups work together to ensure good oversight and advice, which may include a change in home program.

Please read each program’s description within this publication, or visit each program’s website for further details. Further information about HILS and its member programs can be found at the HILS website at http://www.gas.harvard.edu/hils/index.html.

Applying to a Harvard Integrated Life Sciences (HILS) Program for Fall 2014

To apply to a Harvard Integrated Life Sciences (HILS) program, students complete and return the Graduate School of Arts and Sciences (GSAS) admissions application. HILS students are admitted to the Graduate School of Arts and Sciences at Harvard, and register in one of the life sciences PhD study areas that are members of the HILS federation.

For detailed application instructions and information, please refer to the Admissions Information for Prospective Graduate Students section of the GSAS website (http://www.gsas.harvard.edu/admissions/index.html).

Financial Support

The Graduate School of Arts and Sciences (GSAS) admits the most qualified students in the life sciences.

Financial support from Harvard and outside sources is assured for the duration of the PhD program, subject to satisfactory progress toward the PhD degree. Such support may include grants and fellowships from internal and external sources, traineeships, teaching fellowships, research assistantships, and other academic employment opportunities. This approach provides students with flexibility to establish their research interests and allows mobility to study across programs.

Ordinarily, in addition to the payment of tuition and required fees, a stipend will be provided in the first and second years of registration in GSAS. A teaching fellowship or research assistantship is guaranteed during the third and fourth years of registration in GSAS.

For each year that a student makes satisfactory progress toward the PhD degree, a new financial aid award, covering tuition and fees plus a standard monthly stipend, will be provided.

Teaching

Graduate students in HILS have wide-ranging opportunities for student teaching. Specific requirements vary among HILS programs, but they may include undergraduate teaching, teaching on the Medical School campus, and community-based teaching.

Academic Resources

Research Environments

One of the great benefits of studying life sciences through HILS is the student’s ability to use facilities throughout the University.

Many of the facilities listed under one heading are used by faculty members and students

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from across Harvard’s various schools. For example, the Microchemistry and Proteomics Analysis Facility, located in the Department of Molecular and Cellular Biology, is used by Medical School faculty and graduate students. They are listed separately for convenience.

Cambridge Campus Facilities
Harvard provides graduate students in the life science with superlative facilities in Cambridge to conduct cutting-edge research, including:
- FAS Center for Systems Biology
- Life Sciences DNA Sequencing Facility
- Center for Nanoscale Systems (CNS) Facilities (Imaging & Analysis, Nanofabrication, Materials Synthesis, NNN/C Computational Facilities)
- Genome Modification Facility
- Harvard University Herbaria
- MCB Imaging Center
- Microchemistry and Proteomics Analysis Facility
- The Museum of Comparative Zoology
- The Quad Machine Shop: Designers and Builders of Custom Medical Research Tools

Medical School Facilities
The Medical Area in Boston comprises one of the most concentrated areas of scientific research facilities in the United States. About half of the Medical School faculty is based in pre-clinical departments on the Medical School Quadrangle. Core facilities include:
- Biopolymers Facility
- Cell Biology Confocal Microscopy Facility
- Nikon Imaging Center
- Cell Biology Conventional Electron Microscopy Facility
- Cell Biology Molecular Electron Microscopy Facility
- Dana-Farber/Harvard Cancer Center DNA Resource Core
- Quad Machine Shop: Designers and Builders of Custom Medical Research Tools

Many faculty have their laboratories at some of the world’s premier medical research facilities, located throughout the greater Boston area. These include:
- Beth Israel Deaconess Medical Center
- Brigham and Women’s Hospital
- Broad Institute
- Program in Cellular and Molecular Medicine and the Immune Disease Institute (PCMM/IDI)
- Children’s Hospital
- Dana-Farber Cancer Institute
- Forsyth Institute
- Joslin Diabetes Center
- Massachusetts Eye and Ear Infirmary
- Massachusetts General Hospital
- McLean Hospital
- Mount Auburn Hospital
- New England Regional Primate Research Center
- Schepens Eye Research Institute/Retina Foundation
- Spaulding Rehabilitation Hospital

HLS Governance and Administrative Organization

Governance: The HLS Coordinating Committee
The HLS coordinating committee is composed of 25 life sciences scholars across several Harvard faculties and serves as an advisory and deliberative body for its constituent programs, departments, and subject areas, as well as for other key life sciences stakeholders at GSAS, the Medical School, and the University.

HLS Administration
The HLS Program is administered by GSAS Assistant Dean John McNally, who reports to HLS Faculty Chair Dyann F. Wirth and GSAS Administrative Dean Margot Gill. Dean McNally coordinates closely on HLS-related matters with faculty, students, and staff from all of the HLS member programs, as well as with other key life sciences and University entities such as the Division of Medical Sciences, the Biomedical Graduate Student Organization, the GSAS Deans Office, and the Harvard University Development Office.

Within the HLS federation, are several subject area “clusters,” the most important of which is the Division of Medical Sciences (DMS). The DMS coordinates biomedical PhD education activities in conjunction with HLS at the Longwood Medical Area and Harvard Medical School; this encompasses the life sciences disciplines of Biomedical Sciences, Virology, Immunology, and Neuroscience. Of the approximately 1,100 students in HLS programs, over half are enrolled in Longwood-based DMS biomedical study areas. GSAS, HLS, and DMS are close collaborators within the overall HLS administrative structure; for more information, read the Division of Medical Sciences section within this publication, or visit the DMS website at www.gsad.harvard.edu/programs/degree/medsci.html.

The MD/PhD
Basic science students in this program combine Harvard Medical School studies with graduate studies in science or engineering. PhD work may be carried out in HLS, another GSAS science or engineering program, or a program housed within the Schools of Science and Engineering at MIT. Some students apply for admission into the MD/PhD program at the same time they apply to medical school. A limited number of these positions are available each year. Others decide to joint the program after matriculation at Harvard Medical School and become members of the MD/PhD program at the time of their acceptance into a PhD program.

For more information about the MD/PhD program, go to www.hms.harvard.edu/md_phd.
Division of Medical Sciences at Harvard Medical School (DMS)

Programs and Disciplines

BIOINFORMATICS AND INTEGRATIVE GENOMICS (BIG)

BIOLOGICAL AND BIOMEDICAL SCIENCES (BBS)
- Biochemistry and Proteomics
- Cancer Biology
- Cell Biology
- Cellular Imaging and Image Analysis
- Computational Biology
- Developmental Biology
- Disease Mechanisms
- Genetics & Genomics
- Human Biology
- Immunobiology
- Membrane Biology
- Microbial Biology and Pathogenesis
- Molecular Biology
- Molecular Neuroscience
- Physiology
- Stem Cell and Regenerative Biology
- Structural Biology
- Therapeutics, Targets, and Discovery

IMMUNOLOGY

NEUROSCIENCE

SPEECH AND HEARING BIOSCIENCE AND TECHNOLOGY (SHBT)

Virology

The Division of Medical Sciences (DMS) at Harvard Medical School, with the Faculty of Arts and Sciences of Harvard University, offers six interdisciplinary programs leading to the PhD degree: Bioinformatics and Integrative Genomics, Biological and Biomedical Sciences, Immunology, Neuroscience, Speech and Hearing Bioscience and Technology, and Virology. One of these programs, Biological and Biomedical Sciences, contains sub-areas of interest, which are listed above. These six programs share a common purpose: to foster a stimulating and supportive environment for research training in the biomedical sciences.

The Division of Medical Sciences was established at Harvard University in 1908. The Division was designed to provide students wishing to pursue careers in research and teaching with a broad education in basic biomedical science fields and specialization in one of them. Classroom and laboratory instruction are conducted primarily by the over 500 faculty members of the basic sciences departments and affiliated hospital laboratories of the Harvard Medical School (HMS) in Boston. The PhD degree is awarded by the Graduate School of Arts and Sciences (GSAS) of Harvard University. For 100 years, this fruitful collaboration has spawned research achievements across the spectrum from basic science to experimental medicine. Since 1909, over 2,700 Division graduates, including six Nobel Laureates, have gone on to distinguished careers in biomedical research, university teaching, and a number of increasingly diverse careers.

Research Facilities

Located in the Longwood Medical Area of Boston, the Division brings together faculty in the biological sciences throughout Harvard University. The Medical Area, which includes Harvard Medical School, a cluster of affiliated hospitals and research institutes, the Harvard School of Dental Medicine, and the Harvard School of Public Health, comprises one of the most concentrated areas of scientific research facilities in the United States. The interaction between the various programs in the Division, through joint teaching and research as well as the contact with the affiliated hospitals investigating clinical problems, enables the Division to serve as a meeting place for the biological, medical, physical, and chemical sciences, providing students and faculty with a wider range of experience and techniques than can be found in any single discipline or department.

Many of our faculty are based in the seven basic science departments on the Medical School Quadrangle: Biological Chemistry and Molecular Pharmacology, Cell Biology, Genetics, Microbiology and Immunobiology, Neurobiology, Stem Cell and Regenerative Biology, and Systems Biology. Other faculty have their laboratories at:
- Beth Israel Deaconess Medical Center
- Brigham and Women’s Hospital
- Children’s Hospital
- Dana-Farber Cancer Institute
- Harvard Institutes of Medicine (HIM)
- Harvard Medical School
- Harvard School of Public Health
- Harvard University in Cambridge
- Immune Disease Institute
- Joslin Diabetes Center
- Massachusetts Eye and Ear Infirmary (MEEI)
- Massachusetts General Hospital (MGH)
- McLean Hospital
- New England Regional Primate Center
- Schepps Eye Research Institute

The main Harvard University campus in Cambridge encompasses a wide variety of strong academic departments and facilities in the humanities and sciences. The division specifically interacts with the biological sciences programs in biophysics, chemical biology, molecular and cellular biology, organismic and evolutionary biology, biological sciences in public health, and systems biology.

Program of Study

There are many areas of biomedical research excellence in the Division of Medical Sciences (DMS). These are described for each program, and some are available in more than one program. Along with other areas, research in cancer, developmental biology and HIV, are examples that are well represented in several DMS programs. Details on these and the other themes in biomedical sciences and biology are available at: www.hms.harvard.edu/dms/

Academic programs fulfill needs and goals through core and advanced courses, seminars, rotations in laboratories, and a qualifying examination. Courses may be chosen from the offerings of Harvard University as well as from those of the Massachusetts Institute of Technology. Rotations are an integral part of each program; they allow students to investigate several types of research and laboratories before choosing a dissertation laboratory. Many students choose a dissertation laboratory by the end of the first year.

Although individual programs vary, generally students take a qualifying examination at the end of their first year or during their second year. After successful completion of the qualifying examination, the dissertation advisor supervises the doctoral candidate’s research and study, with an advisory committee periodically reviewing progress. Typically, about four years of laboratory work are needed to complete the dissertation research, which is defended before three examiners. Students are expected to complete the degree in four to five years.

The Informal Curriculum

Outside of the classroom, the division sponsors a variety of activities that bring together students and faculty with a broad range of research interests. Important elements of this “informal curriculum” are the seminars, journal clubs, and retreats organized by the programs. These sessions give students the opportunity to interact with faculty and post-doctoral fellows from laboratories throughout the Medical Area, and to learn about research in diverse fields. Student-run journal clubs and seminars provide opportunities to learn how to give talks, critically evaluate scientific literature, present data, and take part in group Division of Medical Sciences at Harvard Medical School (DMS) discussions. Each year students organize their own symposium with talks and poster sessions. City-wide seminars
Combined Degree Programs

The division, in conjunction with Harvard Medical School, offers a combined MD/PhD program to train physician-scientists to work at the forefront of biomedical research and to provide an interface between the most basic and technical research and its clinical application at the bedside. The program seeks to provide students with the most thorough and up-to-date medical education and training for research careers. Students who are interested in working toward simultaneous MD and PhD degrees should complete the application for admission to Harvard Medical School and the MD/PhD Program. Website: http://hms.harvard.edu/pme/jdprogram.asp

Admissions

Each year, nearly 90 students begin graduate study. Total enrollment for 2011–2012 was over 575, with affiliated faculty numbering over 500. Our students come from a variety of undergraduate institutions throughout the United States and from many foreign countries. Women account for almost one-half of the enrollment.

To qualify for admission, applicants must demonstrate strong enthusiasm and ability for the vigorous pursuit of scientific knowledge. Minimal requirements include a bachelor’s degree and undergraduate preparation in the sciences. The program in Bioinformatics requires a strong grounding in mathematics and quantitative sciences (e.g., computer sciences, physics, and chemistry). Strong consideration is given to letters of recommendation, particularly to comments from individuals who have firsthand knowledge of the applicant’s research experience. Some programs may request a personal interview.

Applicants should apply to only one of the six DMS programs. Once enrolled, degree candidates may arrange rotations in laboratories affiliated with other programs. Transfer between programs may be accommodated if justified. We welcome discussion with applicants who would like assistance in determining the most appropriate program for their interests.

Applicants wishing to do research in Biochemistry and Proteomics; Cancer Biology; Cell Biology, Cellular Imaging and Image Analysis; Computational Biology; Developmental Biology; Disease Mechanisms; Genetics & Genomics; Human Biology; Immunobiology; Membrane Biology; Microbial Biology and Pathogenesis; Molecular Biology; Molecular Neuroscience; Physiology; Stem Cell and Regenerative Biology; Structural Biology; or Therapeutics, Targets, and Discovery usually apply through the Biological and Biomedical Sciences (BBS) Program. Applicants wishing to do research in Bioinformatics and Integrative Genomics; Immunology; Neuroscience; Speech and Hearing Bioscience and Technology (SHBT); or Virology should apply directly to the relevant program.

Applications for the 2014–2015 academic year will likely open in late September 2013. To apply, applicants should go to the Graduate School of Arts and Sciences website at www.gsas.harvard.edu. The application deadline is December 2, 2013, 5:00 PM EST, in order to be considered. A completed application includes submission of the online application form, statement of purpose, curriculum vitae, letters of recommendation, scores from the Graduate Record Examination (General Test), official transcripts and application fee. Applicants whose native language is not English, and who have not received a bachelor’s degree from an English language institution, must meet minimum score requirements on the Test of English as a Foreign Language (TOEFL). For more details on a complete application, see Important Information on the Application Process on our website at http://www.hms.harvard.edu/dms/Prospective/Admissions.html.

All materials, including letters of recommendation and official reports of the GRE, must be received by the application deadline. GRE tests should be taken no later than October 2013 for official scores to arrive in time.

Harvard University’s policy is to make decisions on the basis of the individual’s qualifications to contribute to Harvard’s educational objectives and institutional needs. It is unlawful, and contrary to Harvard University policy, to discriminate against individuals on the basis of race, color, gender, sexual orientation, religion, age, national or ethnic origin, political beliefs, veteran status, or disability unrelated to job or course of study requirements.

Financial Aid and Cost of Study

Division of Medical Sciences students receive full tuition and stipend support while they are enrolled and making satisfactory progress toward the PhD degree. The division strongly encourages applicants to apply for support from extramural agencies. Students who receive competitively funded extramural fellowships, which will be used toward our student support upon matriculating to our programs, may be eligible to receive an additional educational allowance from the division.

The Longwood Medical Area

Adjacent to the Medical School are the Harvard School of Public Health, and the Countway Medical Library. The Countway is one of the most complete biomedical research collections in the country. There are also the research laboratories of the affiliated hospitals and institutes. Free shuttle buses link the area with places such as MIT, MGH, and Harvard Square in Cambridge. Many students live near the Medical School, or in neighboring Brookline. Others find affordable housing elsewhere in Boston or in Cambridge. Harvard University provides dormitories for married students and graduate students in Cambridge. University housing is also available for single students in Vanderbilt Hall at the Medical School. Vanderbilt Hall also houses some athletic facilities and a branch of the University Health Services. The Medical Education Center houses the office of the Division of Medical Sciences and its graduate student lounge.

Programs and Disciplines

The six interdepartmental programs of the Division of Medical Sciences are described briefly below. Interested applicants can obtain more information on the programs in which they are interested online at www.hms.harvard.edu/dms/.

Bioinformatics and Integrative Genomics (BIG)

The Bioinformatics and Integrative Genomics (BIG) Program enrolls PhD students with exceptional training in quantitative sciences and strong interest in biomedical applications. Research areas encompass computational analysis and mathematical modeling of data generated by DNA sequence, gene expression, structural, proteomics, and metabolite-assaying technologies. In applied projects, they may also include integration of clinical and population data from electronic health records. Both bioinformatics and genomics are tightly linked to the mathematical and biophysical modeling of complex biological systems and experimental validation of computational predictions. Graduate students will conduct original research in the development of novel approaches and new technologies to address fundamental biological questions, and they will acquire the skills to be leaders in the field of bioinformatics and genomics. Students will be joint members of BIG and a “home program” chosen from one of the four DMS programs (BBS, Immunology, Neuroscience, Virology). BIG students will follow the curriculum and participate in activities of the home program, which will be supplemented with BIG programmatic and curricular offerings. Website: www.hms.harvard.edu/dms/BIG
Biological and Biomedical Sciences (BBS)

BBS is an interdepartmental graduate training program in cellular and molecular biology. BBS faculty members are drawn from all of the basic science departments of Harvard Medical School — Biological Chemistry and Molecular Pharmacology (BCMP), Cell Biology, Genetics, Microbiology and Immunobiology, Neurobiology, Stem Cell and Regenerative Biology, and Systems Biology — and from many of Harvard’s affiliated teaching hospitals. BBS has also incorporated faculty from the Faculty of Arts and Sciences (FAS) as part of its effort to build new cross-campus initiatives in graduate training.

The BBS graduate research training is interdisciplinary, building on a foundational curriculum in molecular and classical genetics, biochemistry and cell biology. This platform is complemented by an array of courses in more specialized areas of investigation. The methods and experimental approaches used to address questions within these areas range from the techniques of molecular biology, protein chemistry, cell biology and biophysics to those of molecular and developmental genetics. Descriptions of the areas of concentration available in BBS, and lists of faculty in each area of research is provided in the faculty section of the website at www.hms.harvard.edu/dms/BBS.

Biological Chemistry and Molecular Pharmacology (BCMP) is home to research and teaching focused on understanding the molecular mechanisms of fundamentally important life processes. BCMP offers a broad range of medical and basic research topics using the analytical tools of biochemistry, molecular biology, biophysics, chemical biology, and structural biology. The research interests of the faculty include the structure and function of proteins with particular interest in large multimeric complexes; the control of all stages of gene expression; the mechanisms of DNA replication, recombination, and repair; the organization and regulation of chromatin structure; the biosynthesis of membrane lipids, carbohydrates, and proteins; principles of antibiotic and natural product synthesis, and the induction of morphological and biochemical differentiation of cells. Website: https://bcmp.med.harvard.edu.

The BBS concentration in Cell Biology offers a variety of excellent courses to provide its trainees with strong core knowledge as well as opportunities to expand their knowledge base throughout their training years. Half courses are intended to serve as an exploration of a broader topic of study, while quarter courses and nano-courses give insight into more specific areas of study in a condensed format. The Cell Biology program is currently being restructured to enhance the paracurricular activities that support student training and build a vibrant network of community interactions around research and mentorship. The research areas represented in Cell Biology cover an impressive range across many levels of analysis from atomic resolution to organismal physiology and disease. Areas of excellence include ubiquitin-dependent regulation of protein turnover, cancer biology and intracellular signaling, regulation of cellular and organellar metabolism, and biological imaging of dynamic processes from membrane traffic to molecular motors. Website: http://cellbio.med.harvard.edu.

Genetics and Genomics over the last several years has seen tremendous advances both in terms of our understanding of the genetic mechanisms underlying biological functions and in the genetic approaches and technologies that are now available in the laboratory to investigate these functions. While classical methods are still central to genetic studies, newer approaches, particularly in the realm of genomics, have also been developed and are now widely used, opening up entire new areas of research. As these advances have occurred, they have led to expansion of the number of laboratories at HMS and our affiliated hospitals that pursue rigorous genetic studies. Labs at HMS now study genetics in a wide range of fields using state of the art technologies, including host-pathogen interactions, development, gene expression, chromosome segregation, chromatin function, cell division, systems and networks, population genetics, human diseases, and more. In turn, this expansion has led to an increase in the number of graduate students who are interested in training in the fields of genetics and genomics. You may go to this website to learn more about Genetics and Genomics: www.hms.harvard.edu/dms/BBS/Genetics/index.html

Microbiology and Immunobiology possesses a faculty with interests that include basic research on the genetics and molecular biology of prokaryotic and eukaryotic microorganisms, microbial pathogenesis, and vaccine development. State-of-the-art facilities and a vibrant research community exist at both Longwood and the main Harvard campus in nearby Cambridge, and collegiality among different laboratories is further promoted by the close proximity of MIT, Tufts, and Boston University. In addition, world-class training in infectious disease is offered at the many hospitals affiliated with HMS, ensuring that researchers always have access to clinical expertise and the opportunity to work with physicians. Website: http://micro.med.harvard.edu/

In addition, the Harvard community has a number of programs that are aimed at bringing students and researchers together from different departments and/or institutions to share their work on topics of mutual interest. For example, all of the cancer researchers from the Harvard community have united under one research organization, the Dana Farber Harvard Cancer Center. The participating institutions include Beth Israel/Deaconess Medical Center, Brigham & Women’s Hospital, Children’s Hospital, Dana Farber Cancer Institute, Harvard Medical School, Harvard School of Public Health and Massachusetts General Hospital. Members of the Harvard Cancer Center collaborate to offer an area of concentration in Cancer Biology within BBS. This program seeks to provide advanced training and an integrated community for those students interested in pursuing cancer-related research. The curriculum will emphasize topics relevant to cancer biology, including signaling, basic cell biology, disease pathology, and translational research. Additional activities, including an oncology seminar series and a student data club, will provide opportunities for students to extend their studies and community beyond the classroom and thesis laboratory. Website: www.hms.harvard.edu/dms/BBS/cancerbio/index.html

Immunology

The purpose of the program is to provide education leading to a PhD in Immunology. This program is under the responsibility of the Committee on Immunology at Harvard. The committee includes 109 faculty members representing a broad area of research interests including transplantation, neuro-immunology, autoimmunity, stem cell biology, infection and immunity, human translational immunology, tumor immunology, immunobiology and mucosal immunity. Our goal is to educate scientists in investigative and academic medicine, preparing them to contribute to immunological research with a full awareness of the potential impact of immunology. Our program combines an education in basic biology, a sophisticated training in immunology, and exposure to the immunological and non-immunological problems of disease. Website: http://www.hms.harvard.edu/dms/immunology/index.html
Neuroscience
The Program in Neuroscience draws together neuroscientists from across Harvard. The program office and the student lounge are located at Harvard Medical School in the Longwood Medical Area of Boston. Most coursework occurs at the Medical School, and all first-year students receive advising here. The program offers students options for thesis research in research departments throughout Harvard, including labs at the Center for Brain Science on the Cambridge campus, and at Harvard-affiliated hospitals such as Children’s Hospital Boston, McLean Hospital, Massachusetts General Hospital, and Brigham & Women’s Hospital. The program has 120 affiliated labs, giving students a wide range of options in choosing research experiences. Website: www.hms.harvard.edu/dms/neuroscience/prospective/AboutPIN.html

Speech and Hearing Bioscience and Technology
The Program in Speech and Hearing Bioscience and Technology (SHBT) was founded in 1992 with the goal of providing multidisciplinary research training in basic, clinical, and applied approaches to the study and treatment of all aspects of human communication and its disorders.

The 65 faculty associated with the SHBT Program have academic homes in many departments and laboratories within Harvard, MIT, and other Boston area institutions. The aggregate research portfolio covers virtually all aspects of speech, hearing, voice, language, and balance. Some program faculty conduct basic studies on motor control or acoustics of speech production and laryngeal function, and some carry out clinical studies of the human voice and voice disorders. Others study the mechanics, biophysics, physiology, and/or molecular biology of the middle and inner ears, or the mechanisms underlying acquired or genetic disorders of hearing. Some are developing regenerative technologies for sensory cells and neurons in the inner ear. Still others take neurophysiological or modeling approaches to study the neural codes and circuits underlying central auditory processing, or neuroimaging approaches to study the mechanisms underlying tinnitus, or cognitive neuroscience approaches to study language processing.

What SHBT faculty all share is 1) an interest in speech and hearing, in its broadest definition; 2) the belief that progress in today’s complex scientific environment requires the coordinated effort of engineers and physical scientists, biological scientists, cognitive scientists, and clinicians; and 3) the understanding that the real-world applications that ultimately move discoveries from bench to bedside require coupling the discoveries and the people behind them with appropriate industrial partners.

The students admitted to the SHBT program also share this vision. They come with backgrounds in physics, engineering, computer science, biology, neuroscience, psychology, linguistics, audiology, etc. After their training years in the multidisciplinary melting pot of the Boston-area environment, they leave with diverse aspirations as to how to apply their graduate training to improving human communication.

Website: www.hms.harvard.edu/dms/SHBT

Virology
It is an exciting time to study virology! In the last decade new viruses such as SARS, H1N1 influenza, and Nipah viruses have emerged around the world; viruses such as Ebola Chikungunya and West Nile viruses have re-emerged; and the AIDS epidemic continues to sweep across sub-Saharan Africa and parts of Asia. New vaccines for HIV, smallpox, avian influenza, and genital herpes are direly needed. New antivirals for Dengue, hepatitis C, and HIV are also desperately needed. The role of viruses such as Merkel cell polyoma virus, papilloma virus, Kaposis’s sarcoma virus, and Epstein-Barr virus in human cancer raise challenges in preventing and treating these diseases. Researchers at Harvard University are working on all of these biomedical problems as well as conducting basic research that is defining new molecular structures of viruses and virus-encoded enzymes, new mechanisms within cells for molecular and organelle trafficking and function, and new mechanisms that control cell growth. Harvard researchers are among the world leaders in the design and testing of AIDS, genital herpes, and smallpox vaccines. The Harvard Program in Virology provides extraordinary opportunities to conduct graduate study for the PhD degree in these exciting areas of biomedical science. We invite you to apply for graduate study in the program for the 2014–2015 academic year admissions. Website: http://www.hms.harvard.edu/dms/virology/prospective/AboutVir.html

Division of Medical Sciences
Contact Information
Admission Questions contact:
Division of Medical Sciences
Harvard Medical School, TMEC 435
260 Longwood Avenue, Boston, MA 02115
617-432-0162
dms@hms.harvard.edu
www.hms.harvard.edu/dms/

Program Addresses:
Bioinformatics and Integrative Genomics (BIG)
Countway Library
10 Shattuck Street, Boston, MA 02115
617-432-2144
www.hms.harvard.edu/dms/BIG

Biological and Biomedical Sciences Program (BBS)
Gordon Hall, Room 005
Harvard Medical School
25 Shattuck Street, Boston, MA 02115
617-432-4035
www.hms.harvard.edu/dms/bbs/

Immunology Program
Harvard Medical School
The Jeffrey Modell Immunology Center
200 Longwood Avenue, Boston, MA 02115
(617) 432-4057
www.hms.harvard.edu/dms/immunology/

Neuroscience Program
Harvard Medical School
Goldenson Room 129
220 Longwood Avenue, Boston, MA 02115
(617) 432-0912
www.hms.harvard.edu/dms/neuroscience/

Speech and Hearing Bioscience and Technology
Admissions information: Christopher Shera
Email: shbt_admissions@hms.harvard.edu
www.hms.harvard.edu/dms/SHBT

Virology Program
Harvard Medical School
Division of Medical Sciences
TMEC 435
260 Longwood Avenue, Boston, MA 02115
(617) 432-0162
www.hms.harvard.edu/dms/virology/

MD/PhD Program
Harvard Medical School
Medical Education Center, Room 168
260 Longwood Avenue, Boston, MA 02115
(617) 432-0991
www.hms.harvard.edu/md_phd/

Graduate Record Examinations (GRE)
ETS Box 955
Princeton, NJ 08541
(609) 771-7670
www.gre.org

Test of English as a Foreign Language (TOEFL)
Educational Testing Service (ETS)
Box 899
Princeton, NJ 08541-6155
(609) 771-7243
www.toefl.org

Programs of Study
The Biological Sciences in Dental Medicine (BSDM) Program, leading to the PhD degree, is located at Harvard School of Dental Medicine and is offered through the Faculty of Arts and Sciences of Harvard University. BSDM was established in 2001 and is one of the programs of Harvard Integrated Life Sciences (HILS).

The BSDM program combines faculty from the Department of Developmental Biology and other Harvard School of Dental Medicine departments with faculty from basic science departments at Harvard Medical School, and faculty from the Faculty of Arts and Sciences in Cambridge.

The BSDM program offers advanced study in the molecular, supramolecular, cellular, and supracellular processes that provide the intellectual basis for dental medicine. The program offers training of research scientists in the following areas of research: neurobiology, bone biology, tooth development, stem cell biology, oral microbiology, autoimmunity, genetics related to craniofacial development, tumor biology, pain research, inflammation, and of course developmental biology.

Since its inception in 2001, the goals of the BSDM program have been: (a) connect research activities and research training in the Harvard School of Dental Medicine with scientific pursuits of universities and academic health centers locally, nationally and internationally; (b) train individuals with the qualifications needed to fill faculty positions in US Dental Schools; (c) provide individuals with a background or interests in dentistry the rigorous, flexible, and multidisciplinary training needed to effectively compete for research funding; (d) add a rigorous PhD training program to the list of such programs at dental schools to help expand the research required to further the national craniofacial/oral health research agenda; (e) to develop a program of multi- and interdisciplinary research training enabling graduates to effectively pursue substantial and exciting scientific opportunities.

The flexible, individualized program of courses taken by the BSDM students is ideal in light of the multi- and interdisciplinary training goal of the program. Students are required to take courses that are also taken by PhD students from other HILS programs and by dental specialty residents who are doing research in fulfillment of requirements for MMSc and DMSc degrees, which increases contacts and exchange of information among students working in a broad range of research areas.

**Admissions**

Applicants to this program should be interested in pursuing a career in basic or patient-oriented science in the areas of skeletal biology, cell biology and development, immunology, or microbiology leading to a PhD degree. Eligible applicants will be individuals with a doctoral degree in dentistry (DMD, DDS), a medical doctoral degree (MD), or a student already accepted into the DMD program at Harvard School of Dental Medicine.

Applicants for admission should have an undergraduate record of introductory courses in calculus, physics, biology, and chemistry, both physical and organic, and significant laboratory research experience. Strong consideration is given to letters of recommendation, particularly from individuals who have firsthand knowledge of the applicant’s research experience.

Scores from the Graduate Records Examination (GRE) should be submitted (General); the GRE subject test is optional in the subject of your choice.

Applicants whose native language is not English and who have not received a degree from an English language institution must score at least 100 on the Test of English as a Foreign Language (TOEFL).

The BSDM Admissions Committee bases decisions regarding admission on a balanced discussion of undergraduate performance/GPA, GRE scores, professional school transcripts (if applicable), TOEFL, letters of recommendation and essay/career goals.

Online submission of the application is required and completed applications with all supporting materials, including letters of recommendation and GRE scores (and TOEFL scores, if applicable), are due online by the announced deadline to ensure consideration for the following fall. Late applications will not be considered.

**Financial Aid**

All BSDM students receive full tuition and stipend support while they are enrolled and making satisfactory progress toward the PhD degree. Although full support is guaranteed, the program strongly encourages applicants to apply for support from extramural agencies, and international applicants are encouraged to seek financial support from their national governments and fellowship agencies.
Members of the Standing Committee for BSDM

Bjorn R. Olsen, Hersey Professor of Cell Biology (Medical School) (Chair)

Malcolm Whitman, Professor of Developmental Biology (Dental School) (Vice Chair)

Arkat Abzanov, Associate Professor of Organismic and Evolutionary Biology

Roland Elie Baron, Professor of Oral Medicine, Infection, and Immunity (Dental School)

Randy King, Associate Professor of Cell Biology (Medical School)

Henry M. Kronenberg, Professor of Medicine (Medical School)

Beate K. M. Lanske, Associate Professor of Developmental Biology (Dental School)

Andrew B. Lassar, Professor of Biological Chemistry and Molecular Pharmacology (Medical School)

Yefu Li, Assistant Professor of Developmental Biology (Dental School)

Richard L. Maas, Professor of Medicine (Medical School)

David J. Mooney, Robert P. Pinkas Family Professor of Bioengineering

Mohammed Shawkat Razzaque, Assistant Professor of Oral Medicine, Infection, and Immunity (Dental School)

Vicki Rosen, Professor of Developmental Biology (Dental School)

Gary B. Ruvkun, Professor of Genetics (Medical School)

Charles N. Serhan, Simon Gelman Professor of Anaesthesia (Medical School)

Jagesh V. Shah, Assistant Professor of Systems Biology (Medical School)

Kevin Struhl, David Wesley Gaiser Professor of Biological Chemistry and Molecular Pharmacology (Medical School)

Clifford J. Tabin, George Jacob and Jacqueline Hazel Leder Professor of Genetics (Medical School)

Xiu-Ping Wang, Assistant Professor of Developmental Biology (Dental School)

Matthew L. Warman, Harriet M. Peabody Professor of Orthopedic Surgery (Medical School)

Other Faculty

BSDM students can do rotations and carry out dissertation research in labs of all members of the HILS PhD programs, with BSDM program approval.

Selected Dissertation Topics

Bo Hou, “Craniofacial Bone Remodeling”

Dolrudee Jumlongras, “Molecular Genetics of Tooth Agenesia”

Brandeis McBratney-Owen, “Development of the Cranial Base in Mice”

Oranart Matangkasombut, “The Role of Bromodomain Factor 1, a TFIID Subunit, in RNA Polymerase II Transcription in Saccharomyces Cerevisiae”

Damian Medici, “Pathogenetic mechanisms of hemangioma endothelial cells”

Joel Stern, “Mechanisms of suppression of experimental autoimmune encephalomyelitis (EAE) by synthetic compounds and fusion antibodies”

Yanqui Liu, “The role of VEGF and VEGF receptors in bone development and homeostasis”

Praveen Arany, “Low Power Laser generated Reactive Oxygen Species activate Latent TGF-beta1 to direct Dental Stem Cell Differentiation for Dentin Repair”

Nevena Dimova, “Defining the ubiquitin and E2-enzyme requirements for APC/C-mediated degradation of cyclin B1”

Wei Huang, “Polycystin-1 and Bone Mechanotransduction”

Joseph Fleming, “Genome-wide integrative analysis of transcription factor occupancy and gene regulation in models of human cancer and cellular differentiation”

Chun Li, “The Role of Non-classical Regulatory T Cells in HIV-1 Infection”

Chi Zhang, “The X-linked Intellectual Disability Protein PHF6 Associates with the PAF1 Complex and Regulates Neuronal Migration in the Mammalian Brain”
Program in Biological Sciences in Public Health (BPH) at Harvard School of Public Health

Programs and Disciplines

BIological Sciences in Public Health (BPH) Program

The Program in Biological Sciences in Public Health (BPH), established in 1993, trains students in individual fields of biological research with a focus on prevention and better treatment of diseases affecting large populations. Students in the BPH program obtain a broad interdisciplinary knowledge of both mechanistic and quantitative approaches to biomedical research. The program trains research scientists in the following areas: molecular and integrative physiology; nutritional biochemistry; cellular and organismal metabolism; cancer cell biology; gene regulation in human disease; gene-environment and cell-environment interactions; inflammation and stress response; immunology; infectious diseases involving protozoa, helminths, viruses and bacteria. All of these areas are studied with an emphasis on cellular and molecular biology and genetic approaches to disease mechanisms.

Our research, whether basic or translational, is relevant to human health. Students apply cutting-edge technology to the solution of worldwide problems with a focus toward better treatment and prevention of human diseases. It has become increasingly evident that progress in disease prevention is optimally promoted by a close interaction between scientists from diverse disciplines, including genetics, cell biology, biochemistry, physiology, systems biology and epidemiology. To achieve that goal, the BPH program is rooted in the rich and diverse environment of the Harvard School of Public Health, dedicated to advancing the public’s health through learning, discovery, and communication. The field of public health is inherently multi-disciplinary and so, too, are the interests and expertise of the School’s faculty and students, which extend across the biological, quantitative, and social sciences. With our roots in biology, we are able to confront the most pressing diseases of our time (e.g., AIDS, malaria, obesity and diabetes, and cancer), gaining insights into their underlying mechanisms and uncovering therapeutic opportunities. Core quantitative disciplines like epidemiology and biostatistics are also fundamental to analyzing the broad impact of health problems, allowing us to look beyond individuals to entire populations. From advancing scientific discovery to training national and international leaders, the Harvard School of Public Health has been at the forefront of efforts to benefit the health of populations worldwide. Shaping new ideas in our field and communicat-
have access to the Countway Library, one of the most complete biomedical research collections in the nation.

The main Harvard University campus in Cambridge encompasses a wide variety of strong academic departments and facilities in the humanities and sciences. The program specifically interacts with the biological sciences programs in molecular and cellular biology, organismic and evolutionary biology, and biophysics.

Program of Study

The program offers opportunities in a wide range of laboratory experiences and considerable interaction among the program components. Academic programs fulfill needs and goals through core and advanced courses, seminars, rotations in laboratories, and a qualifying examination. Rotations are an integral part of the program; they allow students to investigate several types of research and laboratories before choosing a dissertation laboratory. Students choose a dissertation laboratory by the end of the first year.

Although individual programs vary, generally students take a qualifying examination during their second year. After successful completion of the qualifying examination, the dissertation advisor supervises the doctoral candidate’s research and study, with an advisory committee periodically reviewing progress.

Typically, about four years of laboratory work are needed to complete the dissertation research, which is defended before three examiners. Generally, students complete the degree in five to six years.

The Informal Curriculum

Outside of the classroom, the program sponsors a variety of activities that bring together students and faculty with a broad range of research interests. Important elements of this “informal curriculum” are seminars, journal clubs, and retreats. These sessions give students the chance to interact with faculty and postdoctoral fellows from laboratories throughout the Medical Area, and to learn about research in diverse fields. Student-run journal clubs and seminars provide opportunities to learn how to give talks, critically evaluate scientific literature, present data, and to learn about research in diverse fields. Students who are interested in working toward simultaneous MD and PhD degrees should complete the application for admission to Harvard Medical School and the MD/PhD Program.

Admissions

Applicants wishing to do research in areas of metabolic dysregulation in complex disease (obesity, metabolic syndrome, cancer), health effects of environmental exposures (air pollution, lung infection, asthma), nutritional biochemistry (nutrient transport and metabolism), gene-environment interactions (epigenetics, inflammation, stress response), immunology and infectious diseases (host-pathogen interactions and protozoa, helminths, viruses or bacteria) usually apply to the Biological Sciences in Public Health (BPH) program.

To qualify for admission, applicants must demonstrate strong enthusiasm and ability for the vigorous pursuit of scientific knowledge for optimal human health. Minimal requirements include a bachelor’s degree and undergraduate preparation in calculus, physics, biology, and chemistry, both physical and organic.

To apply to the PhD Program in Biological Sciences in Public Health (program #8500), Graduate School of Arts and Sciences online admissions forms must be used. Completed applications and supporting documentation must be submitted online directly to the Graduate School of Arts and Sciences by the December 2 deadline. See www.gas.harvard.edu.

Students are required to submit their application online via the GSAS Harvard Integrated Life Sciences (HILS) admissions application. Please make it clear that you are interested in the Biological Sciences in Public Health (BPH) program (admission code #8500); see GSAS Application Instructions and Information or contact the Graduate School Office of Admission and Financial Aid at:

Office of Admissions and Financial Aid
Harvard University
1350 Massachusetts Avenue
Holyoke Center 350
Cambridge, MA 02138-3654
telephone: 617-495-5315, 617-495-5396
e-mail: admis@fas.harvard.edu

The Office of Admissions and Financial Aid is open Monday through Friday, 9 a.m.-5 p.m., Eastern Standard Time.

Financial Aid and Cost of Study

Students receive full tuition and stipend support while they are enrolled and making satisfactory progress toward the PhD degree. International applicants are urged to seek financial support from their national governments and fellowship agencies. Limited international student funding is available. The program strongly encourages applicants to apply for support from extramural agencies.

Life in Boston

The Harvard School of Public Health is located in the Longwood Medical Area of Boston, across the Charles River from Cambridge. The two cities offer a geographically compact, yet rich and varied academic and cultural environment. Forty-three colleges and universities in the metropolitan area sponsor a multitude of cultural and intellectual activities, all easily accessible via public transportation. The close proximity to MIT, the natural science departments in Cambridge, and the medical schools at Boston University and Tufts University provides an unusual concentration of scientific research that draws visiting scientists from around the world. The main Harvard campus in Cambridge supports a wide variety of facilities for athletics and graduate student activities. Students have access to all the libraries of Harvard University, which is the largest university library system in the world.

In addition to a long list of renowned institutions, such as the Museum of Science and the Museum of Fine Arts, Boston itself is a museum, with hundreds of historical sites and an exciting range of architectural styles as well as ethnically diverse neighborhoods offering an international flavor.

Recreational opportunities in the Boston area are many and varied. Sports fans can follow the Patriots, Bruins, Celtics, or the Red Sox—Fenway Park is only a short walk from the Harvard School of Public Health. Within the city, the Charles River offers an afternoon of sailing and windsurfing, while the network of parks known as the “Emerald Necklace” winds its way from Kenmore Square, through Olmsted Park and past Jamaica Pond to the 265-acre Arnold Arboretum, which is both a city park and a Harvard research facility. Walden Pond and the Great Meadows Wildlife Refuge in Concord are within biking distance. The beaches of Cape Cod, and skiing, hiking, and camping in the Berkshires, Vermont, New Hampshire, and Maine are accessible in day trips.
The Longwood Medical Area
Immediately adjacent to the Harvard School of Public Health, are the Harvard Medical School, the Countway Medical Library, one of the most complete biomedical research collections in the country, and the research laboratories of seven affiliated hospitals and institutes. A free shuttle bus links the area with MIT and Harvard Square in Cambridge. Many students live near the Medical School or in neighboring Brookline; others find affordable housing elsewhere in Boston or in Cambridge. Harvard University provides dormitories for married students and graduate students in Cambridge. University housing is also available for single students in Vanderbilt Hall in the Medical Area, along with athletic facilities and a branch of the Harvard University Health Services. The Harvard School of Public Health houses the program offices as well as a graduate student lounge and computer facilities.

Important Addresses and Numbers
Information, program brochures, and application booklets may be requested from any of the following sources.

Online application submissions are required using the Graduate School of Arts and Sciences application form found at www.gsas.harvard.edu/admissions/. All support documentation must be scanned, uploaded and submitted online.

Office of Admissions and Financial Aid Graduate School of Arts and Sciences
ATTN: Biological Sciences in Public Health (BPH) Program
Harvard University
Holyoke Center, 3rd floor
1350 Massachusetts Avenue
Cambridge, MA 02138
(617) 495-5315
Website: www.gsas.harvard.edu

Applicants with specific questions about the program may contact the Program Office via email at bph@hsph.harvard.edu.

Biological Sciences in Public Health Program Office
Harvard School of Public Health
655 Huntington Avenue
Building 2–113
Boston, MA 02115-6096
Visit website for complete contact information: http://bph.hsph.harvard.edu

Note: Graduate School of Arts and Sciences admissions forms must be used to apply for this program and must be submitted directly to the Graduate School of Arts and Sciences by the December 1 deadline.

Addresses for Constituent Departments at Harvard School of Public Health

Genetics and Complex Diseases
www.hsph.harvard.edu/departments/genetics-and-complex-diseases
ATTN: BPH request for further information
Harvard School of Public Health
655 Huntington Avenue,
Building 2–107
Boston, MA 02115-6021

Environmental Health
www.hsph.harvard.edu/departments/environmental-health
ATTN: BPH request for further information
Harvard School of Public Health
655 Huntington Avenue,
Building 1–1301
Boston, MA 02115-6021

Immunology and Infectious Diseases
www.hsph.harvard.edu/departments/immunology-and-infectious-diseases
ATTN: BPH request for further information
Harvard School of Public Health
651 Huntington Avenue,
FXB-402
Boston, MA 02115

Nutrition
www.hsph.harvard.edu/departments/nutrition
ATTN: BPH request for further information
Harvard School of Public Health
655 Huntington Avenue,
Building 2–305
Boston, MA 02115-6018

MD/PhD Program
Harvard Medical School
Medical Education Center
Room 168
260 Longwood Avenue
Boston, MA 02115
(617) 432-0991

Faculty
Andrea Baccarelli, MD, PhD Mark and Catherine Winkler Associate Professor of Environmental Epigenetics www.hsph.harvard.edu/faculty/andrea-baccarelli/ Identification of molecular and biological factors reflecting the impact of environmental exposures on human health, with particular interest in epigenetics.

Barry Bloom, PhD Harvard University Distinguished Service Professor and Joan L. and Julius H. Jacobson Professor of Public Health www.hsph.harvard.edu/faculty/barrybloom/ Study of pathogenesis and protection in tuberculosis and development of vaccines.

Joseph Brain, SD Cecil K and Philip Drinker Professor of Environmental Physiology www.hsph.harvard.edu/faculty/josephbrain/ Function and structure of pulmonary and hepatic macrophages; responses to inhaled gases and particles.

Barbara Burleigh, PhD Associate Professor of Immunology and Infectious Diseases www.hsph.harvard.edu/faculty/barbaraburleigh/ Studies of the molecular basis of host cell invasion, signaling and differentiation by the human pathogen, Trypanosoma cruzi.

Flaminia Catteruccia, PhD Associate Professor of Immunology and Infectious Diseases www.hsph.harvard.edu/faculty/flaminia-catteruccia/ Reproductive biology of malaria vector, Anopheles gambiae; development of new targets for vector control.

David Christiani, MD Elkan Blout Professor of Environmental Genetics www.hsph.harvard.edu/faculty/david-christiani/ Assessment of the impact of workplace pollutants on health.

Immaculata De Vivo, PhD Associate Professor in the Department of Epidemiology devivo.bwh.harvard.edu/ Discovery and characterization of genetic biological markers to assess disease susceptibility in human populations.

Manoj Duraisingh, PhD Associate Professor of Immunology and Infectious Diseases www.hsph.harvard.edu/faculty/manoj-duraisingh/ Molecular mechanisms underlying the pathogenesis of human malaria.

Max Essex, DVM, PhD Mary Woodard Lasker Professor of Health Sciences www.hms.harvard.edu/dms/virology/fac/Essex Study of human and primate T-lymphotrophic retroviruses, including agents that cause AIDS.

Sarah Fortune, MD Assistant Professor of Immunology and Infectious Diseases www.hsph.harvard.edu/faculty/sarah-fortune/ Secretion and pathogenesis in M. tuberculosis.
Jeffrey Fredberg, PhD Professor of Bioengineering and Physiology www.hsph.harvard.edu/faculty/jeffrey-fredberg/ Identification of the mechanical basis of airway and lung parenchymal function at the levels of organ, tissue, cell, and protein.

Wendy Garrett, MD, PhD Assistant Professor of Immunology and Infectious Diseases www.hsph.harvard.edu/faculty/wendygarrett/ Interplay between the innate immune system and intestinal microbial communities.

Tiffany Horng, PhD Assistant Professor of Genetics and Complex Diseases www.hsph.harvard.edu/faculty/tiffany-horng/ Focus is on the transcriptional mechanisms that regulate inflammatory gene expression.

Gökhan Hotamisgil, MD, PhD Chair, Department of Genetics and Complex Diseases, James Stevens Simmons Professor of Genetics and Metabolism www.hsph.harvard.edu/GSH-LAB/ Regulatory pathways which control energy metabolism

Curtis Huttenhower, PhD Assistant Professor of Computational Biology and Bioinformatics www.hsph.harvard.edu/faculty/curtishuttenhower/ Computational methods for systems biology using data mining in large genomic data collections.

Phyllis Kanki, DVM, DSc Professor of Immunology and Infectious Diseases www.hsph.harvard.edu/faculty/phyllis-kanki/ Study of epidemiology and biological characteristics of HIV-2 in West Africa.

Lester Kobzik, MD Professor in the Department of Environmental Health, Professor of Pathology www.hsph.harvard.edu/faculty/lester-kobzik/ Lung macrophage differentiation and function; flow cytometry applications for respiratory cell biology.

Chih-Hao Lee, PhD Associate Professor of Genetics and Complex Diseases www.hsph.harvard.edu/faculty/chihhao-lee/ Nuclear lipid receptors as therapeutic targets of metabolic diseases.


Lemos, Bernardo, PhD Assistant Professor of Environmental Epigenetics www.hsph.harvard.edu/faculty/bernardo-lemos/ Development of a functional and populational understanding of the mapping between genotypes, phenotypes, and environments.

Marc Lipsitch, DPhil Professor of Epidemiology www.hsph.harvard.edu/faculty/marc-lipsitch/ Theoretical, statistical and experimental approaches to population biology and the epidemiology of infectious diseases.

Quan Lu, PhD Assistant Professor of Lung Biology www.hsph.harvard.edu/faculty/quan-lu/ Developing and applying genomewide RNAi tools to study receptor signaling and gene environment interactions.

William Mair, PhD Assistant Professor of Genetics and Complex Diseases http://www.hsph.harvard.edu/faculty/william-mair/ Molecular pathways underpinning the aging process, with the goal of using this knowledge to develop novel therapeutic strategies to treat age-onset disorders.

Brendan Manning, PhD Associate Professor of Genetics and Complex Diseases in the Faculty of Public Health www.hsph.harvard.edu/faculty/brendan-manning/ Signaling pathways underlying tumorigenesis and metabolic diseases.

Matthias Marti, PhD Assistant Professor in Immunology and Infectious Diseases www.hsph.harvard.edu/faculty/matthiasmarti/ Host-pathogen interactions in malaria parasites.

James Mitchell, PhD Assistant Professor of Genetics & Complex Diseases www.hsph.harvard.edu/faculty/james-mitchell/ Molecular mechanisms of lifespan extension by nutritional intervention.

Eric Rubin, MD, PhD Professor of Immunology and Infectious Diseases www.hsph.harvard.edu/faculty/ericrubin/ Virulence factors of mycobacteria; acquisition of virulence determinants of Vibrio cholerae; generalized transposon mutagenesis systems for bacteria.

Frank Sacks, MD Professor of Cardiovascular Disease Prevention, Professor of Medicine www.hsph.harvard.edu/faculty/frank-sacks/ Human lipoprotein metabolism, biochemical epidemiology involving lipoproteins and fatty acids and clinical trials in cardiovascular disease.

Stephanie Shore, PhD Senior Lecturer on Physiology www.hsph.harvard.edu/faculty/stephanie-shore/ Physiological and pharmacological aspects of bronchoconstriction.

Joseph Sodroski, MD Professor of Pathology in Immunology and Infectious Diseases http://www.hsph.harvard.edu/faculty/josepjsodroski/ Human immunodeficiency virus envelope glycoproteins; HIV-1 vaccine development.

Vishal Vaidya, PhD, Assistant Professor of Medicine & Environmental Health http://bph.hsph.harvard.edu/faculty/Vishal-Vaidya/ Cellular and molecular mechanisms of kidney exposure biology with a special emphasis on biomarkers, biosensors and tissue regeneration.

Marianne Wessling-Resnick, PhD Director of the Biological Sciences in Public Health (BPH) Program, Professor of Nutritional Biochemistry www.hsph.harvard.edu/faculty/marianne-wesslingresnick/ Regulation of the cellular uptake of transferrin; membrane transport of iron.

Dyann Wirth, PhD Department Chair, Richard Pearson Strong Professor of Infectious Disease www.hsph.harvard.edu/faculty/dyannwirth/ Molecular genetic analysis of gene expression, malaria parasites.

Zhi-Min Yuan, MD, PhD Professor of Radiobiology, Director of the John B. Little Center www.hsph.harvard.edu/faculty/zhi-min-yuan/ Elucidation of signaling mechanisms that regulate cellular stress responses; examining how stress signals affect cell behaviors in the context of cancer.

Recent Dissertation Topics
“Immunomodulatory pathways and metabolism”
“The evolution of drug resistant Mycobacterium tuberculosis”
“Characterization of malaria sexual stage development in the human host”
“Circadian integration of hepatic de novo lipogenesis and peripheral energy substrates utilization”
“Diversity of Antigenic Secretion in Apicomplexa Parasites and Its Role in Plasmodium Falciparum Malaria”
The Department of Molecular and Cellular Biology (MCB) is home to an unusually diverse group of outstanding scientists. The department’s mission to advance biological research beyond traditional boundaries is motivated by a passion for discovery and is supported by innovative research centers and state-of-the-art facilities on Harvard’s Cambridge campus. It is this interdisciplinary and collaborative culture—motivated by a passion for scientific discovery—that makes MCB an exciting place to study the unsolved questions in biology. Graduate students are trained to be the next generation of life scientists: creative, independent, and productive researchers working in academia, medicine, industry, law, business, or the non-profit sector.

To learn more about the department’s faculty and labs; research facilities and resources; admissions procedures; two PhD training programs and their degree requirements; current graduate students and graduate student life, please visit our website at www.mcb.harvard.edu/mcb/p/graduate-programs/ or write directly to the Graduate Office at gradprograms@mcb.harvard.edu or call (617) 495-3293.

Training Programs
The Department of Molecular and Cellular Biology offers an interdisciplinary training program in the life sciences that leads to a PhD in either Biology or Biochemistry called Molecules, Cells, and Organisms (MCO). The MCO graduate programs is a PhD program, although it is possible to receive the AM degree to signify the completion of requirements following the Candidacy Examination.

The MCO training program takes full advantage of the university’s outstanding faculty and extensive laboratory resources to provide pre-doctoral students with a solid foundation in the concepts and scientific approaches used in laboratories today to prepare them for a future at the forefront of life sciences.

Molecules, Cells, and Organisms (MCO)
Catherine Dulac, Training Program Director. Faculty participating in the Molecules, Cells, and Organisms training program come from the Departments of Molecular and Cellular Biology, Organismic and Evolutionary Biology, Chemistry and Chemical Biology, Stem Cell and Regenerative Biology, and Physics. In addition, members of the FAS Center for Systems Biology, the Center for Brain Science, the Microbial Science Initiative, and the Harvard Stem Cell Institute are active participants in MCO.

Foundation coursework in the first year prepares students for research in one of four tracks: Genetics, Genomics, and Evolutionary Biology; Cellular, Neuro-, and Developmental Biology; Biochemistry, Chemical and Structural Biology; and Engineering and Physical Biology. MCO trainees spend the first year exploring a broad sweep of fundamental problems at every level through a set of core courses representing the program tracks, followed by deep immersion in focused areas. The objective of the MCO training program is to prepare students for a future in science that will require interdisciplinary breadth, as well as depth in specific disciplines.

The EPB track of MCO trains a new generation of scientists to view living systems through the lens of physics and engineering. Students work comfortably in both the life sciences and the physical sciences, and applicants may have their primary undergraduate training in either area. Program components combine flexibility with rigor, place a priority on independence and imagination, and emphasize extensive individual faculty-student interactions.

Admission Requirements and Undergraduate Preparation
Applications for admission to the PhD program are accepted from students who have received a bachelor’s degree or equivalent training. Incoming students should have a record of introductory courses in chemistry, biology, physics, and mathematics. While the following courses should not be regarded as prerequisites for admission to graduate study, most admitted students have completed these courses as undergraduates:

1. Biology (at least one general course in biology and two terms of biology at a more advanced level)
2. Biochemistry
3. Organic Chemistry
4. Physical Chemistry
5. Physics (a general course in physics)
6. Mathematics (a basic knowledge of differential and integral calculus). Competence in elementary programming is also desirable.
7. Laboratory in Biology, Biochemistry, or Instrumental Analysis.

Prospective students are encouraged to apply for outside funding from agencies such as the National Science Foundation at the time of their application; international students should apply for outside funding before coming to the United States.

Degree Requirements
THE FIRST YEAR
Academic Residence
The Graduate School of Arts and Sciences requires a minimum of two years of full-time study in residence. The Graduate School of Arts and Sciences Handbook describes the regulations and rules that apply to students in the Graduate School of Arts and Sciences.

Coursework
First year graduate students enroll in MCB 290hr (fall and spring) and MCB, 291, 292 and 293 in the fall term. Students in the Engineering and Physical Biology (EPB) track enroll in MCB 294 and typically two of the three additional MCO foundation courses such as MCB 291 and MCB 292. In the spring term, each student enrolls in a quantitative methods course (ordinarily
MCB 111) along with two elective courses selected from their chosen track, in consultation with their advisor or track head. Students in the EPB track will ordinarily take Engineering Science 224 (ES 224). Students may continue to take elective coursework in their second year. In addition required coursework, first-year students also enroll in MCB 300 in the fall and spring of the first year (see Laboratory Rotations below).

**Laboratory Rotations.** Students spend their first year performing experimental research in the laboratories of faculty members in at least three 8-week lab rotations. During the rotations, students interact with individual faculty members and explore possible subjects for future dissertation research. The laboratory rotations do not coincide with the semester start and end dates, but all first-year students should register for MCB 300 in the fall and again in the spring to indicate the laboratory rotation course. Some students choose to carry out an additional rotation during the summer preceding their first year, or, if they have not decided upon a home lab following the spring term, may opt for an additional rotation in May and June of the first year. Each student arranges for a permanent faculty dissertation advisor and begins dissertation research by the end of the first year.

**Outside Fellowship Application.** All prospective students are encouraged to apply for outside funding from agencies such as the National Science Foundation at the time of application to the program. If a student has not procured a fellowship upon admission, first-year students are asked to submit a research proposal to a nationally recognized funding agency. International students are asked to apply for funding opportunities from their home country at the time of application for admission, as many foreign fellowships must be procured before the student matriculates in the United States. A fellowship writing workshop is conducted early every fall to aid students in how to put together a compelling proposal.

**Ethics Workshop in the Responsible Conduct of Research.** In addition to academic coursework, all MCB PhD candidates must complete a workshop in the responsible conduct of research by the end of the first year of study. The workshop is sponsored and conducted by members of the faculty.

**MCO Student-Faculty Journal Club.** While reading and discussing scientific papers is an integral part of the curriculum of many courses, the Journal Club provides a forum for students in the first two years of the PhD program to be coached on presenting papers in a way that should engage even a non-specialist. The coaching trains students how to contextualize the findings of a previously published paper in relation to their own place in history (i.e. what people were thinking before and what they did onwards.) The weekly talks are advertised and open to members of the Life Sciences community, and an MCO faculty member may also present along with a student in any given week. Talks are held weekly during each semester, and each year at least one G1 and G2 will have the opportunity to be coached, engage in a Journal Club presentation, and receive follow-up feedback. For the first month of the fall semester, G1s attend presentations by G2s and faculty, and are thereafter incorporated into the weekly schedule. Following the G2 year, students form their own Journal Club(s) which can be organized by research topic, class year, or however students would like.

**AFTER THE FIRST YEAR**

**Acceptance for Candidacy**

MCB students are evaluated in the spring of their second year by a faculty exam committee that meets with students to discuss their dissertation proposal. The Candidacy (Qualifying) Examination demonstrates a student’s qualifications for advanced research. Typically it is a one-to-two hour presentation of the dissertation research proposal made to members of an Examination Committee, which is chosen by the student in consultation with the dissertation advisor. In addition, students may be examined on course work, readings, and other required knowledge in the field.

**Progress Meetings/Reports**

Students accepted for candidacy arrange to meet at least once annually with their dissertation advisory committee (DAC). At these progress meetings, students should summarize the status of their dissertation research, detailing their accomplishments for the past year and goals for the coming year and the period until completion. The progress reports ensure that students, their advisors, and the advisory committee have the same understanding of students’ progress toward the PhD degree.

**Dissertation Defense**

Four to five years of full-time research is usually required for completion of the PhD degree. Completed research is presented for approval as a written dissertation. Granting of the degree requires the approval of a faculty advisory committee that reviews the dissertation on its contents. The candidate will also be called upon to demonstrate the ability to formulate and defend original ideas on scientific topics not directly related to the subject of the dissertation.

The dissertation defense is comprised of two components: the first is a public presentation made to the department and community as a whole; the second is a private defense and examination before the student’s dissertation advisory committee.

The candidate must provide copies of the completed (unbound) dissertation to members of their committee and the Graduate Programs Office at least two weeks in advance of the dissertation defense. Electronic copies may be submitted. The dissertation should include an abstract of not more than 350 words, stating the purpose, main results and conclusions of the dissertation research. Upon successful completion of the public and private defense, students should submit a hard copy of the bound dissertation to the MCB Graduate Programs Office as well as an electronic copy to the Registrar along with the other required exit surveys, fee for publication, and a signed, original Dissertation Acceptance Certificate, which may be obtained from the Graduate Office following successful completion of the dissertation. Detailed requirements on the dissertation are published in The Form of the PhD Dissertation, which is available online at www.gsas.harvard.edu.

**Teaching**

All graduate students in the Department of Molecular and Cellular Biology are required to teach at least two classes during their time in the PhD program. This requirement must be completed by the end of the G3 year. The intent is to make sure students receive two kinds of experience in teaching: a large undergraduate course with a good amount of independent section teaching and another course that is more discussion-based, containing more advanced material. Typically, students will teach one class in the fall of the G2 year and one class during the fall or spring of the G3 year, but it is up to the student in which semesters the requirement is fulfilled.

**Recent MCB Dissertation Titles (2012–13)**


Chung, Julia. Advisor: Kevin Eggan. “Manipulating Somatic Cells to Remove Barriers in Induced Pluripotent Stem Cell Reprogramming”

Fame, Ryann. Advisor: Jeffrey Macklis. “Molecular Controls over Developmental Acquisition of Diverse Cortical Projection Neuron Subtype Identities”

Gleason, Emily. Advisor: Elena Kramer. “Conserved genetic modules controlling lateral organ development: Polycomb Repressive Complex 2 and ASYMMETRIC LEAVES1 homologs in the lower eudicot Aquilegia (columbine).”

Lau, Derek. Advisor: Andrew Murray. “Dissecting Protein-protein Interactions that Regulate the Spindle Checkpoint in Budding Yeast”

Li, Jennifer. Advisor: Alex Schier. “Investigation of an Operant Learning Circuit by Whole Brain Functional Imaging in Larval Zebrafish”


Nannas, Natalie. Advisor: Andrew Murray. “Investigation of force, kinetochores, and tension in the Saccharomyces cerevisiae mitotic spindle”


Slenn, Tamara. Advisor: Johannes Walter. “The ubiquitin ligase CRL4Cdt2 targets thymine DNA glycosylase for destruction during DNA replication and repair”


Faculty

Howard C. Berg, Herchel Smith Professor of Physics; Professor of Molecular and Cellular Biology. Motile behavior of bacteria.

Briana Burton, Associate Professor of Molecular and Cellular Biology. Mechanisms of membrane-associated macromolecular transport machines.

Philippe Cluzel, Professor Molecular and Cellular Biology; Gordon McKay Professor of Applied Physics. Principles of biological signal integration in single cells; systems biology of the genetic code; transcriptional dynamics in single cells; and multi-drug resistance in bacteria.

David Cox, Assistant Professor of Molecular and Cellular Biology and of Computer Science. Biological and underpinnings of visual processing.

Victoria M. D’Souza, Associate Professor of Molecular and Cellular Biology. Structural biology of retrovirus replication.

Vladimir Denic, Associate Professor of Molecular and Cellular Biology. Mechanisms of membrane-associated cellular biological processes.

John E. Dowling, Llura and Gordon Grand Professor of Neuroscience; Professor of Ophthalmology (Neuroscience). Neurobiology; functional organization of the retina.

Catherine Dulac, Higgins Professor of Molecular and Cellular Biology; Howard Hughes Medical Institute Investigator. Molecular and developmental biology of olfactory and pheromone sensing.

Florian Engert, Professor of Molecular and Cellular Biology. Processing of sensory information and motor control in zebrafish.

Raymond L. Erikson, American Cancer Society Professor of Cellular and Developmental Biology. Reversible phosphorylation in cell proliferation.

Ethan C. Garner, Assistant Professor of Molecular and Cellular Biology. High resolution optical studies of prokaryotic cytoplasmic organization.

Rachelle Gaudet, Associate Professor of Molecular and Cellular Biology. Structural biology of signaling and transport through biological membranes.

William M. Gelbart, Professor of Molecular and Cellular Biology. Developmental genetics; genomics; bioinformatics.

Karine A. Gibbs, Assistant Professor of Molecular and Cellular Biology. Molecular mechanisms of social behavior in bacteria.

Guido Guidotti, Higgins Professor of Biochemistry. Structure and function of membrane proteins.

Takao Hensch, Professor of Molecular and Cellular Biology. Experience-dependent brain development; critical periods.

Hopi Hoekstra, Professor of Molecular and Cellular Biology; Professor of Organismic and Evolutionary Biology; Alexander Agassiz Professor of Zoology and Curator of Mammals in the Museum of Comparative Zoology. Howard Hughes Medical Institute Investigator. The genetic basis of adaptive morphology and behavior.

Craig P. Hunter, Professor of Molecular and Cellular Biology. Biogenesis, transport, and function of extracellular RNA.

Nancy Kleckner, Herchel Smith Professor of Molecular Biology. Chromosomes; motion, mechanics, DNA dynamics and spatial patterning.

Samuel Kunes, Professor of Molecular and Cellular Biology. Development of the nervous system, synaptic plasticity, and memory.

Andrew Leschziner, Associate Professor of Molecular and Cellular Biology. Structural biology of ATP-dependent chromatin remodeling and the molecular motor dynein.

Jeff Lichtman, Jeremy R. Knowles Professor of Molecular and Cellular Biology. Synthetic structure and competition.

Richard M. Losick, Maria Moors Cabot Professor of Biology; Howard Hughes Medical Institute Professor. Gene regulation and development in microorganisms.

Robert A. Luce. Professor of the Practice of Molecular and Cellular Biology; Director of Life Sciences Education. Life Sciences Education.

Susan Mango, Professor of Molecular and Cellular Biology. Developmental plasticity, epigenetics, and cell fate specification; environmental signaling in development.

Matthew S. Meselson, Thomas Dudley Cabot Professor of the Natural Sciences. Mechanisms of cell killing by ionizing radiation; population genetics of bdelloid rotifers.

Andrew W. Murray, Herchel Smith Professor of Molecular Genetics; Co-Director, Bauer Fellows Program. Chromosome segregation, yeast sex, and evolution.

Venkatesh N. Murthy, Professor of Molecular and Cellular Biology. Neuronal cell biology, neural circuits, and olfaction.

David R. Nelson, Arthur K. Solomon Professor of Biophysics; Professor of Physics and Applied Physics. Force-induced denaturation of DNA, sequence heterogeneity and the dynamics of motor proteins, population growth and mutation in disordered media.

Daniel L. Needleman, Assistant Professor of Applied Physics, Associate Professor of Applied Physics and of Molecular and Cellular Biology. Physical aspects of the organization and dynamics of subcellular structures.

Erin O’Shea, Paul C. Mangelsdorf Professor of Molecular and Cellular Biology and of Chemistry and Chemical Biology; Howard Hughes Medical Institute Investigator. Quantitative analysis of regulatory networks.

Sharad Ramanathan, Professor of Molecular and Cellular Biology and Gordon McKay Professor of Applied Physics. Signal processing and decision making.
Joshua Sanes, Jeff C. Tarr Professor of Molecular and Cellular Biology; Paul J. Finnegan Family Director, Center for Brain Science. Assembly and function of neural circuits in the visual system.

Vicki Sato, Professor of the Practice of Molecular and Cellular Biology; Professor of Management, Harvard Business School. Drug discovery and development; the creation of management of biotechnology business.

Alexander F. Schier, Leo Erikson Life Sciences Professor of Molecular and Cellular Biology. Developmental genetics and neurobiology.

Naoshige Uchida, Associate Professor of Molecular and Cellular Biology. Neurobiology of perception and decision making.

Affiliate Faculty

Kevin Eggan, Professor of Stem Cell and Regenerative Biology. Neural reprogramming, pluripotent stem cell technologies and the study of neurological disease.

Douglas A. Melton, Xander University Professor; Thomas Dudley Cabot Professor in the Natural Sciences; Howard Hughes Medical Institute Investigator. Developmental biology of the pancreas with the long-term aim of making insulin-producing beta cells for the treatment of diabetes.

Stuart L. Schreiber, Morris Loeb Professor of Chemical Biology; Howard Hughes Medical Institute Investigator. Chemical biology and the science of therapeutics.

Jack L. Strominger, Higgins Professor of Biochemistry in the Department of Stem Cell and Regenerative Biology. Molecular basis of immune recognition.

Gregory Verdine, Erving Professor of Chemistry in the Departments of Stem Cell and Regenerative Biology and of Chemistry and Chemical Biology. Structural biology, chemical biology; unconventional drugs for intractable targets; designed reprogrammers of cell states.
Biology, Organismic and Evolutionary

Harvard University offers graduate instruction in several areas of biology. The members of the Department of Organismic and Evolutionary Biology (OEB) share a common interest in understanding the structure, function, and variation of biological systems.

The research interests of the OEB faculty include the flow of energy and material through ecosystems, the development and structure of communities and populations, the diversity of plant, animal, and microbial groups, and the mechanisms that have permitted diversity to evolve. These studies span a wide range of spatial and temporal scales and include many different levels of biological organization.

A variety of theoretical, descriptive, and experimental approaches are used in the laboratory and field studies carried out by members of OEB. We have representation in anatomy, behavior, biogeochemistry, development, functional morphology, physiology, paleontology, population genetics, molecular evolution, systematics, and the biology of global change.

The Harvard University Herbaria and the Museum of Comparative Zoology (MCZ) house essential libraries, extensive natural history collections, and experimental laboratories that are utilized by faculty and students of the department. Other resources include the Concord Field Station of the MCZ, the Harvard Forest, and the Arnold Arboretum.

Admission

Students considering graduate work should request the GSAS Guide to Admission and Financial Aid from:

Office of Admissions and Financial Aid
Harvard Graduate School of Arts and Sciences
Holyoke Center 350
1350 Massachusetts Ave
Cambridge, MA 02138

We encourage online submission of the application. See www.gsas.harvard.edu.

Completed applications should be received by December 2 in order to be considered for admission for the coming year.

Although Harvard University awards both the AM and the PhD degrees in biology, the department will recommend for admission only candidates for the PhD degree.

Applicants should have the equivalent of seven full (two-term) courses in the fields of biology, chemistry, physics, mathematics, computer science, or geology; at least a third must be intermediate-level courses. GRE General scores are required. GRE subject scores are recommended. Foreign students should have first class honors degrees, recent TOEFL scores of at least 550, or hold a degree from an institution at which English is the language of instruction.

Financial Aid

The department has available financial support based both on merit and need. Ordinarily, students who are accepted into the program receive substantial financial aid. Stipends are typically composed of scholarships, teaching fellowships, and research assistantships. Students should submit the Statement of Financial Resources for Graduate Study at the time of their first application to the program. Ordinarily, the department does not provide scholarship or fellowship support beyond a period of six years.

Applicants are expected to seek fellowship support from sources outside the University. US citizens who have received fewer than 30 graduate-level credits are expected to apply for pre-doctoral fellowship opportunities provided by the National Science Foundation (NSF). Applications for NSF fellowships are typically due in the fall, and applicants may find application materials at www.nsf.gov.

Doctor of Philosophy (PhD)

A departmental Graduate Committee is responsible for all matters pertaining to OEB graduate students. It considers applicants for admission and approves all examination committees appointed for doctoral candidates.

Course selection (other than those prescribed; see Prescriptions) is determined by consultation between the advisor and student. During the first two years, satisfactory progress toward the degree requires fulfillment of the departmental teaching requirement, successful completion of at least 16 half-courses (with no more than 12 of these half-courses at the 300 level), completion of all prescribed courses with a grade of B- or better, and passing the qualifying examination (which should be held no later than the end of the second year). Thereafter, satisfactory progress is assessed by the student’s Dissertation Committee at an annual Dissertation Conference.

Academic Residence Requirements: A minimum of two years of full-time study is required to fulfill the residence requirements (16 half-courses passed with distinction). Research (300) courses taken under the direction of members of the Harvard faculty count toward fulfilling the academic requirements. These courses ordinarily require a minimum of ten hours per week (one-quarter TIME) for a minimum of a term. Full-time research (recognized as TIME by the Registrar) will generally not be accepted by the department as part of the academic requirement for a degree.

Research Advisor: Upon admission students will be assigned a faculty member in the department to serve as a dissertation research advisor. Students are encouraged to consult freely with any staff member on matters pertaining to their programs and may change to another advisor at any time, subject to the approval of the new advisor and the chair of the Graduate Committee and notification of the department office.

Students must have an advisor at all times and it is the student’s responsibility to ensure this. Any student who does not have an advisor at the beginning of a term must withdraw from the department at the end of that term if arrangements for a new advisor have not been made by that time.

Prescriptions: OEB has relatively few requirements, generally designed to ensure that incoming students have a broad background. They include: 1) college-level calculus; 2) statistics; 3) a reasonable combination of courses in cell biology, molecular biology, and genetics; and 4) courses on the biology (including lab work) of at least two kingdoms. If deficiencies in an applicant’s academic background warrant, courses may be prescribed by the Graduate Committee, and these will be identified at the time of the offer of admission. These courses may be completed prior to matriculation into the program, but they must be completed with a grade of B- or better prior to the student’s qualifying examination. Additionally, the Graduate Committee will determine from each student’s prior training and in discussion with the student and the advisor, an appropriate individual course of study to be completed by the qualifying exam. Each student will complete an orientation seminar program offered by various faculty in the department.

Teaching Requirement: The department requires each PhD candidate to participate in teaching for two terms at a minimum of one quarter TIME each term. The first of these is ordinarily fulfilled during the second year, and the second requirement is ordinarily fulfilled during the fourth year. Additional teaching assignments, if desired by the student, may be undertaken on recommendation of the individual course instructor.
Admission to Candidacy for the PhD Degree: After completion of 16 graded half-courses in biology and related subjects (300 level courses are included), the student’s record is reviewed by the Graduate Committee. Favorable action will provisionally admit the student to candidacy for the PhD degree. Final admission to candidacy is by means of the qualifying examination.

Qualifying Examination: This is an oral examination which shall be taken before the end of the second year of graduate study. Prescriptions must be satisfied prior to the examination. The Graduate Committee will review any petitions for exception.

The examination committee will consist of the student’s advisor acting as chair, plus three additional individuals. At least two of the additional members must be members of the OEB faculty and all must be faculty at Harvard University. A request may be made to the Director of Graduate Studies to allow faculty from another institution. The overall composition of the examination committee must be approved by the Director of Graduate Studies.

By the end of the fall term final exams of the student’s second year, the student, after consultation with his or her advisor, will submit to the Director of Graduate Studies and to the OEB departmental office a list of three broad and non-overlapping topics on which to be examined and the time and location of the examination. The topics should be pertinent to, but not be restricted to, the specific topic of the proposed or ongoing dissertation studies.

At least two weeks prior to the exam, students should present to the examination committee a dissertation proposal in the form of an NSF Dissertation Improvement grant or some similar document not exceeding ten pages in text, plus a syllabus outline for three potential courses that could be taught corresponding to the three topic areas. During the qualifying examination, the student’s knowledge of these topics will be appraised. In addition to this evaluation, the examination committee will determine whether the student has satisfactorily completed the prescribed studies decided upon earlier by the Prescription Committee.

If the qualifying examination reveals serious deficiencies, the committee may require 1) that the student be reexamined at a later date, or 2) that the student not be admitted to candidacy for the doctoral degree.

Dissertation Conference: In the dissertation conference, students have a relatively early opportunity to review with their advisor and the Dissertation Committee the dissertation project, its progress, and future potential. The dissertation conference should be held annually, with the first conference taking place in April of the student’s third year. The student should arrange the conference in March of the fourth year of study, and then in the month of February for all subsequent years. One month prior to the conference, a one-page abstract of proposed and/or completed work and the time and location of the conference should be submitted to the OEB departmental office. The student should present in person a brief account of the results obtained and plans for additional research. The committee should indicate to the student whether it anticipates that the dissertation will be acceptable, and should also suggest improvement where needed.

The Dissertation Committee will consist of the student’s advisor, who will serve as chair, and at least two other members suggested by the advisor and approved by the Director of Graduate Studies. At least three members of the committee must be members of the Department of Organismic and Evolutionary Biology.

Dissertation: The dissertation is written under the supervision of the student’s research advisor and will be read by members of the Dissertation Committee. Prior to the dissertation examination, the candidate will prepare a summary of the dissertation for distribution to the members of the committee. The final copies of the dissertation should conform to the standards outlined in The Form of the PhD Dissertation.

Public Presentation of Dissertation Research: All PhD degree candidates in OEB are required to present the subject matter of their dissertations in a seminar open to the general biological public within the University, and to which the members of the Dissertation Examination Committee and OEB faculty have been invited. This presentation shall take place sometime following the dissertation conference and prior to the dissertation examination.

Dissertation Examination: The dissertation examination, conducted orally, is usually held at least one month before the dissertation examinations are announced early in each academic term. At least two weeks before the date set for the public presentation/examination, the candidate will present the dissertation committee with at least two copies of the dissertation in final form (but not yet bound), and make available a third copy in the OEB office for review by other members of the faculty. After the dissertation examination has been held, the committee may decide that the candidate passes, fails, or passes on condition that specific changes be made in the dissertation.

Master of Arts (AM)

The Department of Organismic and Evolutionary Biology does not admit students whose sole purpose is to study for the master of arts degree. However, graduate students admitted to the any PhD program at Harvard University may apply for the AM degree if they fulfill the following requirements:

1) Six graded half-courses in the Department (or approved by the Director of Graduate Studies), with no grades lower than B- and an overall grade average of B or better.
2) At least three of the six courses must be at the 200 level.
3) At least two of the six courses must be at the 200 level.
4) TIME and 300-level courses will not ordinarily be accepted toward the AM degree.
5) AM candidates must submit a written paper based on original research conducted under the guidance of a faculty member in the department.

Participating Faculty and Their Research Interests

Arkhat Abzhanov, Associate Professor of Biology. Craniofacial development and evolution.

Andrew Biewener, Charles P. Lyman Professor of Biology and Director of Concord Field Station. Comparative biomechanics of mammalian and avian locomotion, and adaptive remodeling and design of musculoskeletal system.

Kirsten Bomblies, Assistant Professor of Organismic and Evolutionary Biology. Plant hybrid necrosis, adaptation and population patterns.

William H. Bossert, David B. Arnold Jr. Professor of Science. Mathematical biology, computer simulation of populations, analysis of animal communication, models of renal tubular function.

Colleen M. Cavanaugh, Edward C. Jeffery Professor of Biology. Symbiosis of bacteria in marine invertebrates from deep-sea hydrothermal vents, methane seeps, and coastal reducing sediments. Specific emphasis on characterization of metabolic and genetic capabilities of symbionts, evolutionary relationships with free-living bacteria, and co-evolution of host and symbiont.

Stacey A. Combes, Assistant Professor of Organismic and Evolutionary Biology. Physical foundation of diverse, natural flight behaviors.

Charles Davis, Professor of Biology and Curator of Vascular Plants. Plant diversity and evolution; phylogenetic reconstruction; floral evolution; horizontal gene transfer; biogeography.

Michael Manish Desai, Assistant Professor of Organismic and Evolutionary Biology and of Physics. Evolutionary dynamics and population genetics.

Programs of Study
Scott V. Edwards, Professor of Biology and Curator of Ornithology. Speciation, population genetics, and comparative genomics of birds and relatives.

Cassandra Extavour, Associate Professor of Biology. Evolution and development of the germ line and reproductive systems; comparative embryology of arthropods; developmental genetics of ovarian morphogenesis.

Brian D. Farrell, Professor of Biology and Curator of Entomology in the Museum of Comparative Zoology. Macroevolution of interspecific interactions, particularly between insects and plants.

David R. Foster, Senior Lecturer on Biology and Director of the Harvard Forest. Plant community ecology, especially vegetation dynamics and the role of disturbance in forest ecosystems.

Peter Girguis, John L. Loeb Associate Professor of the Natural Sciences. Anaerobic methane oxidation and hydrocarbon seep microbiomes.

Gonzalo Giribet, Professor of Organismic and Evolutionary Biology. Molecular and morphological evolution and systematics of invertebrates.

David Haig, George Putnam Professor of Organismic and Evolutionary Biology. Evolutionary theory; intragenomic conflicts; parent-offspring relations.

James Hanken, Professor of Biology, Alexander Agassiz Professor of Zoology, Director of the Museum of Comparative Zoology. Organismal evolution; morphology, systematics, and the developmental basis of evolutionary change.

Daniel L. Hartl, Higgins Professor of Biology. Molecular evolution; transposable elements; genome mapping.

Hopi E. Hoekstra, Alexander Agassiz Professor of Zoology; Professor of Organismic and Evolutionary Biology; Professor of Molecular and Cellular Biology; Curator of Mammals in the Museum of Comparative Zoology. Generation and maintenance of variation in natural populations, with a particular emphasis on the role of natural selection in shaping adaptive genetic and phenotypic variation.

N. Michele Holbrook, Charles Bullard Professor of Forestry. Whole-plant physiology; coordination of hydraulic and stomatal control over water flux through plants; plant biomechanics.

Farish A. Jenkins Jr., Alexander Agassiz Professor of Zoology, Professor of Anatomy, Professor of Biology and Curator in Vertebrate Paleontology in the Museum of Comparative Zoology. Comparative anatomy of fossil and recent vertebrates and the evolutionary pathways of structural and functional development.

Andrew H. Knoll, Fisher Professor of Natural History and Curator of Paleobotanical Collections in the Harvard University Herbaria. Evolution of photosynthetic organisms in geological time.

Elena Kramer, Professor of Organismic and Evolutionary Biology. Evolution of genetic mechanisms controlling floral development, effects of gene duplication on the rates and patterns of both sequence and functional divergence.

Arthur L. Lage, Associate Professor of Veterinary Medicine in the Department of Surgery, Director of Animal Resources in the Faculty of Arts and Sciences. Biology of the urinary system, with special emphasis on comparative aspects of lower tract morphology and function.

George V. Lauder, Professor of Biology and Alexander Agassiz Professor of Zoology in the Museum of Comparative Zoology. Evolutionary biomechanics of vertebrates, and theoretical approaches to organismal form and function.

Daniel E. Lieberman, Professor of Anthropology (biological anthropology). Functional and developmental morphology, craniofacial anatomy, history and phylogenetic analysis of human evolution; Middle East and Africa.

Jonathan Losos, Monique and Philip Lehner Professor for the Study of Latin America. Integrative studies of ecology, behavior, morphology in a phylogenetic context; community, behavioral, and functional ecology; phylogenetic analysis; macroevolutionary diversification.

Lakshminarayanan Mahadevan, Gordon McKay Professor of Applied Mathematics and Mechanics. The applications of mathematics to understand the mechanical behavior of matter in all its forms, but with a particular emphasis on soft materials and biological systems.

Christopher Marx, Associate Professor of Biology. Experimental evolution of microbes to address broad evolutionary and ecological questions and the optimization of complex biological networks.

James J. McCarthy, Professor of Biological Oceanography and Alexander Agassiz Professor of Biological Oceanography. Studies include the processes of primary production and nutrient supply to the upper ocean.

Paul R. Moorcroft, Professor of Organismic and Evolutionary Biology. Effects of demographic and competitive processes within terrestrial plant communities on large-scale ecosystem dynamics.

Martin A. Nowak, Professor of Biology and Professor of Mathematics. Theoretical biology; somatic evolution of cancer.

Bence Olveczky, Assistant Professor of Biology. Understanding the neural circuit mechanisms underlying complex motor behaviors.

Donald H. Pfister, Asa Gray Professor of Systematic Botany and Curator of the Farlow Library and Herbarium. Anatomy, morphology, and classification of the Discomycetes, a group of Ascomycetes.

Naomi E. Pierce, Sidney A. and John H. Hessel Professor of Biology and Curator of Lepidoptera in the Museum of Comparative Zoology. Behavioral ecology, focusing on species interactions such as insect/host plant associations and symbioses between insects and other organisms.

Anne Pringle, Associate Professor of Organismic and Evolutionary Biology. Ecological genetics and mycology, mutualism, individuality and altruism, ecology of sex, invasion biology and the utility of biodiversity.

Andrew Richardson, Assistant Professor of Organismic and Evolutionary Biology. Forest ecology, the carbon cycle, phenology, and broader impacts of global change on terrestrial ecosystems.

Maryellen Ruvolo, Professor of Anthropology (biological anthropology). Molecular evolution of adapted genes in humans and other primates, primate genomics.

Pardis Sabeti, Assistant Professor of Organismic and Evolutionary Biology. Computational methods and genomics to understand mechanisms of evolutionary adaptation in humans and pathogens.

John Wakeley, Professor of Organismic and Evolutionary Biology. Theoretical population genetics and molecular evolution, with a focus on the analysis of DNA sequence data.

Robert M. Woollacott, Professor of Biology and Curator of Marine Invertebrates in the Museum of Comparative Zoology. Biology of marine invertebrate larvae, including anatomy, physiology, substrate selection, and metamorphosis.

Yun Zhang, Associate Professor of Biology. Neural circuits and regulation of behaviors.
PhD Degree in Biophysics

Introduction to Program and Program Rationale
The primary objective of the Biophysics Program at Harvard University is to prepare investigators with diverse backgrounds for independent research careers in which the concepts and methods of physical science are applied to biological problems. The program is administered by the Committee on Higher Degrees in Biophysics, which is comprised of senior representatives from the Departments of Biological Chemistry and Molecular Pharmacology; Molecular and Cellular Biology; Chemistry and Chemical Biology; Physics; Genetics and Pathology. Owing to the interdepartmental nature of the program, research may be pursued on the Cambridge campus (in the Departments of Molecular and Cellular Biology; Chemistry and Chemical Biology; Physics; the School of Engineering and Applied Sciences; etc.) or the Boston campus (including the Harvard Medical School, Division of Medical Sciences, and the 11 Harvard-affiliated teaching hospitals, which include the Dana-Farber Cancer Institute, Brigham and Women’s Hospital, Children’s Hospital, Massachusetts General Hospital, and the Beth Israel Deaconess Hospital).

The goal of the biophysics program is to nurture independent, creative scientists. To this end, the first part of the program seeks both to introduce the student to the faculty members and their research directly, enabling the student to make a considered choice of research advisor, and to involve the student in the diverse areas of biophysics through laboratory as well as coursework. This first two years provides a background for the second part of the program: the training of the student to be an independent scientist by a period of intensive research, culminating in publications and the PhD degree.

Admissions Requirements

Admissions and Scholarships
Information on applications for admission and financial aid may be requested from the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center, 3rd floor, 1350 Massachusetts Avenue, Cambridge, MA 02138.

Online submission of the application is required. See www.gsas.harvard.edu.

Applicants should state clearly in this application their desire to enter the program for the PhD degree in biophysics. All prospective students are urged to file the application forms well in advance of the deadline in early December. Late applications will not be considered. Scores on the general Graduate Record Examination (GRE) are required except in special circumstances. GRE subject tests are recommended. Due to the early application deadline, applicants should plan to take GRE tests no later than October to ensure that original scores are received by the December deadline. TOEFL is required of all foreign applicants other than those whose native language is English.

Final decisions concerning admission are made by the dean of the Graduate School of Arts and Sciences and the candidates are notified by letter from the Admissions Office. After being accepted for admission, applicants are encouraged to make arrangements with the administrator of the Committee on Higher Degrees in Biophysics, Building C2, Room 122, 240 Longwood Avenue, Boston, MA 02115, (617-495-3360) to visit the University.

Students with the MD Degree
Students who already have the MD degree will find an opportunity to improve their knowledge of basic science in either of two ways:

1. Opportunities may be available in the several departments to engage in investigations as a research fellow under the direction of a member of the faculty. No university credit toward a degree is given for such work. Questions concerning the appointment of research fellows should be directed to the faculty members.
2. Under special circumstances, students who have received the MD degree may become candidates for the PhD degree in biophysics, providing their qualifications for admission are approved and providing they are prepared to fulfill the normal requirements for the degree.

Combined MD-PhD Program

Students admitted to Harvard Medical School, as candidates for the MD degree, may also apply for admission to the biophysics program in order to earn a PhD degree in biophysics. This program may be of particular interest to prospective medical students with a strong background in physics and to students enrolled in the Harvard-MIT Division of Health Sciences and Technology. Applications to the biophysics program happen in the fall of the second year of an MD-PhD student’s tenure.

Suggested Undergraduate Preparation

The large list of courses below would provide an ideal background for a student’s coursework in specialized areas of biophysics. No undergraduate major would have taken all these courses in college, so this list is only provided as an overall guideline. Harvard course numbers are provided for further reference.

Math
Introduction to Calculus and Calculus, Series & Differential Equations (Math 1a and Math 1b)
Multivariable Calculus and Linear Algebra and Differential Equations (Math 21a and 21b)
Advanced Calculus
Complex Function Theory (Math 113)
Data Structures and Algorithms (Computer Science 124)

Physics
Introductory Mechanics and Relativity (Physics 15a)
Introductory Electromagnetism (Physics 15b)
Wave Phenomena (Physics 15c)
Quantum Mechanics I and II (Physics 143a and 143b)
Introduction to Biophysics

Chemistry
Organic Chemistry (Chem 20 and Chem 30)
Physical Chemistry and Statistical Thermodynamics (Chem 160 and 161)
Principles of Organic Chemistry (Chem 17)

Biology
Evolutionary Biology (OEB 53)
Cell Biology (MCB 54)
Physical Properties of Macromolecules (MCB 56)
Neurobiology of Behavior (MCB 80)

Biochemistry
Molecular Biology (MCB 52)
An Integrated Introduction to the Life Sciences: Chemistry, Molecular Biology, and Cell Biology (Life Sciences 1a)
An Integrated Introduction to the Life Sciences: Genetics, Genomics, and Evolution (Life Sciences 1b)

Advice to International Students

Students from non-US countries who are continuing their studies at Harvard, or who are applying for admission to the University, should communicate with the Harvard International Office, 1350 Massachusetts Avenue, Room 851, Cambridge, MA 02138, which is especially designed to help and advise international students. The immigration and naturalization laws specify many complex legal requirements affecting the status of international students and scholars during their period of study in the United States. The office is prepared to furnish information to aliens on visa requirements, permissible employ-
ment, income tax liabilities, and many other official restrictions in effect under existing laws of the United States.

Financial Aid
All students accepted into the program are awarded full support, including a stipend, full tuition, and health fees contingent on continued satisfactory progress. Teaching fellowships are available. Second-year students must teach one term as part of their academic requirements. Students are responsible for finding their own teaching position in any one of the participating science departments. Students in their third year and beyond and who are engaged in full-time research become the financial responsibility of their faculty mentors.

Students are encouraged to apply for external fellowships, such as those administered by the National Science Foundation, the National Defense Science and Engineering Fellowship, and the National Institutes of Health, or other foundations, such as the Hertz and Ford Foundations, which are available on a competitive basis to graduate students in biophysics. Applications for those fellowships should be made directly to the appropriate agencies.

Certain limited funds are available as beneficiary aid, distributed by the deans of GSAS to students in the form of gifts or loans to meet unexpected financial needs. Information on loans and beneficiary aids may be obtained from GSAS.

Program of Study
Most graduates of the biophysics program at Harvard have been undergraduate majors in physics or physical chemistry, though a few have come from biology. Consequently, the course requirements for admission are flexible. Each student’s program of graduate study is planned in consultation with a faculty advisor. The degree program is designed to be completed in a maximum of six years.

The first year’s training in the biophysics program provides an introduction to five diverse areas of biophysics: 1) structural molecular biology; 2) cell and membrane biophysics; 3) molecular genetics; 4) physical biochemistry; and 5) neurosciences. The curriculum includes learning experiences in a laboratory environment as well as coursework. The program is flexible and special effort has been devoted to minimizing formal requirements.

The laboratory experience is organized as a full course, Biophysics 300. In the first ten weeks of the fall term, faculty members associated with the biophysics program give seminars describing the current research interests of their own laboratories. Following this, a student spends six-week periods in each of three different laboratories. The list under Participating Faculty and Their Special Fields names some of our professors who currently support biophysics rotation students. In order to make sure that the student gains familiarity with several fields of biophysics, each of the three laboratory experiences usually is selected from a different one of the areas of biophysics listed above. It will also be possible to work on a suitable problem in mathematical biophysics in place of one of the three laboratory rotations.

Biophysics 170, Quantitative Genomics, an in-depth study of genomics: models of evolution and population genetics; comparative genomics: analysis and comparison; structural genomics: protein structure, evolution and interactions; functional genomics, gene expression, structure and dynamics of regulatory networks.

Biophysics 205, Computational and Functional Genomics, Experimental functional genomics, computational prediction of gene function, and properties and models of complex biological systems. The course will primarily involve critical reading and discussion rather than lectures.

Biophysics 242, Special Topics in Biophysics, a required course, invites two or more professors in the spring term to speak on new areas of their own research, thereby introducing students to new questions and methods of research that would not normally be accommodated by the regular curriculum. Past topics have included structure and function of DNA; oncogene products; two-dimensional nuclear magnetic resonance; RNA structure and function; diffusion; atomic interactions in protein-ligand interactions; analysis and design of novel protein-protein and protein-ligand interactions based on 3D structural information; structure/function relationships in peptide antibiotics; biological interactions at surfaces; enzyme-catalyzed redox reactions: catalysts and cofactors; molecular neurobiology and systems neurosciences; conceptual foundations and recent developments in computational biology, genomics, and macromolecular interactions; new biology through physics: molecular discoveries with light; information theory and neural systems; X-ray and electron crystallography and high-resolution light microscopy; computational and functional genomics; molecular motors, exploring advanced imaging techniques; and brain, behavior, and biophysics.

In addition to these courses, each student normally takes one course in each of the five biophysics areas mentioned previously. Most coursework is completed within the first two years.

A student may also gain knowledge in a particular area by taking reading courses or by studying independently while registered for TIME.

Courses in Biophysics and Related Fields
Courses in the following list have been divided roughly into the five areas plus mathematical biophysics. However, the list is not all-inclusive; further offerings for any given term may be found in the Harvard University list of Courses of Instruction.

Structural Molecular Biology
Chemical Biology (Chemistry 170)
Molecular Biology (BCMP 200)
Proteins: Structure, Function and Catalysis (BCMP 201)
Macromolecular NMR (BCMP 228)
Advanced Organic Synthesis and Reactions (Chemistry 207)
Dynamic and Stochastic Processes in Cells (Systems Biology 200)
Structural Biology of the Flow of Information in the Cell (MCB 156)
Molecular Biology of the Bacterial Cell (Microbiology 201)
Mechanisms of Microbial Pathogenesis (Microbiology 203)

Molecular Genetics
Molecular Genetics of Neural Development and Behavior (MCB 129)
Computational and Functional Genomics (Biophysics 205)
Bioregulatory Mechanisms (MCB 155)
Principles of Genetics (Genetics 201)

Physical Biochemistry
Human Disease (Chemistry 185)
Physical Chemistry (Chemistry 160)
Frontiers in Biophysics (Chemistry 163)
Topics in Biophysics (MCB 212)
Quantum Mechanics for physical Chemistry (Chemistry 242)
Statistical Thermodynamics (Chemistry 161 or Chemistry 240)
Experimental Physical Chemistry (Chemistry 165)

Cell and Membrane Biophysics
Molecular and Cellular Immunology (MCB 169)
Biochemistry of Membranes (MCB 176)
Molecular Biology of the Cell (Cell Biology 201)
Biology of the Cancer Cell (Cell Biology 212)
Molecular and Systems Level Cancer Cell Biology (Cell Biology 211)

Mathematical Biophysics
Complex and Fourier Analysis (Applied Mathematics 104)
Ordinary and Partial Differential Equations (Applied Mathematics 105)
Methods of Analysis (Math 115)
Physiological Systems Analysis (Eng. Sci. 145)  
Nonlinear Dynamical Systems (Applied Mathematics 147)  
Statistics for Biology (OEB 153)  
Signals and Systems (Eng. Sci. 156)  
Physical Mathematics I, II (Applied Mathematics 201, 202)  
Mathematical Modeling (Applied Mathematics 115)  
Mathematics in Biology (MCB 111)

Neurosciences
Cellular Basis of Neuronal Function (MCB 115)  
Molecular Neurobiology (MCB 141)  
Introduction to Neurobiology (Neurobiology 200)  
Neurophysiology of Central Circuits (Neurobiology 204)  
Molecular Neurobiology (Neurobiology 221)  
Systems Neuroscience (MCB 105)

Formal Academic Requirements
The academic requirement for the PhD degree consists of not less than two years—at least one of which must be in residence at the Harvard Graduate School of Arts and Sciences—devoted to advanced studies approved as suitable preparation for the degree by the Committee on Higher Degrees in Biophysics. In estimating the extent of a candidate’s study for the degree, the advanced work done in other graduate departments of Harvard or of other universities will be considered. A year’s work for a resident student normally consists of four courses (eight half-courses) of advanced grade. Under certain conditions summer courses taken at the Marine Biological Laboratory in Woods Hole may be counted for credit toward the degree.

The biophysics program anticipates completion of formal course studies in the first two years.

Languages. There is no language examination but students are encouraged to gain a reading knowledge of one foreign language, preferably selected from German, Russian, and French.

Dissertation Qualifying Examination. Before beginning dissertation research, it is normally necessary for the student to fulfill the following requirements: (1) pass one Harvard course within the subject areas listed above; (2) do satisfactory work in three laboratory rotations; and (3) submit and defend an original research proposal. The purpose of the oral defense of the qualifying research proposal is to ensure that the student is adequately prepared to embark on dissertation research. The exam is normally taken in the fourth term of residence, before the chair and three examiners knowledgeable in the field of the research proposal. Reexamination will be permitted. As a rule, students will not be permitted to enter the third year of graduate study unless the qualifying examination has been passed.

Dissertation. Selection of a dissertation advisor normally occurs in a student’s second year of study. Independent research on one’s dissertation technically begins once the qualifying examination is successfully completed.

The program policy is that all students who have successfully completed their qualifying exam promptly establish their Dissertation Advisory Committee (DAC). The DAC has several functions. The first will be to approve the student’s dissertation proposal. Second, the DAC, in consultation with the dissertation advisor, will periodically evaluate the progress of the student’s dissertation research. The DAC may make recommendations to the dissertation advisor as well as the student with regard to the student’s progress towards completion of the dissertation. Third, the DAC, in consultation with the dissertation advisor, will determine at what point the student is ready to defend his or her dissertation.

It is expected that the preparation of a dissertation will usually require full-time research for not less than one-and-a-half years after the qualifying examination. The dissertation must give evidence of independent original research and be clearly, logically, and carefully written in good English. The final manuscript must conform to the requirements described in The Form of the PhD Dissertation.

On receipt of the dissertation, the chair of the Committee on Higher Degrees in Biophysics will appoint a reading committee of three to judge the dissertation. The dissertation defense is comprised of two parts: the public seminar and the private defense. In the private defense the candidate will be questioned on the subject of the dissertation and its relation to the student’s special field and collateral subjects. If the reading committee is unable to agree on its recommendations, the question of the acceptance of the dissertation will be decided by the Committee on Higher Degrees in Biophysics.

Upon completion of all the requirements, the original bound dissertation, with the dissertation acceptance certificate signed by the reading committee, will be submitted to the Office of the Registrar of the Graduate School both electronically and in hard-copy, for inspection by any member of the Faculty of Arts and Sciences.

After Commencement, an original bound copy will be deposited in the Harvard Library, open to public inspection. A second bound copy will be kept by the committee chair, and a third bound copy will be kept by the department in which the student worked.

Selected PhD Dissertation Titles
Ashley Gibbs Bischof (2013). “Extracellular Matrix as a Key Mediator of Mammary Tumor Cell Normalization”


Alison Lynn Hill (2013). “Dynamics of HIV Treatment and Social Contagion”


Nilah Monnier (2013). “Bayesian Inference Approaches for Particle Trajectory Analysis in Cell Biology”


Participating Faculty and Their Special Fields
The following is a partial list of faculty members who will accept students for degree work in biophysics, with their special fields of research and instruction indicated. More than 80 members of the Harvard faculty are currently affiliated with the biophysics program; dissertation research with other faculty members is possible by arrangement. A more complete listing is available.

James M. Hogle, PhD, Edward S. Harkness Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School; Chair, Committee on Higher Degrees in Biophysics. 

Frederick Michael Ausubel, PhD, Professor of Genetics, Harvard Medical School. Molecular biology of bacterial pathogenesis in plants and animals.

Brian J. Bacsukai, PhD, Associate Professor of Neurobiology, Harvard Medical School. Mechanisms of visual processing in the visual cortex of awake behaving monkeys.

Howard C. Berg, PhD, Herchel Smith Professor of Physics and Professor of Molecular and Cellular Biology. Motile behavior of bacteria.
Stephen C. Blacklow, MD, PhD, Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. Biophysics of receptor-ligand interactions.

Martha L. Bulyk, SB, PhD, Associate Professor of Medicine and Health Sciences and Technology, Harvard Medical School. Functional and computational genomics studies of transcription factors and cis regulatory elements.

James J. Chou, PhD, Associate Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. NMR spectroscopy on membrane-associated proteins and peptides.

George M. Church, PhD, Professor of Genetics, Harvard Medical School. Human and microbial functional genomics, genotyping, and gene expression regulatory network models.

L. Stirling Churchman, PhD, Assistant Professor of Genetics, Harvard Medical School. Regulation of the RNA polymerase motor mechanism In Vivo.

David E. Clapham, MD, PhD, Aldo R. Castaneda Professor of Cardiowascular Research and Professor of Neurobiology, Harvard Medical School. Imaging, optics, and biology.

Jon C. Clardy, PhD, Professor of Biological Chemistry and Molecular Pharmacology. Small molecule signaling, biosynthesis, and drug discovery.

Adam E. Cohen, PhD, Assistant Professor of Chemistry and Chemical Biology and of Physics. Analysis of structure and function of nicotinic acetylcholine receptors.

Jonathan B. Cohen, PhD, Professor of Neurobiology, Harvard Medical School. Structure and function of ligand-gated ion channels.

David P. Corey, PhD, Professor of Neurobiology, Harvard Medical School. Biophysics of mechanosensation.

Vladimir Denic, PhD, Assistant Professor of Molecular and Cellular Biology. Structural diversification of very longchain fatty acids.

Michael M. Desai, PhD, Assistant Professor of Organismic and Evolutionary Biology and of Physics, Harvard University. Theoretical and experimental approaches to study genetic variation within populations.

Michael J. Eck, MD, PhD, Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. Structural studies of proteins involved in signal transduction pathways.

Florian Engert, MA, PhD, Professor of Molecular and Cellular Biology. Synaptic plasticity and neuronal networks.

Raymond Leo Erikson, PhD, American Cancer Society Professor of Cellular and Developmental Biology. Protein kinases, reversible protein phosphorylation.

Conor L. Evans, PhD, Assistant Professor of Dermatology, Harvard Medical School. Development and application of optical detection, treatment and monitoring approaches targeting major human diseases.

Rachelle Gaudet, PhD, Associate Professor in Molecular and Cellular Biology. Structural studies of the stereochemistry of signaling and transport through biological membranes.

David Golan, MD, PhD, Professor of Biological Chemistry and Molecular Pharmacology and Medicine, Harvard Medical School. Membrane dynamics; membrane structure; cellular adhesion.

Jene A. Golovchenko, PhD, Gordon McKay Professor of Applied Physics and Rumford Professor of Physics. Probing polymers with nanotopes, experimental condensed matter physics.

Stephen Coplan Harrison, PhD, Professor of Biological Chemistry and Molecular Pharmacology. Structure of viruses and viral membranes; protein-DNA interactions; X-ray diffraction.

Sun Hur, PhD, Assistant Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. Elucidating the principles of self vs non-self RNA discrimination by the immune system.

Donald E. Ingber, MD, PhD, Judah Folkman Professor Vascular Biology, Harvard Medical School. Research in integrin signaling, cytoskeleton, and control of angiogenesis.

David Jeruzalmi, BS, M.Phil, PhD, Associate Professor in Molecular and Cellular Biology. Structural studies of nucleo-protein assemblies.

Tomas Kirchhausen, PhD, Professor of Cell Biology, Harvard Medical School. Molecular mechanisms of membrane traffic, x-ray crystallography; chemical genetics.

Roy Kishony, PhD, Professor of Systems Biology, Harvard Medical School. Systems-level genetic networks.

Nancy Elizabeth Kleckner, PhD, Herchel Smith Professor of Molecular Biology, Harvard Medical School. Chromatin biology of ATP-dependent chromatin remodeling.

Galit Lahav, PhD, Associate Professor of Systems Biology, Harvard Medical School. Dynamics of network motifs in single living human cells.

Andres E. Leschziner, PhD, Assistant Professor of Molecular and Cellular Biology. Structural biology of ATP-dependent chromatin remodeling.

Erel Levine, PhD, Assistant Professor of Physics. Communication of information in and between cell and organisms.

David R. Liu, PhD, Professor of Chemistry and Chemical Biology. Amplifiable and evolvable unnatural molecules; natural molecule evolution; engineering of synthetic and biological molecules.

Jun Liu, BS, PhD, Professor of Statistics. Statistical theory and inference for stochastic processes; applications to bioinformatics.

Joseph J. Loparo, PhD, Assistant Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. Developing novel single-molecule methods to study multi-protein complexes.

Jarrod A. Marto, PhD, Assistant Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. Quantitative proteomics of cancer progression.

Keith Wyatt Miller, DPhil, Mallinckrodt Professor of Pharmacology, Department of Anaesthesia, Harvard Medical School. Characterization of lipid-protein interactions; regulatory confirmation changes and molecular mechanisms of drug action on ion channels from nerve membranes using rapid kinetics and spectroscopy (EPR, NMR, and FTIR).

Timothy Mitchison, PhD, Hasib Sabbagh Professor of Systems Biology, Harvard Medical School. Cytoskeleton dynamics; mechanism of mitosis and cell locomotion; small molecule inhibitors.

Andrew W. Murray, PhD, Herchel Smith Professor of Molecular Genetics. Regulation of mitosis.

Venkatesh N. Murthy, PhD, Professor of Molecular and Cell Biology. Mechanisms of synaptic transmission and plasticity.

Daniel J. Needleman, PhD, Assistant Professor of Applied Physics. Physics of macromolecular assemblies and subcellular organization.

Bence P. Olveczky, PhD, Assistant Professor of Organic and Evolutionary Biology, Neurobiology of vocal learning.

Erin K. O’Shea, PhD, Professor of Molecular and Cellular Biology. Systems level and molecular analysis of signaling pathways, transcriptional regulation, and methods for expressing and assaying the proteins derived from an organism.

David S. Pellman, MD, Professor of Cell Biology, Harvard Medical School. The mechanics and regulation of mitosis.

Mara Prentiss, PhD, Mallinckrodt Professor of Physics. Exploitation of optical manipulation to measure adhesion properties, including virus cell binding.

Sharad Ramanathan, PhD, Assistant Professor of Molecular and Cellular Biology. Decision making in Cells and Organisms.
Tom A. Rapoport, PhD, Professor of Cell Biology, Harvard Medical School. Mechanism of how proteins are transported across the endoplasmic reticulum membrane.

Samara L. Reck-Peterson, PhD, Assistant Professor of Cell Biology, Harvard Medical School. Molecular mechanism of dynein function in normal and diseased states.

Gary Ruvkun, PhD, Professor of Genetics, Harvard Medical School. Genetic control of developmental timing, neurogenesis, and neural function.

Bernardo L. Sabatini, BS, PhD, MD, Takeda Professor of Neurobiology, Harvard Medical School. Regulation of synaptic transmission and dendritic function in the mammalian brain.

Aravinthan D.T. Samuel, PhD, Professor of Physics. Behavioral neuroscience and neurophysiology.

Stuart Schreiber, PhD, Morris Loeb Professor of Chemistry and Chemical Biology. Forward and reverse chemical genetics: using small molecules to explore biology.

Brian Seed, PhD, Professor of Genetics, Harvard Medical School. Genetic analysis of signal transduction in the immune system.

Jagesh V. Shah, PhD, Assistant Professor of Systems Biology, Assistant Professor of Health Sciences and Technology, and Assistant Professor of Medicine, Harvard Medical School. Quantitative models of cellular behavior to investigate protein function.

Eugene Shaknovich, PhD, Professor of Chemistry and Chemical Biology. Theory and experiments in protein folding and design; theory of molecular evolution; rational drug design and physical chemistry of protein-ligand interactions; theory of complex systems.

William M. Shih, PhD, Associate Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. Biomolecular nano-technology.

Steven E. Shoelson, MD, PhD, Professor of Medicine, Harvard Medical School. Structural and cellular biology of insulin signal transduction.

Pamela Silver, PhD, Professor of Systems Biology, Harvard Medical School. Dynamics of the nucleus, regulation of nuclear transport and partitioning of nuclear components during cell division. Systems cell biology.

Timothy A. Springer, PhD, Latham Family Professor of Pathology, Harvard Medical School. Biophysics of cell adhesion and vascular shear flow.

Hanno Steen, PhD, Assistant Professor of Pathology, Harvard Medical School. Cell cycle studies using mass spectrometric and proteomic technology.

Shamil R. Sunyaev, PhD, Associate Professor of Medicine and Health Sciences and Technology, Harvard Medical School. Computational methods in genetics, genomics, and proteomics.

Jack W. Szostak, PhD, Professor of Genetics, Harvard Medical School. Directed evolution; information content and molecular function; self-replicating systems.

Naoshige Uchida, PhD, Associate Professor of Molecular and Cellular Biology. Sensory Information in neuronal processes.

Gregory Verdine, PhD, Erving Professor of Chemistry in the Department of Stem Cell and Regenerative Biology. Protein-nucleic acid interactions; transcriptional regulation; x-ray crystallography.

Gerhard Wagner, PhD, Elkan Blout Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. Protein and nucleic acid structure, interaction and mobility; NMR spectroscopy.

John R. Wakeley, BS, MS, PhD, Professor of Organismic and Evolutionary Biology. Theoretical population genetics.

Ronald L. Walsworth, PhD, Senior Lecturer on Physics. Experimental atomic physics, biophysics, and soft matter physics.

Johannes C. Walter, PhD, Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. Maintenance of genome stability in S phase.

Thomas Walz, PhD, Professor of Cell Biology, Harvard Medical School. High-resolution electron microscopy.

George Whitesides, PhD, Woodford L. and Ann A. Flowers University Professor. Rational drug design; biomaterials science and biophysics.

Kai W. Wucherpfennig, MD, PhD, Professor of Neurology, Harvard Medical School. Basic mechanisms of T cell mediated autoimmune diseases.

Xiaoliang Sunney Xie, PhD, Mallinckrodt Professor of Chemistry and Chemical Biology. Single molecule spectroscopy and dynamics and molecular interaction and chemical dynamics in biological systems.

Gary I. Yellen, PhD, Professor of Neurobiology, Harvard Medical School. Molecular physiology of ion channels: functional motions, drug interactions, and electrophysiological mechanisms.

Xiaowei Zhuang, BS, MS, PhD, Professor of Chemistry and Chemical Biology and of Physics. Single-molecule biophysics.
Chemical Biology

Introduction to Program

Chemical biology is a rapidly growing field that combines the rigor and quantitative aspects of traditional chemistry and biochemistry programs with the excitement and medical relevance of modern molecular, cellular, organismic, and human biology. We believe that many biological problems demand molecular and quantitative answers that can only be supplied by tools and approaches derived from chemistry — such as single-molecule measurements, single-cell imaging, and the use of exogenous molecules to modulate the activity of cellular components. The integration of chemistry, biology, and medicine has become an integral and essential aspect of the training and research culture at Harvard, and this spirit is embodied in the Chemical Biology Program.

The Program links together faculty on Harvard’s Cambridge campus (Faculty of Arts and Sciences, or FAS) with faculty at Harvard Medical School (HMS) and the Harvard-MIT Broad Institute. Labs at the Chemistry Department offer world-class expertise in molecular design, analytical chemistry and physical chemistry, while labs at HMS have outstanding strengths in natural product chemistry, drug discovery, and the use of chemical tools to probe biological systems. The chemical biology faculty at HMS are embedded in arguably the richest concentration of biomedical expertise in the world; and the Broad Institute leads the world in the development of technology to exploit the uses of genomic information, including chemical technologies. Students in the Program are encouraged to take full advantage of this remarkable breadth of opportunity by working with faculty to devise novel approaches to important biological, medical and chemical problems.

While the list of program faculty is large and diverse, the Program itself is small, flexible and intimate. Our goal is to encourage students to develop their own ideas, drawing on the expertise available in the community to make exciting new discoveries.

For more information, please visit http://chembio.med.harvard.edu.

Admissions Requirements

The typical student has a strong background in one of the disciplines relevant to Chemical Biology and a strong interest in interdisciplinary research. Scores on the general Graduate Record Examination (GRE) are required and one subject GRE in a relevant field is recommended. TOEFL is required of all foreign applicants other than those whose native language is English.

Online submission of the application is required. Please refer to the GSAS Admissions page for further information on applying: www.gsas.harvard.edu/prospective_students/admissions.php. Students should request information from admis@fas.harvard.edu.

A number of candidates will be invited to interview in mid-February. Final decisions concerning admission are made by the dean of the Graduate School of Arts and Sciences, and the candidates are notified by letter from the Admissions Office.

Degree Requirements

Coursework

Incoming students will meet individually with the co-directors to discuss their background and interests. Co-directors will assist each student in developing a personalized curriculum and deciding on laboratory rotations which will complement the student’s existing training.

Students are required to take CB300: Introduction to Chemical Biology Research; Chem170: Chemical Biology; CB2200: Introduction to Chemical Biology; BCMP309: Principles of Drug Action in Man; BCMP207: Molecular Approaches to Drug Action, Discovery and Design; MedSci 300: Conduct of Science; and three additional courses chosen in consultation with the program co-directors. These courses must be passed with a B average or better.

Chemistry 170. Chemical Biology.

Applying chemical approaches to problems in biology. Topics include: protein engineering and directed evolution; RNA catalysis and gene regulation; chemical genetics, genomics, and proteomics; drug action and resistance; rational and combinatorial approaches to drug discovery; metabolic engineering.


CB2200: Introduction to Chemical Biology. This course will provide a survey of major topics, technologies, and themes in chemical biology, with hands-on exposure to a variety of experimental approaches.

CB300: Introduction to Chemical Biology Research. Lectures introduce the research areas of current program faculty in Chemical Biology.

Laboratory Rotations

Students are required to complete two–four laboratory rotations. The program does not set time limits on rotations, but most rotations are expected to be 6–12 weeks long. Rotations allow students to explore different research areas, identify potential collaborators, and experience the environment in different research groups. The purpose of the rotation is to facilitate the choice of the dissertation laboratory, not to accomplish a research project. Students may rotate in the labs of faculty outside of our program with program approval.

First-year students must choose their dissertation laboratory no later than June 30.

Preliminary Qualifying Exams (PQE)

The aim of the PQE is to assess the student’s ability to review research in a particular field, to identify a problem or formulate a central hypothesis that is significant for the field, to design line(s) of experimentation to address the problem or test the hypothesis, and to describe how she or he will interpret the data that would result from the proposed experiment. The topic for the proposal may be related to a student’s dissertation research or the topic may be completely independent.

Students must take the exam by March 15 of their second year.

Teaching Requirement

All students are required to serve as a teaching assistant for one course by the end of their second year of graduate study. The course should be relevant to chemical biology but need not be one of the core courses.

Dissertation Research

After passing the PQE, a dissertation advisory committee (DAC) of at least three members (not including the dissertation advisor) must be appointed by the end of October of the student’s third year and a meeting scheduled by the end of December. Subject to program approval, any three faculty members may serve on the committee.

The role of the DAC is to assist the student in defining the dissertation project; review scientific progress; offer critical evaluation, suggesting extension or modification of objectives; arbitrate differences of opinion between the student and the advisor if they arise; and decide when the work accomplished constitutes a dissertation.
Dissertation Defense

The DAC, in consultation with the dissertation advisor, determines when it is time for a student to stop laboratory work and begin to write his or her dissertation. The dissertation defense is comprised of two components: the first is a public presentation made to the department and community as a whole; the second is a private defense and examination before the student’s examination committee.

Recent Chemical Biology Dissertation Titles

Ye Grace Chen. “The Discovery and Characterization of NAD-Linked RNA.” (Liu Lab)
James Cronican, “Macromolecule delivery into mammalian cells using supercharged proteins.” (Liu Lab)
Elizaveta Freinkman, “Assembly and regulation of the lipopolysaccharide transporter.” (Kahne Lab)
Pulin Li, “Chemical Genetics of Hematopoietic Stem Cells Transplantation” (Zon Lab)
Ruqi Rachel Wang, “Monolayer Purification and Affinity Grid for Single-Particle Electron Microscopy.” (Walt Lab)

Participating Faculty and Their Research Interests

Emily Balskus, Assistant Professor of Chemistry. Discovery of new biosynthetic pathways and enzymatic transformations; interfacing small molecule catalysts with living systems.
Stephen C. Blacklow, Assistant Professor of Pathology. Molecular basis for specificity in protein folding and protein-protein interactions.
James Bradner, Assistant Professor of Medicine. Gene regulation using small molecules as probes.
Jon Clardy, Professor of Biological Chemistry and Molecular Pharmacology. Program Co-Director. Discovery of biologically active small molecules, biosynthesis, x-ray crystallography.
Vlad Denic, Assistant Professor of Molecular and Cellular Biology. Lipidomics, insertion of tail-anchored proteins into lipid bilayers, assembly of lipids into the double autophagosomal membrane.
Rachelle Gautret, Associate Professor in Molecular and Cellular Biology. Structural studies of the stereochemistry of signaling and transport through biological membranes.
David Golan, Professor of Biological Chemistry and Molecular Pharmacology. Understanding the molecular interactions controlling protein and lipid mobility and distribution in cell membranes.
Nathanael Gray, Professor of Biological Chemistry and Molecular Pharmacology. Study the mechanisms leading to tumorigenesis. We focus on elucidating the protein kinases responsible for specific cancers and developing small molecule inhibitors of these kinases as tools for discovery and as potential therapeutics.
Stephen Haggerty, Assistant Professor of Neurology. Chemical biology of neuropsychiatric disorders and neuroplasticity.
Marcia Haigis, Assistant Professor of Pathology. Our laboratory focuses on understanding the role that mitochondria play in mammalian aging and disease.
Jacob Hooker, Assistant Professor of Radiology. Basic reaction methodology development for short-lived isotopes and the application of these new methods to the construction of novel PET imaging agents to probe human brain function.
Deb Hung, Assistant Professor of Microbiology and Molecular Genetics. Chemical genetics approach to bacterial pathogenesis.
Daniel Kahne, Professor of Chemistry and Chemical Biology. Professor of Biological Chemistry and Molecular Pharmacology. Biological mechanisms.
Randy King, Associate Professor of Cell Biology. Regulation of mitosis and chromosome segregation.
Roy Kishony, Professor of Systems Biology. Understanding the system-level architecture of genetic networks and the interplay between their design and the evolutionary process.
Eric Jacobsen, Sheldon Emery Professor of Chemistry. Mechanistic and synthetic chemistry.
Peter Lansbury, Professor of Cell Biology. Regulation of mitosis and chromosome segregation.
Stephen Liberles, Assistant Professor of Neurology. Protein pathogenesis.
David R. Liu, Professor of Chemistry and Chemical Biology. Molecular evolution of proteins, nucleic acids, and synthetic molecules to probe biology; development of DNA-templated organic synthesis; reaction of discovery; creation of synthetic biotic systems.
Ralph Mazitschek, Assistant Professor of Radiology. Chemistry and Molecular Pharmacology. Development of modulators of chromatin modifying enzymes in particular class II HDACs.
Timothy Mitchison, Professor of Systems Biology. Cytoskeleton dynamics; mechanism of mitosis and cell locomotion; small molecule inhibitors.
Andrew Myers, Professor of Chemistry and Chemical Biology. Synthesis and study of complex molecules of importance in biology and human medicine.
Erin O’Shea, Professor of Molecular and Cellular Biology and of Chemistry and Chemical Biology. Systems level and molecular analysis of signaling pathways, transcriptional regulation, and methods for expressing and assaying the proteins derived from an organism.
Randall Peterson, Associate Professor of Medicine. Chemical and genetic approaches to studying diseases of the blood and the circulatory system.
Tobias Ritten, Associate Professor of Chemistry and Chemical Biology. The development of novel reaction chemistry. We seek to discover molecule structure and reactivity that can contribute to interdisciplinary solutions for challenges in science.
Tom Roberts, Professor of Pathology. Kinases, kinase inhibitors, cancer and aging. We work in wide variety of model systems and utilize approaches varying from systems biology to zebrafish genetics.
Alan Saghatelian, Assistant Professor of Chemistry and Chemical Biology. Development and application of liquid chromatographymass spectrometry based (LC-MS) global metabolite profiling as a general discovery tool in chemical biology.
Adrian Salic, Associate Professor of Cell Biology. Mechanisms of vertebrate hedgehog signaling.
Stuart Schreiber, Morris Loeb Professor of Chemistry and Chemical Biology. Forward and reverse chemical genetics: using small molecules to explore biology.
Matthew Shair, Professor of Chemistry and Chemical Biology. Organic synthesis and chemical biology.
Pamela Silver, Elliot T. and Onie H. Adams Professor of Systems Biology. Genome organization, pathways in disease, synthetic biology and bioenergy.
Piotr Sliz, Assistant Professor of Pediatrics. MicroRNA biogenesis and structural biology computing.
Peter Sorger, Otto Krayer Professor of Systems Pharmacology. Analysis of mechanical and regulatory processes controlling eukaryotic cell division.

Gregory Verdine, Erving Professor of Chemistry. Protein-nucleic acid in interactions; transcriptional regulation; x-ray crystallography.

Loren Walensky, Associate Professor of Chemical Biology. Biology of deregulated apoptotic and transcriptional pathways in cancer.

Suzanne Walker, Professor of Microbiology and Molecular Genetics. Chemical biology applied to microbial systems.

Xu Wu, Assistant Professor of Dermatology. Chemical biology and functional genomics of regenerative medicine and cancer.

Sunney Xie, Professor of Chemistry and Chemical Biology. Single molecule spectroscopy and dynamics; molecular interaction and chemical dynamics in biological systems.

Priscilla Yang, Associate Professor of Microbiology and Molecular Genetics. Identifying the biochemical pathways and potential pharmacological intervention points associated with DENV infection of the host cell and developing tools that permit interrogation of these interactions in biological relevant settings. Using small molecules to discover and probe these interactions at both the molecular and pathway levels, and developing new tools that permit us to monitor circal processes.

Xiaowei Zhuang, Assistant Professor of Chemistry and Chemical Biology and of Physics. Single molecule biophysics.

Leonard Zon, Grousbeck Professor of Pediatrics. Utilizing the zebrafish as a model system, the Zon Laboratory focuses on the developmental biology of hematopoiesis and cancer.
Higher Degrees in Chemistry

General Information

The Department of Chemistry and Chemical Biology offers a program of study leading to the degree of doctor of philosophy in chemistry, in the special fields of biological, inorganic, organic, and physical chemistry. A PhD program in chemical physics is also available.

The entering graduate student at Harvard joins an active research center as a co-worker at the start of or during the student’s second term. The department’s faculty and its affiliated student scientists share a rich training in the unique tools of chemical inquiry and commitment to scientific investigation at the molecular level. Doctoral research, based on the student’s own interests and those of the chosen faculty supervisor, is concerned with problems of intrinsic interest and importance at the frontiers of chemical science. The student joins a community of about 180 graduate students, more than 200 postdoctoral fellows, and 32 faculty members.

Regular seminars are held by most faculty members for their research groups. The exchange of views, the solution of problems, and the discussion of recent developments have made this setting an important component of the graduate program. Colloquia in special fields of chemistry and frequent lectures by visiting chemists are continual catalysts for creative research. Considerable opportunity exists for interaction with other departments and groups inside Harvard University, at MIT, and at other research centers in the Boston area.

Departmental research facilities are located in six buildings on the historic main Harvard campus: Mallinckrodt, Conant, Converse, Naito, Bauer, and the Mallinckrodt/Hoffman “Link.” These laboratories are adjacent to the Departments of Stem Cell and Regenerative Biology, Molecular and Cellular Biology, Organicism and Evolutionary Biology, Physics, Earth and Planetary Sciences, the Centers for Systems Biology and Brain Science, and the School of Engineering and Applied Sciences. Also nearby is the Science Center, housing Mathematics, Statistics, and History of Science, but devoted primarily to undergraduate teaching facilities. In addition to the faculty research labs, the Chemistry and Chemical Biology complex contains facilities for analytical instrumentation (NMR, Mass Spectrometry, X-ray Crystallography, X-ray Diffraction), a library, and computer workstations for molecular modeling and chemical information retrieval. A machine shop, electronics shop, and facilities for protein structure determination, materials synthesis, nanofabrication, and imaging are available in adjacent laboratories. Nearly all CCB faculty are affiliated with multiple cross-departmental programs and research centers at Harvard.

Admission

Applications for admission to study for the PhD degree in chemistry are accepted from students who have received the bachelor’s degree or have had equivalent preparation. These applications should be initiated during the fall of the year preceding the September when admission is desired. Normally, students are admitted only for September. The Department of Chemistry and Chemical Biology admits students with a record of classroom and laboratory training in biological, organic, inorganic, and physical chemistry. We expect students to possess a strong enough grounding in chemistry to perform well on the required Chemistry GRE subject exam, and to be thoughtful enough about the discipline of chemistry to communicate their desire to pursue doctoral research in our department.

Applicants must take the GRE general and chemistry examinations. These must be taken no later than November of the year prior to admission and preferably earlier so that score reports arrive by the December application deadline. TOEFL is required of all foreign applicants other than those whose native language is English.

We encourage prospective students to submit their applications online whenever possible at http://www.gas.harvard.edu/apply. We also ask the student’s recommenders to submit their letters online whenever possible. The Department of Chemistry and Chemical Biology is a participant in Harvard Integrated Life Sciences (HILS).

Financial Support

The Department of Chemistry and Chemical Biology meets the financial needs of its graduate students through department scholarships, department fellowships, teaching fellowships, research assistantships, and independent outside fellowships. Financial support is awarded on a one-for-one basis. An advanced course is required to take “Chemistry 301hf. Scientific Writing”.

Qualifying Requirements. Students must pass four advanced half-courses in chemistry and/or related fields (e.g., biochemistry, physics, etc.) with average grades of B or higher. Grades of B will count as a pass if balanced by a B+ or better on a one-for-one basis. An advanced course is one designated in the announcement of courses as ”for undergraduates and graduates” or “primarily for graduates” with the exception of the following courses that cannot be used for credit toward the PhD degree in Chemistry: Chemistry 100r, 135, 145, 160, and 165. Courses numbered 300 or above do not count toward this requirement.

All entering graduate students (G1s) are required to take “Chemistry 301hf. Scientific Teaching and Communication: Practicum” in their first year. This course will teach graduate students how to communicate scientific concepts while meeting the requirements for the degree.
in the classroom and help prepare them for their teaching responsibilities that begin in the spring term of the first year.

During orientation, incoming students will formulate a plan of study in consultation with a member of the Curriculum Advising Committee (CAC). The CAC advises students on their academic plans, approves required courses and assists in decisions related to the PhD program. Any changes to the original plan of study must be discussed with and approved by a member of the CAC.

Students normally satisfy the letter-graded course requirements in the first two years of graduate studies. In consultation with the CAC, special arrangements may also be made in the following circumstances:

(a) Advanced courses passed with honor grades by a Harvard undergraduate, who is subsequently admitted to the Graduate School, may be counted in fulfillment of the departmental course requirement. They may be counted for residence requirements only if in excess of the courses required for the AB degree (see the Graduate School of Arts and Sciences Handbook).

(b) Students who have taken elsewhere the equivalent of a Harvard advanced course may, by arrangement with the Curriculum Advisory Committee, meet the requirement with respect to that course without enrollment by fulfilling such requirements as the instructor in the course stipulates. (See the Graduate School of Arts and Sciences Handbook, Credit for Work Done Elsewhere.)

Rotations. Entering graduate students (G1s) are required to participate in three 4-week rotations in different laboratories, OR they may conduct one 8-week and one 4-week rotation in two different laboratories. The goal of the rotations is to broaden a student’s scientific perspective by exposure to the science and environment of different laboratories. Students may rotate with faculty outside the Chemistry and Chemical Biology Department. Anyone wishing to do a rotation in an outside department is encouraged to contact the outside faculty member directly to discuss the possibility of a rotation.

Advising. During orientation, each incoming student meets with an assigned member of the Curriculum Advising Committee (CAC) to formulate a Plan of Study. The CAC advises students on their academic plans, approves required courses, and assists in decisions related to the PhD program. Any changes to the original Plan of Study must be discussed with and approved by a member of the CAC.

During rotations, once in a lab, each rotation student will be assigned a graduate student or postdoctoral mentor. Mentors are a valuable resource for rotation students, providing guidance and advice regarding lab practices and policies.

Students should enter a research group by June 30th of their first year. Once a student joins a research group, the faculty member of that group becomes the student’s advisor. If a student subsequently finds that another area of research more closely matches his or her interests, the student should consult with the director of graduate studies.

At the end of their first year, students are expected to form, in consultation with the director of graduate studies, their Graduate Advising Committee (GAC). The GAC consists of the student’s advisor and two other faculty members, one of whom must be a CCB faculty member. Students report their progress to the GAC at least once per year, beginning in their G2 year. The GAC may require more frequent meetings depending on the student’s progress, especially as the dissertation defense nears. Students are expected to present and defend an independent research proposal anytime between the first semester of their 2nd year and the end of their 4th year in the presence of their GAC. Any one of the G2, G3, or G4 GAC committee meetings can serve as the independent research proposal meeting. The objective of these meetings is to promote the timely completion of the degree requirements, to foster (non-advisor) faculty-student interactions, and to provide career counseling.

Students are encouraged to consult with the director of graduate studies on any issues that affect graduate student life.

Oral Examinations. Students are expected to present and defend an independent research proposal anytime between the first semester of their 2nd year up to the end of their 4th year (June 30th). Any one of the G2, G3, or G4 GAC committee meetings can serve as the independent research proposal meeting. Students are required to choose topics that are distinct from their Ph.D. research, and the final topic should be arrived at in consultation with their advisor. The student with his/her advisor will decide when to present the independent proposal.

Completing an independent research proposal will expand a student’s base scientific knowledge and provide a formal exercise in identifying research projects in interesting and promising areas of research. The objectives of the independent research proposal program are:

1. To provide students the opportunity to:
   a. think deeply and creatively about a significant research problem and propose how that problem can be addressed experimentally.
   b. develop writing skills by preparing a clear and concise scientific document.
   c. develop oral presentation skills and engage in scientific discourse.

2. To provide students with a forum to receive constructive, critical feedback from faculty members.

The oral exam is expected to be 30 to 60 minutes in duration. During the presentation, students should be prepared to answer questions concerning the proposal topic as well as allied areas. Questions of a more general nature or of topical interest (e.g., recent CCB seminars) may also be asked. At the end of the independent research proposal presentation, there will be a short discussion on research progress to date.

Language. A thorough command of oral and written English is required. Incoming PhD students who are not native speakers of English and who have not received their undergraduate degree from an English-speaking institution will have their English proficiency determined by their TOEFL iBT score. Students who are not deemed proficient will be required to take courses approved by GSAS to improve their proficiency as part of their preparation for teaching and professional development. Students will not be allowed to teach until they are deemed proficient.

Teaching. All students are expected to teach discussion or laboratory sections half-time for two terms. Most students teach in the spring term of their first year and during one term of the second year (usually the fall). With their advisor’s approval, a student may also teach in subsequent years.

Satisfactory Progress. Continuation in the degree program is contingent on the following: (1) satisfactory completion of required coursework, (2) successful presentation and defense of a research proposal in accordance with policy set by the Graduate Advising Committee (GAC), (3) admission to a research group by June 30th of the first year, and (4) satisfactory progress in 300-level research courses.

Dissertation. The preparation of a satisfactory dissertation normally requires at least four years of full-time research. The final manuscript must conform to the requirements described online in The Form of the PhD Dissertation.

All students are expected to provide a public presentation of their PhD research. The dissertation defense will be comprised of two parts: 1) a public presentation of the student’s PhD research to which members of the CCB community will be invited, followed by 2) the private PhD dissertation defense before the dissertation defense committee (generally the GAC). One of the readers must be a faculty member of the department of Chemistry and Chemical Biology (generally the advisor). Two members of the committee must be members of the Faculty of
Master of Arts (AM)
The Department of Chemistry and Chemical Biology does not grant terminal AM degrees. However, upon completion of certain requirements, students in the Chemistry PhD program may apply for the AM degree. The requirements for this degree are:

Residence. A minimum of one year of full-time study is required.

Program of Study. The student must pass eight advanced half-courses diversified among the fields of chemistry with average grades of B or higher. Grades of B will count as a pass if balanced by a B+ or better on a one-for-one basis. Typically, four of the half-courses are classroom work, and the remaining four are research courses. Students will formulate a Plan of Study in consultation with a member of the Curriculum Advising Committee (CAC). The CAC may withhold approval for courses deemed inappropriate for the AM degree in Chemistry.

Approval of the application for the AM degree is contingent upon the satisfactory completion of the required eight half-courses. Proper documentation of passing grades on applicable bracketed courses (i.e., GSAS transcripts) must be received by the department office before approval of the AM degree is granted.

Thesis: None required.

Recent PhD Dissertations
James Birrell, "I. Enantioselective Acylation of Silyl Ketene Acetals through Fluoine Anion-Binding Catalysis II. Development of a Practical Method for the Synthesis of Highly Enantioenriched trans-1,2 Amino Alcohols" (Jacobsen Group)
Emily Eames, "Magnetism, Reactivity and Metal Ion Lability in Trigonal Iron Clusters" (Betley Group)
Stephen Jensen, "The Roles ofInterstitial and Surface Defects on Oxidation and Reduction Reactions on Titania" (Friend Group)
Theresa Liang, "Silver-Mediated Trifluoromethylation of Aryl Nucleophiles and Synthesis of 3-Decoy-3-fluoromorphine" (Ritter and Liu Groups)
Brian Liu, "Total Syntheses of Fastigiatine and the Hilarimicin Agycons" (Shair Group)
Anna Mari Lone, "The Biochemistry and Physiology of Peptidases" (Saghedelian Group)
Sijia Lu, "Label-Free Optical Imaging of Chromophores and Genome Analysis at the Single Cell Level" (Xie Group)
Meghan Thurlow, "Free Radicals and Reactive Intermediates in the Boundary Layer: Development and Deployment of Solid-State Laser Based Instrumentation to Measure Part Per Trillion Mixing Ratios of Iodine Monoxide and Glyoxal in Situ" (Anderson Group)
Peter Wright, "Multiplicative Expansion of the Pool of Fully Synthetic Tetracycline Antibiotics" (Myers Group)
Jiabin Xu, "Computer Simulations of Protein Folding and Evolution" (Schreiber Group)
Yuan Yuan, "Small-molecule Modulators of Pancreatic Ductal Cells: Hitone Methyltransferases and β-Cell Transdifferentiation" (Schreiber Group)
Lauren Zarzar, "Dynamic Hybrid Materials: Hydrogel Actuators and Catalytic Microsystems" (Aizenberg Group)

Faculty and Research Interests
Joanna Aizenberg, Gordon McKay Professor of Materials Science; Susan S. and Kenneth L. Wal-lach Professor at the Radcliffe Institute for Advanced Study; Professor of Chemistry and Chemical Biology. PhD 1996, Weizmann Institute of Science. Biomimetic inorganic materials synthesis, self-assembly, crystal engineering, surface chemistry, nanofabrication, biomaterials, biomechanics and biooptics.

James Anderson, Philip S. Weld Professor of Atmospheric Chemistry. PhD 1970, University of Colorado. Chemical reactivity of radical-radical and radical-molecule systems; chemical catalysis sustained by free radical chain reactions in the Earth’s stratosphere and troposphere; mechanistic links between chemistry, radiation, and dynamics in the atmosphere that control climate; high-accuracy satellite observations for testing and systematic improvement of climate forecasts.


Emily Balskus, Assistant Professor of Chemistry and Chemical Biology. PhD 2008, Harvard University. The elucidation and study of biosynthetic pathways and enzymes as well as the development of synthetic methods that are compatible with microbial chemistry.

Theodore Betley, Associate Professor of Chemistry and Chemical Biology. PhD 2005, California Institute of Technology. Synthetic inorganic chemistry targeting chemical energy conversion, structure and reactivity of polymeric and organo-metallic compounds.

Adam Cohen, Professor of Chemistry and Chemical Biology and of Physics. PhD 2003, University of Cambridge; PhD 2007, Stanford University. Single-molecule spectroscopy and biophysics; Brownian motion and feedback control; electron-kinetics, polymer physics, fluctuation-induced forces; nonequilibrium van der Waals/Casimir forces instrumentation.

Cynthia Friend, Theodore William Richards Professor of Chemistry and Professor of Materials Science. PhD 1981, University of California at Berkeley. Surface chemistry: heterogeneous catalysis, nanoscale growth, environmental chemistry, laser-assisted materials processing, heterogeneous chemistry relevant to origins of life, and chemical sensor technology.

Roy Gordon, Thomas Dudley Cabot Professor of Chemistry. PhD 1964, Harvard University. Inter-molecular forces, transport processes and molecular motion; theory of crystal structures and phase transitions, kinetics of crystal growth; solar energy, chemical vapor deposition; synthesis of inorganic precursors to new materials; thin films and their applications to microelectronics and solar cells.


Daniel Kahne, Professor of Chemistry and Chemical Biology and Professor of Biological Chemistry and Molecular Pharmacology. PhD 1986, Columbia University. Synthetic organic chemistry and its applications to problems in chemistry and biology.
Charles Lieber, Mark Hyman Jr. Professor of Chemistry. PhD 1985, Stanford University. Chemistry and physics of materials with an emphasis on nanoscale systems. Rational synthesis of new nanoscale building blocks and nanostructured solids; development of methodologies for hierarchical assembly of nanoscale building blocks into complex and functional systems; investigation of fundamental electronic, optical, and optoelectronic properties of nanoscale materials; design and development of nanoelectronics and nanophotonic systems, with emphasis on electrically-based biological detection, digital and quantum computing, and photonic systems.

David R. Liu, Professor of Chemistry and Chemical Biology and Howard Hughes Medical Institute Investigator. PhD 1999, University of California at Berkeley. Organic chemistry and chemical biology of molecular evolution, nucleic acid-templated organic synthesis, reaction discovery, protein and nucleic acid evolution and engineering, synthetic polymer evolution; generally, effective molarity-based approaches to controlling reactivity and evolution-based approaches to the discovery of functional synthetic and biological molecules.

Andrew Myers, Professor of Chemistry at Harvard University. Synthesis and study of complex natural products; development of synthetic methodology.

Daniel Nocera, Professor of Chemistry and Chemical Biology and Patterson Rockwood Professor of Energy. PhD 1984, California Institute of Technology. Synthesis and catalysis, mechanistic chemistry, proton-coupled electron transfer reactions, time-resolved and steady-state spectroscopies; development of new methods to elucidate energy conversion processes in biology.

Erin O'Shea, Professor of Molecular and Cellular Biology and of Chemistry and Chemical Biology and Howard Hughes Medical Institute Investigator; Director of the Center for Systems Biology. PhD 1992, Massachusetts Institute of Technology. Systems level and molecular analysis of signaling pathways; transcriptional regulatory network architecture, function, and evolution; regulation and mechanism of oscillation of a circadian clock.

Hongkun Park, Professor of Chemistry and Chemical Biology and of Physics. PhD 1996, Stanford University. Physics and chemistry of nanostructured materials; the development of neuro-electronic interface; electron transport through individual molecules, nanowires, and nanotubes; single-molecule optoelectronics; synthesis and characterization of transition-metal-oxide and chalcogenide nanostructures; the interrogation of complex neural networks using optical and electronic techniques.


Alan Saghatelian, Associate Professor of Chemistry and Chemical Biology, PhD 2002, Scripps Research Institute. Development and application of global metabolite profiling (metabolomics) as a general discovery tool for chemical biology. Elucidation of molecules and metabolic pathways that control phenotype at the cellular and physiological level.

Stuart Schreiber, Morris Loeb Professor of Chemistry and Chemical Biology and Howard Hughes Medical Institute Investigator. PhD 1981, Harvard University. Development of diversity-oriented synthesis, chemical genetics, and ChemBank; application to an understanding of cell circuity and disease biology.

Matthew Shair, Professor of Chemistry and Chemical Biology. PhD 1995, Columbia University. Synthesis of small molecules that have interesting biological functions and elucidation of their cellular mechanisms; development of organic synthesis.

Eugene Shakhnovich, Professor of Chemistry and Chemical Biology. PhD 1984, Moscow State University. Theoretical biomolecular science including protein folding, theory of molecular evolution, structural bioinformatics, rational drug design, populational genomics, other complex systems including complex polymers and spin glasses.

Jack Szostak, Alexander A. Rich Distinguished Investigator; Massachusetts General Hospital; Professor of Genetics; Professor of Chemistry and Chemical Biology; and Howard Hughes Medical Institute Investigator. PhD 1977, Cornell University. Design and synthesis of self-replicating artificial cell, chemical genetics, and ChemBank; origins and early evolution of life.

Gregory Verdine, Professor of Stem Cell and Regenerative Biology and Ewing Professor of Chemistry. PhD 1986, Columbia University. Protein-nucleic acid interactions; transcriptional regulation; X-ray crystallography; structure and function of DNA-processing enzymes; discovery of novel ligands to peptide receptors.

George Whitesides, Woodford L. and Ann A. Flowers University Professor. PhD 1946, California Institute of Technology. Physical organic chemistry, materials science, biophysics, complexity, surface science, microfluidics, self-assembly, micro- and nanotechnology, and cell-surface biochemistry.

Xiaoliang Sunney Xie, Professor of Chemistry and Chemical Biology, PhD 1990, University of California at San Diego. Single-molecule spectroscopy and dynamics; molecular interaction and chemical dynamics in biological systems; live cell imaging.

Xiaowei Zhuang, Professor of Chemistry and Chemical Biology and of Physics; Howard Hughes Medical Institute Investigator. PhD 1996, University of California at Berkeley. Investigating complex biological processes at the single-molecule level; live cell imaging; development of new techniques for single-molecule sensing and imaging.

### Affiliate Faculty

**Jon Clardy**, Professor of Biological Chemistry and Molecular Pharmacology (Medical School). PhD 1969, Harvard. Discovery of biologically active small molecules using DNA-based approaches or high-throughput screening and chemical analysis; protein structure and enzymology; functioning of small molecules as carriers of biological information; new biosynthetic pathways; new microbial biology.

**Efthimios Kaxiras**, Gordon McKay Professor of Applied Physics and Professor of Physics (School of Engineering and Applied Sciences). PhD 1987, Massachusetts Institute of Technology. Development of computational methodologies for coupling spatial and temporal scales; optical and electronic properties for nucleic acids, melanin, flavonoids; structure and properties of carbon and other nanotubes, surface nanowires and nanodots, graphene nanoflakes; effect of chemical impurities on the large-scale mechanical behavior of solids.

**Suzanne Walker**, Professor of Microbiology and Molecular Genetics (Medical School). PhD 1992, Princeton. Chemical biology applied to microbial systems; enzymology; mechanism of action of antibiotics.

**Christopher Walsh**, Hamilton Kuhn Professor of Biological Chemistry and Molecular Pharmacology (Medical School). PhD 1970, Rockefeller University. Molecular basis of biological catalysis, with focus on the structure and function of enzymes; biosynthesis and mechanism of action of antibiotics and bacterial siderophores.
Higher Degrees in Systems Biology

Introduction to Program
Systems Biology aims to explain how higher level properties of complex biological systems arise from the interactions among their parts. This new field requires a fusion of concepts from many disciplines, including biology, chemistry, computer science, applied mathematics, physics and engineering.

Through coursework and collaborative research, we aim to enable students to combine experimental and theoretical approaches to develop physical and quantitative models of biological processes. Students will be introduced to the tools that are now available, and to important unsolved problems in biology that may now be possible to address using quantitative and theoretical approaches.

For more information, please visit http://sysbiophd.harvard.edu.

Admissions Requirements
The typical student has a strong background in one of the disciplines relevant to Systems Biology (such as biology, mathematics, engineering, physics, chemistry and computer science) and a strong interest in interdisciplinary research. Although cross training is not required, many of the students admitted have had some experience in biology and some exposure to quantitative or theoretical approaches.

Online submission of the application is required. Please refer to the GSAS Admissions Page for further information on applying, http://www.gas.harvard.edu.

A number of candidates will be invited to interview in late January or early February. Final decisions concerning admission are made by the dean of the Graduate School of Arts and Sciences, and the candidates are notified by letter from the Admissions Office.

Combined MD-PhD Program
Students admitted to Harvard Medical School as candidates for the MD degree may also apply for admission to the Systems Biology program in order to earn a PhD degree in systems biology. This program may be of particular interest to prospective medical students with a strong theoretical background and to students enrolled in the Harvard-MIT Division of Health Sciences and Technology.

Financial Aid
All students accepted into the program are awarded full support, including a stipend, tuition, and health fees. Students are encouraged to apply for external fellowships, such as those administered by the National Science Foundation, National Defense Science and Engineering Fellowship, and National Institutes of Health.

Degree Requirements
Advising
The class advisors will lead a weeklong orientation for incoming students at the end of August. The orientation will include a set of lectures and activities that will introduce students to the many resources at and around Harvard and will answer their questions regarding research, academics and the graduate program. Students will also be paired with a senior graduate student mentor during the orientation.

Coursework
Incoming students will meet with the class advisors to discuss their background and interests. Class advisors will assist each student in developing a personalized curriculum to complement the student’s existing training.

Students are required to complete four science courses offered at either Harvard or MIT. A list of courses students commonly take is distributed to the students during orientation. In addition to these four courses, systems biology first year students enroll in three courses that help prepare them for the practice of science.

SystBio212: Communication of Science. First year students will work collaboratively with faculty and one another on critical science communication skills including crafting graphics, writing fellowships, and giving oral presentations.

SystBio300: Introduction to Systems Biology. The course is an evening seminar featuring weekly lectures by Program faculty which serves to acquaint first year students with the major research themes of the program faculty and helps them decide on research rotations and evaluate potential dissertation advisors.

MedSci300: Conduct of Science. The course follows a discussion group format in which 8–12 students meet with a faculty member who leads discussions on the ethical and responsible conduct of research.

Lab Rotations
Students in the program are expected to perform two to four laboratory rotations before selecting a dissertation laboratory. This is to allow the student to explore different research areas, identify potential collaborators, and experience the environment in different research groups. The program does not set time limits on rotations, but most rotations are expected to be 4–12 weeks long.

Independent Research
After the first year, students may choose a single faculty member as their dissertation advisor, or may elect to collaborate between two labs. Subject to Program approval, students may choose advisors from any science department at Harvard, including the research departments of the eleven Harvard-affiliated teaching hospitals.

Preliminary Qualifying Examination
The purpose of the examination is to ensure that the student is prepared to embark on dissertation research. The examination is given in two phases. The first phase must be completed by June 1 of the student’s first year, and is intended to evaluate the student’s progress in acquiring competence in mathematical and/or computational approaches. Students will formulate a question related to any problem in biology and devise a mathematical or computational approach to addressing it. Results of the project will be presented in a short written summary and orally. Phase two must be completed by the end of March of the student’s second year. Students will prepare and defend an original research proposal related to the student’s proposed dissertation research.

Dissertation Advisory Committee
After completing the Qualifying Exam, students will be required to meet once a year with a Dissertation Advisory Committee (DAC) consisting of their advisor(s) and three additional faculty. The role of the DAC is to assist the student in defining the dissertation project, review scientific progress, offer critical evaluation, suggest expansion or modification of objectives, arbitrate differences of opinion between the student and the advisor if they arise, and decide when the work accomplished constitutes a dissertation.

Dissertation Defense
The DAC, in consultation with the dissertation advisor, determines when it is time for a student to stop laboratory work and begin to write his or her dissertation. The dissertation defense is com-
prised of two components: the first is a public presentation made to the department and community as a whole; the second is a private defense and examination before the student’s examination committee.

**Recent Systems Biology Dissertation Titles**

Steven Hershman. “Personal Genomics and Mitochondrial Disease” (Mootha lab)

Dirk Landgraf. “Quantifying localizations and dynamics in single bacterial cells” (Paulsson lab)

Adam Palmer. “Gene-drug interactions and the evolution of antibiotic resistance” (Kishony lab)

Nick Stroustrup. “The C. elegans Lifespan Machine and its application to the temperature scaling of lifespan” (Fontana lab)

Ketki Verkedkar. “Quantitative analysis of DNA repair and p53 in individual human cells” (Lahav lab)

Vikram Vijayan. “Circadian gene expression in cyanobacteria” (O’Shea lab)

Qingqing Wang. “Alternative splicing regulation in programmed cell death and neurological disorders: A systems biology approach” (Silver lab)

**Participating Faculty**

The 52 faculty members of the Systems Biology program are from the departments of Systems Biology, Biological Chemistry and Molecular Pharmacology, Molecular and Cellular Biology, Chemistry and Chemical Biology, Cell Biology, Genetics, and Physics, and from the School of Engineering and Applied Sciences.

Edoardo Airoldi, Assistant Professor of Statistics. We develop and apply statistics, methods for analyzing complex dynamical systems. We are broadly interested in characterizing mechanisms of regulation in bacteria, yeast, and cancer systems, quantitatively. Our focus is on cellular proliferation, metabolism, signaling pathways, and protein-mRNA regulation.


Martha Bulyk, Associate Professor of Medicine, Pathology, and Health Sciences & Technology; Associate Member of Broad Institute of MIT and Harvard. Functional and computational genomics studies of transcription factors and Cis regulatory elements.

George Church, Professor of Genetics. Synthetic biology design of 3D, multicell, & new translational codes; stem-cell, aging & cancer epigenetics, ecosystem models, personal genomics.

Stirling Churchman, Assistant Professor of Genetics. Mechanisms of transcription within the cell, including regulation of initiation, elongation, and termination, and how these processes are altered in disease states.

Philippe Cluzel, Professor of Molecular and Cellular Biology and Gordon McKay Professor of Applied Physics. The Cluzel laboratory studies biological signal integration and genetic networks at the single-cell level. We use real-time systems analysis to investigate how single cells respond to information in their environment. Our systems of interest include multi-drug resistance in E. coli and S. aureus, transcriptional dynamics of flagellar genes in bacteria, and degeneracy in the genetic code.

Angela DePace, Assistant Professor of Systems Biology. Mechanism and evolution of gene regulation.

Vlad Denic, Associate Professor of Molecular and Cellular Biology. Mechanisms of membrane-associated cell biological processes.

Michael Desai, Assistant Professor of Organismic and Evolutionary Biology and of Physics. Mathematical models of evolutionary dynamics, theoretical population genetics, and experimental evolution, with the goal of understanding how natural selection shapes genetic variation.

Catherine Dulac, Professor of Molecular and Cellular Biology. Molecular and developmental biology of olfactory and pheromone sensing.

Walter Fontana, Professor of Systems Biology. Experimental and theoretical approaches to address fundamental problems in systems biology as they relate to aging (C.elegans), plasticity in molecular signaling, and the evolvability of phenotype.

Ethan Garner, Assistant Professor of Molecular and Cellular Biology. The Garner lab studies the organization, structure, and dynamics of the prokaryotic cytoplasm. Generally, we are interested in elucidating how small collections of genes are able to impart long range order to cells.

Jesse Gray, Assistant Professor of Genetics. The Gray lab studies how transcriptional networks rewire neuronal circuits.

Jeremy Gunawardena, Associate Professor of Systems Biology. Theoretical and experimental approaches to in-silico systems biology.

John Higgins, Assistant Professor of Systems Biology. Dynamics of human pathophysiologic processes by developing mathematical descriptions of complex human disease phenotypes and how they change over time.

Curtis Huttenhower, Assistant Professor of Computational Biology and Bioinformatics. Computational metagenomics, the human microbiome and large-scale biological network analysis.

Marc Kirschner, Professor of Systems Biology, Chair of the Department of Systems Biology. Regulation of the cell cycle, the role of cytoskeleton in cell morphogenesis, and mechanisms of establishing the basic vertebrate body plan.

Roy Kishony, Professor of Systems Biology. Combining theoretical and experimental approaches to understand how biological function emerges in complex genetic and chemical networks. Using population genetics approaches to understand the interplay between biological design and the evolutionary process.

Galit Lahav, Associate Professor of Systems Biology. The dynamics of conserved network motifs in diverse signaling systems in human cells, studied by stimulating the proteins of interest and accurately monitoring their expression level and localization in individual living cells.

Erel Levine, Assistant Professor of Physics. Coordinated regulation at the mRNA level and coordination between regulatory modules.

Richard Losick, Professor in the Department of Molecular and Cellular Biology. Gene regulation and development in microorganisms.

Lakshminarayanan Mahadevan, Gordon McKay Professor of Applied Mathematics and Mechanics. The applications of mathematics to understand the mechanical behavior of matter in all its forms, but with a particular emphasis on soft materials and biological systems.

Christopher Marx, Associate Professor of Organismic and Evolutionary Biology. Experimental evolution of microbes to address broad evolutionary and ecological questions and explore the systems-level function and optimization of complex biological networks.

Sean Megason, Assistant Professor of Systems Biology. Studies how the program contained in the genome is executed during development to turn and egg into an embryo, using confocal/2-photon imaging of living, transgenic zebrafish embryos to watch biological circuits function in vivo and use these data in cell-based, quantitative modeling.

Timothy Mitchison, Professor of Systems Biology, Deputy Chairman of the Department of Systems Biology. Cytoskeleton dynamics, in particular the mechanism of mitosis and the mechanism of cell motility dependent on actin polymerization.

Vamsi Mootha, Professor of Systems Biology. Biochemical adaptation at the level of the mitochondrion, assessed through physiology, functional genomics (microarrays, proteomics), and computation; integration of genome-scale datasets to
discover gene networks underlying rare and common human metabolic diseases biology.

Andrew Murray, Professor of Molecular and Cellular Biology. Mitosis, meiosis, experimental evolution, and signal transduction.

Radhika Nagpal, Professor of Computer Science, Instructor in Systems Biology. Developing programming paradigms for robust collective behavior, inspired by biology; understanding robust collective behavior in biological systems.

Dan Needleman, Assistant Professor of Applied Physics and of Molecular and Cellular Biology. Combining quantitative experiments and theory to understand the architecture and dynamics of self-organizing, subcellular structures, particularly the metaphase spindle.

Martin Nowak, Professor of Mathematics and of Biology. Theoretical biology, somatic evolution of cancer.

Erin O'Shea, Professor of Molecular and Cellular Biology, Co-director of the Bauer Center for Genomics Research. Systems level and molecular analysis of signaling pathways, transcriptional regulation, and developing methods for expressing and assaying the entire complement of proteins derived from an organism.

Kevin Parker, Professor of Biomedical Engineering. Cellular mechanotransduction in the heart.

Johan Paulsson, Associate Professor of Systems Biology. Mathematical theory for noise in intracellular networks and the development of new experimental techniques for counting molecules in single cells. Combining theory and experiments in the study of e.g. stochastic gene expression, homeostatic control, near-critical metabolism and intracellular selfishness.

Sharad Ramanathan, Professor of Molecular and Cellular Biology and of Applied Physics. Studies how cells and organisms process signals from their environment and how underlying molecular pathways evolve.

Samara Reck-Peterson, Assistant Professor of Cell Biology. Mechanisms underlying intracellular transport and cell division, and the roles played by microtubules and microtubule-based molecular motors.

Aviv Regev, Assistant Professor of Biology at MIT and Member of the Broad Institute of Harvard/MIT. Understanding the mechanisms by which molecular networks accommodate changes at different time scales.

John Rinn, Assistant Professor of Stem Cell & Regenerative Biology and of Pathology. The roles of large non-coding RNAs in chromatin formation and their misregulation in disease.

Pardis Sabeti, Associate Professor of Organismic and Evolutionary Biology. Studying the effect of natural selection on the human genome and on the genomes of other organisms and uncovering the traits that have emerged to shape these species, and to understand mechanisms of evolutionary adaptation in humans and pathogens.

Alan Saghatelian, Associate Professor of Chemistry and Chemical Biology. The development and application of LC-MS based metabolomics approaches to study basic as well as biomedical problems in biology.

Alex Schier, Professor of Molecular and Cellular Biology. Developmental genetics and neurobiology.

Jagessh Shah, Assistant Professor of Systems Biology. Scaling molecular events into cell behavior. Using molecular techniques and modern biophysical tools they are piecing together quantitative models of endogenous and synthetic cellular networks.

William Shih, Associate Professor of Biological Chemistry and Molecular Pharmacology. Explores the principles of self-assembling molecular machine design and evolution, using DNA nanostructures as model systems. Also develop DNA nanostructures as tools for molecular and structural biology.

Pamela Silver, Professor of Systems Biology. Systems analysis of genomes, RNA and nuclear organization; designing biological systems; synthetic biology.

Jack Szostak, Professor of Genetics. Approaches to the analysis of chromosome segregation, genomic stability and programmed cell death in yeast, mice and human cells.

Michael Springer, Assistant Professor of Systems Biology. Understanding the relation between genotype and phenotype, with a special interest in how biochemistry, molecular design, and wiring can allow cells to process information from their environment and respond appropriately.

Peter Sorger, Professor of Systems Biology. The application of experimental and computational approaches to the analysis of chromosome segregation, genomic stability and programmed cell death in yeast, mice and human cells.

Ralph Weissleder, Professor of Systems Biology. Development of novel imaging tools and their application to understanding complex diseases.

David Weitz, Professor of Applied Physics and Physics. Studies soft condensed matter physics, and applies physical methods to study the elastic properties of cell, both by creating in vitro model systems, and by developing techniques for in vivo studies of cells. The goal of the work is to understand the origin of the force transduction in cells.

Xiaoliang Sunney Xie, Professor of Chemistry and Chemical Biology. Single molecule spectroscopy and dynamics; molecular interaction and chemical dynamics in biological systems.

Peng Yin, Assistant Professor in Systems Biology. Our research interest lies at the interface of information science, molecular engineering, and biology. We are generally interested in developing programmable molecular systems and technology inspired by biology.

Xiaowei Zhuang, Professor of Chemistry and Chemical Biology and of Physics. Study of complex biological processes at the single molecule (or single working unit) level; development of new imaging techniques.
The PhD in Health Policy, awarded by the Faculty of Arts and Sciences, is a collaborative program of six Harvard University faculties: the Graduate School of Arts and Sciences, Harvard School of Public Health, Harvard Medical School, Harvard Business School, Harvard Law School, and Harvard Kennedy School. This degree is intended for students seeking teaching careers in institutions of higher learning and/or research careers in health policy. Joseph P. Newhouse, John D. MacArthur Professor of Health Policy and Management, is chair of the Committee on Higher Degrees in Health Policy that administers the program; Katherine Swartz, Professor of Health Economics and Policy, is director of graduate studies; Deborah Whitney is administrative director of the PhD Program in Health Policy and Ayres Heller is assistant director of the PhD Program in Health Policy.

Candidates for the PhD in health policy will generally be in residence for two years before undertaking qualifying examinations. Satisfactory completion of those examinations is a prerequisite for writing a dissertation. Students are strongly encouraged to remain in residence in the Cambridge area until they have passed the dissertation proposal oral; the program encourages students to remain in residence throughout the dissertation stage as well. Continuation of candidacy is contingent upon suitable progress and achievement during each academic year.

For more information, visit www.healthpolicy.fas.harvard.edu.

Admissions

A distinguished undergraduate record, as well as excellent performance in any graduate work undertaken, is required for admission to the PhD Program in Health Policy. Preference will be given to applicants who have had either some relevant work experience or graduate work after completion of a bachelor’s degree, although a previous graduate degree is not required. Scores from the Graduate Record Exam (GRE) or the Graduate Management Admission Test (GMAT) that are five years old or less are required for all applicants. In addition, applicants whose native language is not English and who do not hold the equivalent of a US bachelor’s degree from an institution at which English is the language of instruction must take the Test of English as a Foreign Language (TOEFL).

The PhD Program in Health Policy is particularly committed to increasing the diversity of its doctoral student population. Minority candidates, including students who self-identify as Black/African American, Puerto Rican, Mexican American, Native American, or Native Pacific Islander are especially encouraged to apply.

Those wishing to apply to the MD program at Harvard Medical School, as well as to the PhD Program in Health Policy, must apply separately to each program and indicate in the application to the PhD Program that a concurrent application has been submitted to Harvard Medical School.

Similarly, applicants interested in the Coordinated JD/PhD program must apply to and be separately admitted to both Harvard Law School and the PhD Program in Health Policy before applying to the Coordinated JD/PhD Program. Applicants should indicate in the application to the PhD Program that a concurrent application has been submitted to Harvard Law School.

Applications must include: 1) a statement of purpose that indicates the concentration(s) and policy area(s) of interest; up to two areas of concentration may be specified; 2) three letters of recommendation, submitted online; 3) a curriculum vitae or resume; 4) official transcripts for all college/university degrees and courses; if applicant is enrolled in school while applying, send fall term grades when available; 5) GRE General Test or GMAT scores; GRE scores are preferred; 6) official TOEFL scores, if necessary; 7) a recent sample of written work that is no more than 20 pages in length (required only for applicants to the Ethics concentration).

The application deadline is in mid-December for admission the following fall. The online application is available through the GSAS website (www.gtas.harvard.edu).

Financial Aid

The department offers financial support for graduate study, based on both need and merit. For example, thanks to grants from the Agency for Healthcare Research and Quality and the National Institute of Mental Health, the program can offer some traineeships to students who are US citizens or permanent residents of the US. As the program is committed to increasing the diversity of the doctoral student population, Harvard provides Graduate Prize Fellowships (tuition for five years in the program and a stipend for three years) to underrepresented minority applicants with financial need, who are admitted to the program. Applicants are encouraged to apply for external grants and fellowships whenever possible.

Degree Requirements

The PhD program has the following components:

- Concentration in one academic discipline (decision sciences, economics, ethics, evaluative science and statistics, management, or political analysis) and specialization at the dissertation stage in one policy area (global health, healthcare services, mental health, or public health).
- Three one-term courses, chosen from three concentrations outside a student’s field of concentration. The statistics requirement (noted below) may be used to satisfy one of the three requirements, except for students concentrating in evaluative science and statistics.
- Two one-term courses in statistics.
- One course in epidemiology.
- A weekly research seminar starting in the third year.
- Written general and concentration examinations following two years of coursework; the general examination also contains an oral component.
- A dissertation prospectus and oral examination.
- A dissertation based on original research and a dissertation defense

Concentrations

Students in the PhD in health policy program choose a concentration and meet specific curriculum requirements in one of the following seven disciplines. For complete information on each concentration, including course requirements for each, please visit the program website at: www.healthpolicy.fas.harvard.edu.

Decision Sciences (Professor Milton C. Weinstein, chair). Decision sciences are the collection of quantitative techniques that are used for decision making at the individual and collective level. They include decision analysis, risk analysis, cost-benefit and cost-effectiveness analysis, decision modeling, and behavioral decision theory, as well as parts of operations research, microeconomics, statistical inference, management control, cognitive and social psychology, and computer science. The concentration in decision sciences prepares students for research careers that involve the application of these methods to health problems.

Economics (Professor Joseph P. Newhouse, chair). The concentration in economics focuses on the economic behavior of individuals; providers; insurers; and international, federal, state, and local governments and actors as their actions affect health and medical care. In addition to examining the literature on health economics, the training emphasizes microeconomic...
theory, econometrics, and interactions with other disciplines, including clinical medicine. The concentration prepares students for research and teaching careers as health economists.

**Ethics (Professor Norman Daniels, chair).** The ethics concentration integrates quantitative, qualitative, and normative approaches to the analysis of ethical issues in health policy and clinical practice. Increasingly, the investigation of ethical issues in medicine and health policy has not only drawn on normative ethics and political philosophy, but has included empirical research concerning attitudes and practices in clinical and broader institutional settings. A grasp of normative theories and tools is important because ethical principles and approaches underlie, explicitly or implicitly, the formulation of particular health policies at both the macro and micro level. Students in this track will focus on developing skills in a range of disciplines, with the goal of evaluating how ethical and socio-cultural values shape— and should shape—health policies as well as clinical and public health practices. Students with a strong background in ethics and political philosophy will have a chance to deepen that understanding and apply it to issues in health policy while at the same time acquiring necessary quantitative skills. Students with degrees or training in related fields, such as law or medicine or public health, will acquire both normative and quantitative skills needed for research and teaching in ethics and health policy.

Research in health policy and ethics would include such topics as: policies for the allocation of scarce resources to individuals (e.g., human organs for transplantation, newly developed drugs, hospital beds) and across categories of patients (treatment vs. prevention for HIV/AIDS, or for HIV/AIDS vs. malaria); policies for care at the beginning and end of life; evaluation of informed consent protocols and their effectiveness; issues of equity in the evaluation of policies determining access to health services and the reduction of risk factors; policies responding to cross-cultural variation in ethical norms; ways in which health professionals are educated; policies regarding the balance between the individual and the collective (e.g., in bio-terrorism, epidemic control, etc.). While not abandoning the concerns of traditional work in bioethics, the concentration will develop proficiency in experimental and quasi-experimental research design, statistics, relevant social sciences, and other methodological approaches (e.g., epidemiology, program evaluation, qualitative methods, and survey design).

**Management (Professor Robert S. Huckman, chair).** The management concentration prepares students to do research on the managerial, operational, and strategic issues facing a wide range of organizations in the health care industry including: health care providers; pharmaceutical and biotechnology firms; device and technology companies; and private and public insurers. Students in this track examine how theories and concepts from fields such as technology and operations management, organizational behavior, organizational economics, and competitive strategy can be applied to and further developed for understanding health care organizations. Key research themes include: learning and process improvement; organizational structure and performance in health care delivery; managing R&D organizations; managing teams in clinical and research settings; information technology and the management of health care processes.

**Political Analysis (Professor Robert J. Blendon, chair).** This concentration is intended for students who wish to do research on the relationship between politics and health policy. Students will study theories of individual opinion formation, voting behavior, legislative organization, and interest group formation. In addition, students will examine the role of public opinion, interest groups, the media, and institutions in influencing health policy outcomes. The research methodologies most utilized in this track include survey research methods and quantitative statistical methods appropriate for large-scale databases.

**Policy Areas**

In addition to choosing a concentration, students specialize in one of four areas of policy interest:

**Global Health** This policy area focuses on the economic determinants and consequences of health and health care in countries other than the US, especially less developed countries.

**Health Care Services** This area is designed for students whose primary interests are access to health care, medical technology assessment, quality of health care, and the costs and financing of health care services.

**Mental Health** This area is designed for students who wish to specialize in mental health policy, including the financing of services, the roles of public and private sectors, and the links between mental health and human services.

**Public Health** This area is designed for students who are interested in policies directed at the rates of disease and injury in the population. Major topics include smoking behavior, control of alcohol abuse, mental health, traffic accidents, dietary and nutritional recommendations, occupational safety, gun control, control of infectious diseases including AIDS, and food and drug regulation.

**Committee on Higher Degrees in Health Policy/Research Interests**

Nava Ashraf, PhD, Associate Professor, Harvard Business School

Katherine Baicker, PhD, Professor of Health Economics, Department of Health Policy and Management, Harvard School of Public Health

Robert J. Blendon, ScD, Richard L. Menschel Professor and Senior Associate Dean for Policy Translation and Leadership Development, Harvard School of Public Health

Barry Bloom, PhD, Harvard University Distinguished Service Professor and Joan L. and Julius H. Jacobson Professor of Public Health, Department of Global Health and Population, Harvard School of Public Health

David Bloom, PhD, Clarence James Gamble Professor of Economics and Demography, Department of Global Health and Population, Harvard School of Public Health

Allan M. Brandt, PhD, Professor of the History of Science, Department of the History of Science, School of Arts and Sciences and Amalie Moses Kass Professor of the History of Medicine, Department of Social Medicine, Harvard Medical School

Daniel P. Carpenter, PhD, Allie S. Freed Professor of Government, Department of Government, Faculty of Arts and Sciences

Amitabh Chandra, PhD, Professor of Public Policy, Harvard Kennedy School

Michael Chernew, PhD, Professor of Health Care Policy, Department of Health Care Policy, Harvard Medical School

I. Glenn Cohen, JD, Assistant Professor of Law, Harvard Law School and Co-Director, Harvard Law School’s Petrie-Flom Center for Health Law Policy, Biotechnology and Bioethics

Jessica Cohen, PhD, Assistant Professor of Global Health, Department of Global Health and Population, Harvard School of Public Health
David M. Cutler, PhD, Otto Eckstein Professor of Applied Economics, Department of Economics, Faculty of Arts and Sciences & Harvard Kennedy School

Norman Daniels, PhD, Mary B. Saltonstall Professor of Population Ethics and Professor of Ethics and Population Health, Department of Global Health and Population, Harvard School of Public Health

Amy C. Edmondson, PhD, Novartis Professor of Leadership and Management, Harvard Business School

Arnold M. Epstein, MD, John H. Foster Professor of Health Policy and Management and Chair, Department of Health Policy and Management, Harvard School of Public Health; Professor of Medicine and Health Care Policy, Harvard Medical School

Richard G. Frank, PhD, Margaret T. Morris Professor of Health Economics, Department of Health Care Policy, Harvard Medical School

Julio Frenk, MPH, MD, PhD, T & G Angelopoulos Professor of Public Health and International Development, Harvard School of Public Health and Harvard Kennedy School and Dean of Faculty, Harvard School of Public Health

G. Scott Gazelle, MD, PhD, Professor of Radiology, Harvard Medical School and Professor in the Department of Health Policy and Management at Harvard School of Public Health

Sue J. Goldie, MD, MPH, Roger Irving Lee Professor of Public Health, Department of Health Policy and Management, Harvard School of Public Health and Faculty Director of the Harvard Global Health Institute

David C. Grabowski, PhD, Professor of Health Care Policy, Department of Health Care Policy, Harvard Medical School

James K. Hammitt, ScM, MPP, PhD, Professor of Economics and Decision Sciences, Department of Health Policy and Management, Harvard School of Public Health

John Hsu, MD, MBA, MSCE, Associate Professor of Medicine, Harvard Medical School

Robert S. Huckman, PhD, Albert J. Weatherhead III Professor of Business Administration, Harvard Business School

Haiden A. Huskamp, PhD, Professor of Health Care Policy, Department of Health Care Policy, Harvard Medical School

Anupam B. Jena, MD, PhD, Assistant Professor of Health Care Policy and Medicine, Department of Health Care Policy, Harvard Medical School, and Assistant Physician and Professor, Department of Medicine, Massachusetts General Hospital

Ashish Jha, MD, MPH, Professor of Health Policy and Management, Department of Health Policy and Management, Harvard School of Public Health

Nancy Kane, DBA, Professor of Management, Department of Health Policy and Management, and Associate Dean for Educational Programs, Harvard School of Public Health

Jane Kim, PhD, Assistant Professor of Health Decision Science, Department of Health Policy and Management, Harvard School of Public Health

Gary King, MA, PhD, Albert J. Weatherhead III University Professor, Department of Government, Faculty of Arts and Sciences, and Director of The Institute for Quantitative Social Science

Michael Kremer, PhD, Gates Professor of Developing Societies, Department of Economics, Faculty of Arts and Sciences

Bruce E. Landon, MD, MBA, Professor of Health Care Policy, Department of Health Care Policy, Harvard Medical School and Professor of Medicine, Beth Israel Deaconess Medical Center

Mary Beth Landrum, PhD, Professor of Health Care Policy, Department of Health Care Policy, Harvard Medical School

Peter V. Marsden, PhD, Edith and Benjamin Geisinger Professor of Sociology, Department of Sociology, and Dean of Social Science, Faculty of Arts and Sciences

Marie C. McCormick, MD, ScD, Sumner and Esther Feldberg Professor of Maternal and Child Health, Department of Social and Behavioral Sciences, Harvard School of Public Health, and Professor of Pediatrics, Harvard Medical School

Thomas G. McGuire, PhD, Professor of Health Economics, Department of Health Care Policy, Harvard Medical School

Barbara J. McNeil, MD, PhD, Ridley Watts Professor and Chair, Department of Health Care Policy, Harvard Medical School, and Professor of Radiology, Harvard Medical School

J. Michael McWilliams, MD, PhD, Assistant Professor of Health Care Policy and Medicine, Harvard Medical School, and Associate Physician in the Division of General Medicine at Brigham and Women’s Hospital

Michelle Mello, JD, MPH, PhD, Professor of Law and Public Health, Department of Health Policy and Management, Harvard School of Public Health

Carl N. Morris, PhD, MS, Professor of Statistics, Department of Statistics, Faculty of Arts and Sciences

Joseph P. Newhouse, PhD, John D. MacArthur Professor of Health Policy and Management at Harvard University, with appointments at Harvard Medical School, Harvard School of Public Health, John F. Kennedy School of Government, and the Faculty of Arts and Sciences, and Director, Harvard Interfaculty Initiative in Health Policy

Sharon-Lise Normand, PhD, Professor of Health Care Policy (Biostatistics), Department of Health Care Policy, Harvard Medical School and Professor in the Department of Biostatistics, Harvard School of Public Health

Gary P. Pisano, PhD, is Harrie E. Figgie Jr. Professor of Business Administration, Harvard Business School

Meredith B. Rosenthal, PhD, Professor of Health Economics and Policy, Department of Health Policy and Management, Harvard School of Public Health

Donald B. Rubin, MS, PhD, John L. Loeb Professor of Statistics, Department of Statistics, Faculty of Arts and Sciences

Joshua Salomon, PhD, Professor of Global Health, Department of Global Health and Population, Harvard School of Public Health

Sara Singer, MBA, PhD, Assistant Professor of Health Care Management and Policy, Department of Health Policy and Management, Harvard School of Public Health

Benjamin Sommers, MD, PhD, Assistant Professor of Health Policy and Economics, Department of Health Policy and Management, Harvard School of Public Health and Assistant Professor of Medicine, Harvard Medical School

Stephen B. Soumerai, ScD, Professor of Population Medicine, Department of Population Medicine, Harvard Medical School and Harvard Pilgrim Health Care

Katherine Swartz, MS, PhD, Professor of Health Economics and Policy, Department of Health Policy and Management, Harvard School of Public Health

Milton C. Weinstein, PhD, Henry J. Kaiser Professor of Health Policy and Management, Department of Health Policy and Management and Department of Biostatistics, Harvard School of Public Health, and Professor of Medicine, Harvard Medical School

Alan M. Zaslavsky, PhD, Professor of Health Care Policy (Statistics), Department of Health Care Policy, Harvard Medical School

Richard J. Zeckhauser, PhD, Frank Plumpton Ramsey Professor of Political Economy, Harvard Kennedy School
Dissertation Titles and Graduates’ Positions
The PhD Program in Health Policy has an excellent record of graduate placement. Selected graduates’ dissertation titles and their current positions are listed here.

Decision Sciences
"Cost-Effectiveness of Imaging and Surgery in Patients with Colorectal Cancer Liver Metastases," 1999. Current position: Professor of Radiology, Harvard Medical School; Professor, Department of Health Policy and Management, Harvard School of Public Health; Director, Partners Radiology; Director, Institute for Technological Assessment, Massachusetts General Hospital


"The Cost-Effectiveness of Early Antiretroviral Therapy for HIV-Infected Adults," 2001. Current position: Associate Professor of Public Health and Chief, Division of Health Policy, Department of Public Health, Weil Medical College of Cornell University

"Decision Analysis in the Evaluation of Breast Cancer Treatment," 2003. Current position: Assistant Attending Outcomes Research Scientist, Health Outcomes Group, Department of Epidemiology and Biostatistics, Memorial Sloan-Kettering Cancer Center


"Examining Methods Used to Evaluate the Cost-Effectiveness of Childhood Obesity Interventions," 2012. Current position: Acting Assistant Professor, Department of Pediatrics, University of Washington School of Medicine & Seattle Children’s Research Institute

Economics
"Risk Sharing in Managed Care," 1998. Current position: Professor of Health Economics and Policy, Department of Health Policy and Management, Harvard School of Public Health


"Consequences of Government Provision and Regulation of Health Insurance," 2012. Current position: Assistant Professor, Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health

"The Consumer’s Role in Nursing Home Quality," 2004. Current position: Associate Professor of Health Policy, Department of Health Care Policy, Harvard Medical School

"Conflicts of Interest among Oncology Clinical Trials Investigators and Among Patient Advocacy Organizations, and Patient Preferences and Health Care Disparities," 2010. Current Position: Assistant Professor, Lerner College of Medicine, Case Western Reserve University and Associate Professional Staff, Bioethics Department, Cleveland Clinic Foundation


"Injuries and Violence: A Review of the Literature," 2004. Current position: Assistant Professor, Department of Pediatrics, Medical School, University of Minnesota School of Public Health


"Everything for Everybody? An Examination of Organizational Scope in the Hospital Industry," 2010. Current position: Assistant Professor, Department of Health Policy and Administration, Pennsylvania State University

"The Use of Information Technology in US Health Care Delivery," 2011. Current position: Assistant Professor, School of Information & School of Public Health, University of Michigan

Medical Sociology
"End Stage Renal Disease: Factors Affecting Patient’s Treatment and Care Assessments," 2006. Current position: Director, Office of Minor-
ity Health, Centers for Medicare and Medicaid Services

“Continuity and Team Approaches to Care: Effects on Physician-Patient Relationship Quality, Patients’ Experiences, and the Technical Quality of Care,” 2007. Current position: Associate Professor, Department of Health Services, UCLA School of Public Health

“Adoption of New Medical Technologies: The Case of Cervical Cancer Prevention,” 2009. Associate Health Policy Researcher, RAND Corporation


Political Analysis


“Consumer’s Values on Health Care Services,” 2003. Current position: Professor, Department of Public Administration, College of Social Science, Ewha Women’s University, Korea

“Obesity Policy and the Public,” 2007. Current position: Associate Professor, Department of Health Policy and Management and Department of International Health, Johns Hopkins Bloomberg School of Public Health


“Essays on Politics, Public Health Law, and Health Outcomes in the United States and Sub-Saharan Africa,” 2012. Current position: Assistant Professor, Department of Health Policy and Management, Columbia University Mailman School of Public Health
Higher Degrees in History

Admissions
The dean of the Graduate School of Arts and Sciences admits candidates to the Graduate School for advanced study in history only upon the recommendation of the History Department. The department considers applications only for the PhD degree. Strong preference will be given to applicants who are adequately prepared to meet the language requirements for the doctorate. The GRE General test is required. For a complete listing of the elements of a complete admissions application, consult the GSAS Guide to Admissions and Financial Aid.

Doctor of Philosophy (PhD)

Academic Residence — The minimum academic residence requirement of graduate study in history at Harvard is two years of full-time study. For information on financial residence see the GSAS Guide to Admission and Financial Aid.

Advising — When applying, students often make quite explicit statements regarding their research interests and the faculty with whom they wish to work. Based on this information, students are assigned an advisor with whom they consult from the point of initial enrollment. The advisor must approve the student’s plans of study in the first four terms, and is often the chair of both the general examination and dissertation committees.Effecting a change of advisors typically involves conversations with both the new advisor and the original advisor. Once an agreement has been reached, the coordinator of graduate studies must be informed.

Plan of Study — A candidate upon entering the first year must, before filing his or her study card with the registrar, submit a formal Plan of Study, approved by his or her faculty advisor, to the director of graduate studies. This plan will state the candidate’s choice of courses and language examinations during the first two years.

During these years, the candidate must take at least nine half-courses, chosen in consultation with his or her faculty advisor. Of these half-courses, at least six must be in history, and of these six half-courses, two must be research seminars in history with letter grades. A minimum grade of B is required in eight courses; a grade of satisfactory is required in “The Writing of History: Approaches and Practices” in the fall term of his or her first full year of residence.

It is expected that students will ordinarily complete coursework in the term of enrollment in the course. Incompletes are not permitted in any course, unless there is a certified medical excuse.

Languages — Candidates admitted to graduate study in history will be required to show a satisfactory reading knowledge, met by a performance judged proficient or satisfactory on the departmental language examination, of at least two foreign languages. All incoming first-year students must take at least one language examination in September of their first year of graduate study, and the second in January of that year. All examinations must be completed prior to taking the General Examination. The required languages, based on the candidate’s historical field of research, are listed below:

- African History — One European language (preferably French) and Arabic or another African language
- Ancient History — French, German, Ancient Greek, and Latin
- British History — French or German and one other European language
- Byzantine History — French, German, Byzantine Greek, and Latin
- Early Modern European History — French, German, and one other language (if required for research)
- East Asian History — Two East Asian languages, or one East Asian language plus German, French or Russian
- International History — two major international languages, e.g., French, German, Spanish, Chinese, Arabic
- Latin American History — two of the following: Spanish, Portuguese, French, or German
- Medieval History — Western Medieval and Renaissance History: French, German, and Latin
- Middle Eastern History — French, German, and a Middle Eastern language
- Modern European History — Modern History of Western and Central Europe: French or Russian and German; Modern History of Eastern Europe: French or German, and two approved languages pertinent to the area studied
- Russian History — Modern Russian History: Russian and either French or German; Medieval Russian History: Russian, Old Church Slavonic, and either French or German

- South Asian History — two South Asian languages (e.g., Hindi, Urdu, Bengali, Tamil) or one South Asian and one non-South Asian language (e.g., French, German, Chinese, Japanese, Arabic)
- United States History — two of the following at a satisfactory level, or one at a proficient level: French, German, or Spanish
- Economic and Social History of Europe and the United States — French and German
- Intellectual History of Europe and the United States — French and German

These examinations will be graded “proficient,” “satisfactory,” or “unsatisfactory,” and the grades will be part of the candidate’s record. Candidates who receive a grade of “unsatisfactory” on an examination will be required to take that examination again, ordinarily the next time it is offered. In case of another failure at that time, the candidate will be permitted to remain registered but will be expected to follow a program giving emphasis to further language preparation, ordinarily including a course offered by the appropriate language department. Failure to meet the requirement following this term of remedial study will oblige the candidate to study the language intensively during the fourth term. The candidate may be required to spend this term full-time in the study of the language not yet satisfactorily known.

No more than two half-courses in a foreign language will count for credit toward the degree. Certification of competence in languages in which the Department of History does not offer examinations may be made by other departments or committees of the University.

Before approving a student’s dissertation topic, the chair, in consultation with the prospective dissertation director, must be satisfied that the candidate commands the necessary languages for the projected research.

General Examination — The purpose of the general examination is to expand and deepen students’ general historical knowledge, provide them with the tools to conduct research in history, and prepare them to teach. The examination is composed of four fields; the candidate is examined orally in each field for 30 minutes, so that the entire examination occupies two hours.
Guidelines for constructing fields:

1. Field definitions should be constructed with the guidance of the candidate’s advisor and individual examiners and must be approved by the director of graduate studies. Fields may be defined temporally within regions, nations or empires (e.g., Byzantine Empire, colonial Latin America, China since 1800) or thematically or comparatively (e.g., European intellectual history, comparative empires, comparative gender history, diasporic histories). Within each field, an encyclopedic knowledge of detail is not expected, but the candidate should demonstrate familiarity with the important problems and substantial mastery of the basic literature in each field.

2. Since the purpose of the general examination is to achieve breadth of knowledge, the selection of the four fields should be made with the aim of achieving range across time and space. Students are required to include an early and a modern field (with chronological coverage suitable to the particular regional frame). It is strongly recommended that all students present a field that includes a region of the world beyond their area of specialization.

3a. Students whose main pursuit is European history will ordinarily cover three of the following four periods in their choice of fields: ancient, medieval, early modern, modern. If one examination field is outside the history of both Europe and the United States, however, fields in two of these temporal periods will suffice.

3b. Students whose main pursuit is United States history will ordinarily cover fields in the US to 1815 and the US since 1815. If one additional examination field is outside the history of both Europe and the United States, these two fields will suffice for temporal diversity.

3c. It is strongly recommended that students in Asian, African, Latin American, or Middle Eastern history, in addition to the early and modern fields in their area of specialization, present at least one field outside these areas, or an international or comparative field.

3d. Students are permitted to present a field outside the history department comparable in scope to departmental fields.

3e. A candidate may not present more than two fields in a single national history.

Preparation for Examinations

Candidates prepare for General Examinations both by taking graduate seminars and by arranging for reading courses (History 3010) with the faculty members who will serve as examiners in the several fields. Faculty members may conduct History 3010 either as individual tutorials or as small-group discussions (when several students are simultaneously preparing similar fields for examination). The four fields are prepared with four different faculty members, one of whom is ordinarily the primary advisor.

Examiners

Candidates may select a faculty member at the assistant professor level or above and must consult the graduate coordinator if proposing to select a faculty member outside the University.

Extensions

The examination is taken late in the fourth term. Candidates may petition the director of graduate studies for extension to the fifth term. The last possible extension, to the sixth term, requires a petition to the director, subject to the approval of the department. Candidates make examination arrangements with the graduate coordinator.

Evaluation

A candidate’s advisor ordinarily chairs the examination committee. The candidate determines the order of fields to be examined. At the conclusion of the examination, the chair will ask the candidate to wait outside the room while the committee deliberates. The candidate will be informed directly after the examination whether he or she has passed, and the department will follow up with official notification. The grade is final. The overall grade may be requested from the graduate coordinator one month after the examination date.

Interpretation of the Final Grade

The passing final grades are Excellent, Good, or Fair, and a plus or minus can be attached to each grade. A candidate can be failed with no bar to reexamination, or failed without the possibility of reexamination. If one fails the General Examination with no bar to reexamination, he or she will be allowed to take the examination a second time in the fifth or sixth term. The mark of Excellent is rare and represents an exceptional performance. A mark of Good shows a solid grasp of the historiography and problems of each field, with no significant weaknesses, although varying (Good Plus to Good Minus) in articulateness. A mark of Fair indicates significant weaknesses in at least some fields, and some difficulty in articulating historiography and problems.

The grade does not become public record; it is held internally by the department, not by the Office of the Registrar. It is used when assessing departmental nominations for Harvard fellowships but will not be a part of the candidate’s dossier for applying for academic positions.

Master of Arts (AM)

The interim AM degree is ordinarily awarded, by formal application, to doctoral candidates after they have met the coursework, language, and residency requirements.

Dissertation

As soon as possible after passing the General Examination, and in no case later than two terms after passing it, doctoral candidates must identify a dissertation director, a dissertation committee, settle on a dissertation topic, and, with the director’s approval, present a proposal on the subject of their projected dissertation to their committee members. The committee is composed of the director, who should ordinarily be a permanent member of the department, and two others, one of whom may not be a permanent member.

After the fifth term, candidates are required to present their dissertation proposals in a conference of faculty and graduate students.

Beginning in their fourth year, all students will present an annual statement of progress to the members of their dissertation committee.

A prospective sixth-year or more advanced student must have a written statement from the supervisor of the dissertation indicating that there is satisfactory progress in research and writing.

An unbound copy of the completed dissertation must be distributed to each member of the dissertation committee no later than December 1 for the degree in March, April 1 for the degree in May, or September 1 for the degree in November. The final dissertation manuscript should conform to the requirements described in The Form of the PhD Dissertation.

Beginning in academic year 2009-2010 incoming students will be required to defend their dissertations. The defense committee will consist of the student’s dissertation committee plus one additional member drawn from the History Department, another Harvard department, or outside the University. Prior to the oral defense, each member of the defense committee will write a detailed report on the dissertation. The defense itself should last approximately two hours. It will be open to the intellectual community of faculty and graduate students as well as the friends and family of the student. Once the dissertation has been successfully defended, members of the committee will sign the dissertation acceptance certificate. The committee’s written reports will be appended to the certificate. The oral defense is optional for students who enter
the program before the 2009–2010 academic year.

As of May 1994, an overall Graduate School of Arts and Sciences policy has been established that students will not be permitted to register beyond their tenth year in the Graduate School.

If eight years after passing the General Examination a candidate has not completed all the requirements for the degree, he or she may be dropped from candidacy. A candidate who has been dropped can be reinstated only by formal readmission to the Graduate School and to the Department of History.

More Information

Further information about graduate study in history may be obtained by writing to the Coordinator of Graduate Studies, Department of History, Harvard University, Robinson Hall, Cambridge, MA 02138; or by visiting www.history.fas.harvard.edu.

Applications for admission and grants, and information regarding admissions procedures, may be obtained by writing to:

Admissions Office
Harvard Graduate School of Arts and Sciences
Holyoke Center 350
1350 Massachusetts Avenue
Cambridge, MA 02138

We encourage online submission of the application. See www.gsas.harvard.edu.

Current Research Interests of Members of the Department of History

Akcyeampong, Emmanuel K., Professor of History and African and African American Studies. Sub-Saharan Africa, comparative slavery, social and cultural history.

Armitage, David, Lloyd C. Blankfein Professor of History. British, intellectual, and international history.

Beckert, Sven, Laird Bell Professor of History. 19th-century US social and economic history, comparative labor history.

Blair, Ann, Charles Lea Professor of History. Early modern France; intellectual and cultural history, history of the book, history of science.

Bose, Sugata, Gardner Professor of Oceanic History and Affairs. South Asia and comparative dimensions of modern history across the Indian Ocean.

Chaplin, Joyce, James Duncan Phillips Professor of Early American History. Early American history, the history of science, intellectual history, environmental history.

Cohen, Lizabeth, Howard Mumford Jones Professor of American Studies. 20th-century US history, broadly defined; history of cities, labor, consumption, and built environment.

Cott, Nancy F., Jonathan Trumbull Professor of American History and Pforzheimer Foundation Director of the Schlesinger Library. 19th- and 20th-century US history, with an emphasis on gender.

Darnton, Robert, Carl H. Pforzheimer University Professor and Director of the Harvard University Library. 18th and 19th c. France, European social and intellectual history.

Dench, Emma, Professor of the Classics and of History. Hellenistic, Roman Republican and early Roman imperial history, especially questions of identity and historiography.

Elkins, Caroline, Professor of History. East African history, modern African and European history.

Faust, Drew, Lincoln Professor of History. 19th-century US history, Civil War.

Ferguson, Niall, Laurence A. Tisch Professor of History. Financial and international history; American and British imperial history.

Frank, Alison Fleig, Associate Professor of History. Central European history, with an emphasis on the 19th and early 20th centuries.

Gordon, Andrew, Lee and Juliet Folger Fund Professor of History. Modern Japanese history; primary interest in labor and the social and political history of modern Japan.

Gordon, Peter, Professor of History. Modern European intellectual history; Germany and France; existentialism; critical theory; theories of knowledge; modern Jewish thought.

Hankins, James, Professor of History. Medieval and early modern intellectual history; history of Italy 1050–1796; the reception of classical texts in the Middle Ages and Renaissance.


Higonnet, Patrice, Robert Walton Goeltz Professor of French History. Comparative historiography of the French and American Revolutions. The theme of suicide in French history and literature, 17th–19th centuries.

Jasanoff, Maya, Associate Professor of History. Modern British history with a focus on Britain’s relationship with its empire, Europe, and the rest of the world, particularly South Asia and the Atlantic world.

Jewett, Andrew, Assistant Professor of History and of Social Studies. History of the natural and social sciences in the US.

Johnson, Walter, Winthrop Professor of History. 19th-century US, slavery, capitalism, imperialism; social and historical theory.

Kafadar, Cemal, Vehbi Koç Professor of Turkish Studies. Early modern and modern history of the Middle East and the Balkans.

Kirby, William C., Edith and Benjamin Geisinger Professor of History. Modern Chinese history, with special concern for 20th-century political and economic history; Chinese foreign cultural and economic relations.


Kloppenberg, James, Charles Warren Professor of American History. American intellectual history, American and European intellectual and political history.

Lepore, Jill, David Woods Kemper ’41 Professor of American History. Early American history.

Lewis, Mary, Professor of History. 20th-century French and European social, urban, labor and legal history; immigration and citizenship; French colonialism.

Maier, Charles S., Leverett Saltonstall Professor of History. Comparative European political, economic, and social history in the 20th century. European-American relations; contemporary German history.

Manela, Erez, Professor of History. Modern international history; US in the world; evolution of international society; colonialism and nationalism.

Martin, Terry, George F. Baker III Professor of Russian Studies. Russian and Soviet history, including the study of Soviet nationalities policy.

McCormick, Michael, Francis Goeltz Professor of Medieval History. Cultures, societies, and economies of the late Roman and early medieval Mediterranean basin, early medieval kingdoms and Byzantium, paleography, and codicology.

McGirr, Lisa, Professor of History. Modern American history, women’s studies, history of conservatism.
Miller, Ian, Assistant Professor of History. Modern Japanese history with a focus on cultural and environmental history.

Mottahedeh, Roy, Gurney Professor of Islamic History. Medieval Islamic history.

Najmabadi, Afsaneh, Francis Lee Higginson Professor of History. Middle East, gender and modernity.

O’Neill, Kelly, Assistant Professor of History. Social and cultural history of the Russian Empire, particularly in the 18th and 19th centuries; Islam, architecture, the effect of commerce and trade on empire-building, and the history of the Black Sea region.

Owen, E. Roger, A.J. Meyer Professor of Middle East History. The political and economic history of the 19th- and 20th-century Middle East.

Ozment, Steven, McLean Professor of Ancient and Modern History. Intellectual, social, and cultural history of late medieval and Renaissance Europe.

Plokhii, Serhii, Hrushevs’kyi Professor of Ukrainian History. Social, intellectual and cultural history of Ukraine and of Central and Eastern Europe.

Rothschild, Emma, Jeremy and Jane Knowles Professor of History. 18th-century history, especially the history of economic thought and economic history.

Smail, Daniel, Professor of History. Late Medieval social and cultural history; history of law and justice; natural history and historiography.

Tai, Hue-Tam Ho, Kenneth T. Young Professor of Sino-Vietnamese History. Social and intellectual history of modern Vietnam; peasants in the Chinese Revolution.

Ulrich, Laurel Thatcher, 300th Anniversary University Professor. Early American social history; women’s history; material life in America.
Higher Degrees in the Department of History of Art and Architecture

The Department of History of Art and Architecture (HAA) offers a program of instruction that prepares students for teaching the history and theory of art at the college level, for museum work, and for independent research and writing. Students admitted to graduate study in the department are expected to be candidates for the PhD degree.

The department offers strong programs in the main aspects of the history of Western art, in Islamic and Asian art, and in architectural history as well. Approximately 20 scholars constitute the regular teaching staff.

While the department has long been a center for advanced research, its faculty also conducts undergraduate instruction for both concentrators in history of art and architecture and students of the College in general. History of Art and Architecture doctoral candidates are often invited to participate in these programs as teaching fellows and tutors, and thereby gain valuable pedagogical experience as well as financial aid. The Harvard University Art Museums also offer students the opportunity to serve as curatorial assistants.

The many colleges, museums, and commercial galleries in the greater Boston area provide a stimulating environment for study and research. Students may enroll for credit in graduate courses in the history of art and architecture offered by the Massachusetts Institute of Technology. In addition, the department regularly invites authorities from other universities and museums to offer instruction in Cambridge, and the M. Victor Leventritt Lecture in the History and Theory of Art each year brings outstanding authorities to the campus for lectures and meetings with students and faculty.

Collections of Western, Asian, and ethnographic art housed in the Harvard museums enrich the student’s training by providing fine original works of art for study. The Straus Center for Conservation and Technical Study offers instruction in the history of techniques and materials. Harvard’s library holdings include more than 200,000 books on art and archaeology, more than 800,000 photographs and slides, and an extensive collection of rare books and manuscripts. Finally, students of history of art and architecture are encouraged to take full advantage of the University’s course offerings in the humanities and social sciences and the rich intellectual and cultural life of the campus at large.

Harvard University’s program of financial assistance to graduate students is among the most generous in the country. The program is administered directly by the Graduate School of Arts and Sciences in consultation with the department. The Graduate School strives to insure that all students have sufficient resources from the University or elsewhere to support them for the entire period of work toward their degrees—and not merely at the beginning.

Teaching fellowships are available to students who conduct section meetings in introductory courses or instruct small groups of undergraduates in the department’s tutorial program. Teaching fellowships are not awarded to students in their first or second year of residence. Scholarship funds for residence in Cambridge or for foreign travel are available from endowed restricted funds restricted to the department’s use. Harvard graduate students in the history of art and architecture also receive aid from outside sources such as Fulbright programs, Merit Scholarships, the American Academy in Rome, the Japan Foundation, and fellowships administered by the National Gallery in Washington. As the costs of graduate training and foreign study continue to rise and University resources come under increasing pressure, students are urged to exert individual initiative in seeking funding from sources outside of the University.

Doctor of Philosophy (PhD)

Prerequisites for Admission

The department seeks students who have strong motivation for the study of the visual arts and the ability to develop as professional scholars. A college major in art history is a desirable but not necessary prerequisite to admission to graduate study here. The department welcomes students who have received sound training in other branches of the humanities or other disciplines, or who have engaged in practical work in museums and galleries.

Master of Arts (AM)

The department does not admit candidates for a terminal AM degree. PhD candidates may, however, apply for a master’s degree after having completed, with satisfactory grades, eight half-courses. The degree may also be offered to students unable to complete the doctorate.

Qualifying Paper

The qualifying paper (QP) is required of all students, even those who have completed a master’s thesis elsewhere. Emphasis is placed upon the student’s independence of thinking and research, ability to use primary source materials, and proficiency in writing and presentation.

The QP will be written in the fourth term of residence. The QP will be a revised and in-depth version of a paper written for a HAA graduate seminar or any other course at Harvard in one of the preceding three terms. Papers written for courses at other institutions, before or during enrollment in the HAA program, are not admissible. The QP will be no longer than about 10,000 words; doublespaced; separate bibliography; standardized references and citations; illustrations with captions.

Program of Study

The doctoral program in History of Art and Architecture usually requires six to seven years to complete and is divided into four stages: course work, qualifying paper, General Examination, and dissertation. Ordinarily three years are spent in academic residence in Cambridge prior to beginning work on the dissertation. Dissertation research usually involves travel in America and abroad.

Coursework

To fulfill residence requirements students take 16 half-courses, chiefly in history of art and architecture. However, with the approval of their advisors, they may take courses in related fields. The Graduate School of Arts and Sciences requires all full-time students to register for credit in four half-courses or equivalent study in each term. In order for students to be in good standing, the department stipulates that they maintain a B+ average in course grades.

History of Art and Architecture does not give credit for courses taken elsewhere, before coming to Harvard. Only in exceptional cases can the department depart from the rule. This requires: first, the consent of the intended thesis supervisor; second, the approval of the director of graduate studies (DGS) to submit the request to the Faculty; third, the approval of the Faculty. Consideration of this request is given only after completing a full year of coursework.

Languages

For all fields, the department’s minimum language requirement is a reading knowledge of two languages that are relevant to the student’s field of study and research interest (excluding his/her native language). The languages will have to be deemed necessary, and approved of, by a faculty member in the field and the DGS. The student will be required to provide proof of proficiency in the languages.

The requirements for languages should be met by the end of the fourth term. Two half courses of language study relevant to the field of investigation are satisfactory.
study may be counted toward fulfilling departmental course requirements. Language skills are a vital resource of the art historian, and those planning to apply to the department’s graduate program are urged to give high priority to language training. Since a single standard cannot be applied to all, students are expected to master the languages necessary for their own fields of specialization. Ideally, students should acquire competence in the required languages before entering the department’s graduate program.

G3 Presentations
Beginning in Fall 2011, all third-year students in residence are expected to present to their peers and the faculty a short (20-minute) presentation on the research project that they hope will form the basis of their dissertation. These presentations will be scheduled across two sessions in October, with four or five students presenting per session.

General Examination
The General Examination will be taken no later than the sixth term in residence, typically in the spring term G3. The exams should take place during reading period of the spring term. Following completion of the qualifying paper and at least two months prior to the date of the examination, the student should consult with advisors and present to the department a written proposal describing the general and specific fields to be covered in the examination.

The general field ordinarily consists of a combination of broad areas of art and architectural history such as Romanesque and Gothic, southern Renaissance and Baroque, 19th- and 20th-century Europe and America, and medieval and early modern Japan.

The specific field is a narrower area of study chosen by the student and subject to faculty review; in principle it should comprise a coherent and clearly defined area of scholarly inquiry. Ordinarily this specific field will cover no less than 50 years.

The examination committee will ordinarily consist of three members, at least two of whom belong to the department faculty. They will be appointed by the faculty in consultation with the student and advisor. During preparation for the examination, students should meet regularly with the committee and, with its help, should formulate possible examination questions.

The examination is designed to test the students’ mastery of their scholarly fields and their ability to proceed to writing a dissertation. Students are allowed access to the library and to other resources while answering Parts 1 and 2. The examination consists of four parts:

1. Written essay(s) (eight hours). Interpretation. General field. One or two questions designed to test the student’s grasp of broad art-historical issues.
2. Written essay(s) (eight hours). Methods and Historiography. Specific field. One or two questions designed to bring out the student’s knowledge of sources, both primary and secondary, and of methodological issues.
3. Oral examination (three hours). Analysis of visual material. General field. The student will have one and a half hours to examine eight to 12 works of art or sets of photographs in preparation for an oral discussion of all but one of them with the examination committee. The discussions may involve such issues as attribution, connoisseurship, contextualization, formal analysis, patronage, technique, and condition.
4. Oral examination (one-and-one-half hours). Evaluation and review. Within one week of Part 3, the student and the examination committee will meet to evaluate the entire examination and discuss plans for the dissertation. Students whose performance on the examination is not satisfactory will be given one opportunity to repeat all or part of it.

Dissertation
Dissertation Proposal. The student should submit a dissertation proposal of no more than 1,500 words to the department for its approval within three months after passing the General Examination. This proposal, which outlines the proposed topic and plan of research, will form the subject of a colloquium which will consist of a committee of no fewer than four faculty members and the student. Other interested faculty and students may attend. Students whose travel plans preclude participation after passing the General Examination must participate in a colloquium at the preceding period.

Students ordinarily devote three years to research and writing the dissertation, and complete it prior to seeking full-time employment. The dissertation will be judged according to the highest standards of scholarship, and should be an original contribution to knowledge and to the interpretation of its subject. The final manuscript must conform to the requirements described in The Form of the PhD Dissertation, distributed by the department and the Graduate School of Arts and Sciences. When the dissertation has been approved by the dissertation committee, a dissertation defense should be scheduled in agreement with the department, student, and dissertation committee.

Admissions
For admission and financial aid applications write to the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138; phone (617) 495-5315 or e-mail to admission@fas.harvard.edu. We encourage online submission of the application. See www.gsas.harvard.edu.

A writing sample in proposed field of study (if possible) and GRE scores are required for application for admission to the Department of History of Art and Architecture. The writing sample should be uploaded (not mailed) and consist of a single (one) document of reasonable length. (A term paper or a chapter of a thesis, rather than the entire thesis.) If 3 MB is not adequate for your upload, please upload only an excerpt. This will be adequate for initial consideration. The Department will contact you directly if more information is needed.

The proposed field of study should be specified on the application. Candidates have the option of specifying architecture as their main area of interest in any period or field.

Department of History of Art and Architecture Faculty

Ruth Biehfeldt, Associate Professor of History of Art and Architecture. Classical art and archeology with a focus on Roman. PhD, University of Munich.


Benjamin Buchloh, Andrew W. Mellon Professor of Modern Art. Modern Art. PhD, City University of New York.


Thomas B.F. Cummins, Dumbarton Oaks Professor of the History of Pre-Columbian and Colonial Art. Pre-Columbian and colonial Latin American art. PhD, University of California at Los Angeles.


Jeffrey Hamburger, Kano Francke Professor of German Art and Culture. Medieval. PhD, Yale University.


Jinah Kim, Assistant Professor of History of Art and Architecture. S. Asian Art., PhD, University of California, Berkeley.


Ewa Lajer-Burcharth, William Dorr Boardman Professor of Fine Arts. 18th- and 19th-century European, contemporary post-1970s, feminist and critical theory. PhD, City University of New York.


Gülru Necipoglu, Aga Khan Professor of Islamic Art. Islamic. PhD, Harvard University.

Alina Payne, Professor of History of Art and Architecture. Renaissance and Baroque architecture, late 19th- and 20th-century history and theory of architecture; architectural representation. PhD, University of Toronto.


David Roxburgh, Prince Alwaleed Professor of Islamic Art History and Architecture. Islamic. PhD, University of Pennsylvania.

Hugo van der Velden, Professor of History of Art and Architecture. N. Renaissance. PhD, Utrecht University.


History of Science

The department offers comprehensive programs leading to the degrees of Master of Arts and Doctor of Philosophy in the History of Science. The objective of these programs is to train students to examine the development of science from a wide variety of perspectives through a course of study that will enable the candidate to lay a broad and sufficient foundation for teaching and research in various areas of the history of the natural and social sciences, behavioral and brain sciences, technology, mathematics, medicine, and allied health. In addition to courses in history, history of science, and the sciences, related work is often selected from fields such as philosophy, government, literature, sociology, law, and public policy. Courses from the Program on Science, Technology, and Society at the Massachusetts Institute of Technology may be taken by cross-registration.

In the history of science program the methods of historical research are employed to explore the genesis and evolution of the sciences and to analyze the growth of science as part of the intellectual and social experience of humankind. Science is its subject and history its method. To pursue advanced work in the field, therefore, it is desirable to have some preliminary training in the natural and social sciences and in history.

Students in the doctoral program are eligible for financial support administered under the direction of the Graduate School of Arts and Sciences, as described in the application for admissions and in Financing Graduate Study. Harvard grants are awarded for the first and second years primarily on the basis of financial need as determined by the Graduate School at the time of application. Ordinarily, living stipend support is limited to the first two years, including summer support, and tuition grants are limited to five years.

After the completion of two years in residence, candidates for the PhD degree in history of science ordinarily are eligible for appointments as teaching fellows in the history of science to serve as tutors in the undergraduate program of history and science. A candidate may also lead discussion sections in departmental courses and courses given under the Committee on the Core Program. Doctoral candidates making satisfactory progress are eligible to apply for completion-year funding from the Graduate School. Applicants are encouraged to apply for non-Harvard fellowships, such as those offered by the National Science Foundation, the Jacob Javits Fellowship Program, and the Mellon Foundation.

Students in the master’s program must show the capacity to finance themselves without University help.

Master of Arts (AM)

This program is suitable for postbaccalaureate students in other disciplines and professions who wish advanced training in the history of science. It also is appropriate for students who are advanced degree candidates in foreign universities.

Academic Residence – The minimum residence requirement is one year of full-time study (eight half-courses or equivalent). Of the four full courses required, the student must include the half-course Salon (History of Science 310hf), two half-courses offered “Primarily for Graduate Students” (not including “Graduate Courses of Reading and Research”), one half-course offered “Primarily for Graduate Students” (not including “Graduate Courses of Reading and Research”) outside the department, and two additional half-courses in the history of science. The remaining two half-courses may be chosen from offerings in science, history, the history of science, or other related fields. An average of B must be maintained throughout the year.

Languages – A reading knowledge of a foreign language other than English is required. All students will be expected to take the language examination in October of the year of their admission.

Essay – An essay of 7,500–10,500 words (roughly twenty-five to thirty-five pages), exclusive of bibliography, on a subject to be determined in consultation with the student’s advisor, must be submitted to the department toward the end of the second term, but no later than the last day of Reading Period. A paper written for a seminar may be revised or expanded for this requirement.

Doctor of Philosophy (PhD)

Prerequisites for Admission – Undergraduate training should ordinarily include courses in history and a major or strong minor in natural science. Any student who, in the opinion of the department, has not had sufficient scientific or historical preparation will be required to make up this deficiency by appropriate course work, which may be counted toward fulfillment of the residence requirement. The GRE General Test is required.

Academic Residence – The minimum residence requirement is two years of full-time study (16 half-courses or equivalent of which ordinarily a maximum of four may be “Graduate Courses of Reading and Research”). During the first two years at Harvard the candidate must pass sixteen half-courses, with an average grade of B or above. These courses must include: the half-course Salon (History of Science 310hf); six additional half-courses in the history of science, of which at least two must be offered “Primarily for Graduate Students” (not including “Graduate Courses of Reading and Research”); one half-course offered “Primarily for Graduate Students” (not including “Graduate Courses of Reading and Research”) outside the department. Students writing dissertations on a post-1800 topic are required to take two history of science courses on pre-1800 topics, and vice versa. A candidate who maintains a record of high distinction in the first year at Harvard may petition for academic credit of up to four half-courses for graduate work of high quality done at another institution provided those courses are in accepted fields.

Program of Study – Students must plan both their course distribution requirements and the three or four “fields of study” that they intend to submit for the general examination (see section on the General Examination below). Study programs, courses, seminars, and fields of study are selected in consultation with the faculty advisor assigned to the student at the beginning of the first year of residence. By the end of the first term, but not later than the end of the second term of residence, all students must complete with their advisor a written plan for fulfilling the department’s requirements. At the end of each year, the student’s progress is reviewed by the department, and a determination is made of the student’s qualification for continuing graduate work in light of both departmental and OSAS requirements.

All or part of these requirements may be waived if a student can present an equivalent preparation successfully completed elsewhere.

Languages – All students must demonstrate proficiency in at least one language other than English by the end of their third year. The language(s) in question should reflect their research interests and ordinarily will be agreed upon in consultation with their advisors at the beginning of their first year of graduate study; the list may be revised as necessary to reflect students’ changing intellectual trajectories. Some students may enter with all the language preparation they will need for graduate study in their chosen fields. Others may have an elementary or intermediate knowledge of a language or languages and may improve on that knowledge by taking additional coursework.

Students can demonstrate proficiency in various ways, but most often by taking third-year coursework in a language other than English.
and/or using non-English-language texts in one or more seminar papers or in the preparation of their general examination fields and prospectuses. The development of oral skills is also encouraged. Proficiency is assumed in the case of native speakers and bilingual students, as long as they are skilled in both reading and speaking; the language in question must be relevant to their research fields.

As students’ fields of study develop, they may find that they need to acquire new languages or further develop their skills in ones they already know. This should be discussed by students and their advisors on a regular basis as part of the advising process.

Teaching — As part of the program that prepares students for careers in teaching and research, the department requires each student to participate as a teaching fellow or course assistant in at least one course offered by a member of the department faculty.

General Examination — The General Examination, which is oral, is to be taken at the end of the fourth term, or the very beginning of the fifth term. No encyclopedic command of detail is expected. Rather, the general exam committee will seek evidence of an understanding of the main intellectual developments within a field of science, familiarity with the chief historiographic traditions associated with a particular content area, and the ability to set a particular field of science within its institutional, political, and social contexts.

The general examination includes ordinarily three or, occasionally, four fields. The number and definition of the fields is determined by the student in consultation with her or his advisor. At least two (2) fields should be in history of science and directed by faculty in the department or people otherwise designated by the department. All general examinations must include at least one outside field. For a general examination comprising four fields, possible combinations include (but are not limited to):

• Two fields in history of science and two fields in history
• Two fields in history of science and two fields in literature
• Two fields in history of science and two fields in sociology
• Two fields in history of science, one in philosophy of science, and one in science
• Two fields in history of science, one in history and one in anthropology
• Two fields in history of science, one in government, and one in sociology
• Two fields in history of science, one in Art History and one in VES

• Three fields in history of science, and one in history

Dissertation — After passing the General Examination, generally in the fifth term, a candidate for the doctorate is required to submit to the department a dissertation prospectus. The proposal should follow the departmental Dissertation Proposal Guidelines. The student discusses a draft of the prospectus with the Dissertation Prospectus Committee, which gives its recommendation for the approval of the dissertation, subject to specified revisions. The coordinator of graduate studies will arrange for the whole faculty to review the prospectus at a faculty meeting.

A prospective fourth-year student must have obtained approval of a prospectus. When the whole faculty approves the prospectus, the selection of the dissertation director and other members of the committee is ordinarily also approved at the same time. The names of faculty members available for the direction of the PhD dissertation are listed in the course catalogue under History of Science 300. The director of the dissertation must be an eligible member of the department. Dissertation committees comprise at least three members. The department requires that two members of the committee be members of the department. Students in the History of Science are encouraged to include junior faculty on their dissertation committees.

After the prospectus has been approved, the student, in conjunction with her or his advisor, is required to submit a brief annual report on the progress of the dissertation each year. The annual report form is due in September following a discussion between the student, the advisor and, ordinarily, at least one other member of the committee.

The dissertation defense will ordinarily take place after the dissertation has been approved by the members of the dissertation committee.

Work for the degree must be completed within a total of five years, or in certain fields where additional preparation is necessary, a total of six years. An extension is considered only upon submission of a petition to the department, showing just cause.

Advising — A student entering the program is assigned a preliminary, primary advisor, who serves as her or his primary advising resource during the first two or three, semesters. In addition, all first year doctoral candidates will be assigned a continuing graduate student (post-grads) who will act as a peer mentor during the first year, helping the candidate to acclimatize to departmental expectations and routines.

Once the fields for general examination have been set, the three or four faculty members who will be working with the student to prepare her or him for the examinations are consolidated into a formal Generals Advising Committee. Following the successful completion of the general examination, this will be replaced by the Dissertation Prospectus Committee, which will supervise the preparation of the prospectus, overseen by the primary advisor.

When the student’s dissertation prospectus has been vetted by the Dissertation Prospectus Committee and approved by the department, a Dissertation Advising Committee will be set up. This will generally consist of the primary advisor/dissertation director and at least two additional dissertation consultants. Two members of the dissertation committee must be members of the department. Together, these three individuals act as a collective intellectual resource for the student.

The director of graduate studies and the department chair are available at all times to provide additional support and advice at any stage of the graduate student program. Students are encouraged to seek help from either or both of these individuals if any part of the advising process seems not to be working as it should.

Further information regarding courses and programs of study in history of science may be obtained by contacting:

Director of Graduate Studies
Department of the History of Science
Science Center 371
Cambridge, MA 02138
(617) 495-9978
www.fas.harvard.edu/~hsdept

For information concerning admission, grants, tuition, and registration policies:

Admissions Office
Harvard Graduate School of Arts and Sciences
Holyoke Center 350
1350 Massachusetts Avenue
Cambridge, MA 02138
(617) 495-5315
admiss@fas.harvard.edu

We encourage online submission of the application. See www.gas.harvard.edu.

Selection of PhD Dissertation Titles

“The American Subject: The New Math and the Making of a Citizen”

“A Body Made of Nerves: Reflexes, Body Maps and the Limits of the Self in Modern German Medicine”

“Broken Pieces of Fact: the Scientific Periodical and the Search for Order in Nineteenth-Century France and Britain”
Current Research Interests of Members of the Department of the History of Science

Blair, Ann, Henry Charles Lea Professor of History. Early modern France; intellectual and cultural history, history of the book, history of science.

Brandt, Allan M., Amalie Moses Kass Professor of the History of Medicine (HMS), Professor of the History of Science (FAS), Dean, Graduate School of Arts and Sciences. History of American medicine and science; health and public policy; medical ethics.

Browne, Janet, Aramont Professor of the History of Science. History of biology; natural history and exploration; 1700–1900; Darwin and Darwinism; evolutionary thought; scientific biography.

Chaplin, Joyce, James Duncan Phillips Professor of Early American History. Early American History; Intellectual History; Environmental History; History of Science.

Csizsar, Alex, Assistant Professor of the History of Science. Cultural politics of scientific publishing in France and Britain, with a focus on the eighteenth and nineteenth centuries.

Daemmrich, Arthur, Assistant Professor of Business Administration (HBS). International comparative studies of regulatory institutions, and sector-level research on the pharmaceutical, biotechnology, and chemical industries.

Galison, Peter L., Joseph Pellegrino University Professor. History and philosophy of 20th century physics; instrumentation; relationship of physics to engineering.

Godfrey-Smith, Peter, Professor of Philosophy. Philosophy of biology, Philosophy of mind, Pragmatism (especially John Dewey), Philosophy of science, Metaphysics, Epistemology.

Hammonds, Evelyn, Barbara Gutmann Rosenkrantz Professor of the History of Science and of African and African American Studies; Dean of Harvard College. History of US medicine and public health, history of race in science, medicine, and technology; gender, sexuality, and science.

Harrington, Anne, Harvard College Professor and Professor of the History of Science. History of psychology and the brain sciences, 18th through 20th centuries.

Hyman, Steven, Harvard University Distinguished Service Professor; Affiliate of the Department of History of Science; Professor of Stem Cell and Regenerative Biology; Professor of Neurobiology.

Jasanoff, Sheila, Pforzheimer Professor of Science and Technology Studies, Kennedy School of Government. Special focus on the relationship between law, science, and politics in contemporary democratic societies. Environmental policy, science, and technology policy, and comparative regulatory policy.

Jones, David, A. Bernard Ackerman Professor of the Culture of Medicine. History of decision making in cardiac therapeutics.

Kleinman, Arthur, Esther and Sidney Rabb Professor of Anthropology; Professor of Medical Anthropology in Social Medicine and Professor of Psychiatry [HMS]. Medical Anthropology: social experience, suffering, social and mental health; China, Taiwan, North America.

Kuriyama, Shigehisa, Reischauer Institute Professor of Cultural History. Broad philosophical issues (being and time, language and experience, curiosity and desire) through the lens of specific topics in comparative cultural history.

Lemoy, Rebecca, Assistant Professor of the History of Science. History of the human sciences, the history of brainwashing, coercive interrogation, and the “Self as Data”.

Mazur, Barry, Gerhard Gade University Professor. Number theory, automorphic forms, related issues in algebraic geometry.

Minow, Martha, Jeremiah Smith, Jr. Professor of Law, Dean of the Faculty of Law: Equality and Inequality, Human Rights and Transitional Societies, Law and Social Change, Religion and Pluralism.

Moss, Robb, Rudolf Arnheim Lecturer on Filmmaking.

Park, Katharine, Samuel Zemurray Jr. and Doris Zemurray Stone Rockcliffe Professor of the History of Science. History of science in the late Middle Ages and the Renaissance; history of medicine and the life sciences; history of gender, sexuality, and the body.

Picon, Antoine, Professor of the History of Architecture and Technology at the Graduate School of Design. History of architectural technologies from the 18th century to the present.

Podolsky, Scott, Associate Professor of Social Medicine [HMS]. History of antibiotics over the past half-century.

Richardson, Sarah, Assistant Professor of History of Science, and Studies of Women, Gender, and Sexuality. Race and gender in the biosciences and on the social dimensions of scientific knowledge.

Ragab, Ahmed, Richard T. Watson Assistant Professor of Science and Religion. History and development of medieval Islamic sciences, the relationship between science and religion in the medieval and modern Middle East, the history of medieval Islamic hospitals, and the intellectual and cultural history of women in the region.

Roosth, Sophia, Assistant Professor in the History of Science. Twentieth and twenty-first century life sciences.

Mark Schiefsky, Professor of the Classics. History of philosophy and science in the Greco-Roman world, especially medicine and mechanics.

Shapin, Steven, Franklin L Ford Professor of the History of Science (on leave spring term). Sociology of scientific knowledge; early modern science; the social role of the scientist in 20th- and 21st-century America; science and entrepreneurship; the history and sociology of dietetics.
Higher Degrees in Human Evolutionary Biology

Introduction

Research in the Department of Human Evolutionary Biology asks the question “Why are humans the way we are?” using evolutionary and comparative approaches to human biology and behavior. The faculty view several major, interrelated research questions as most important to the study of human evolutionary biology. First, what selective forces operated at different times in primate and human evolution, including today, to make humans the way we are behaviorally, anatomically, physiologically and genetically? Second, what are the genetic versus environmental underpinnings of the human phenotype—both behavioral and physical—in terms of fixed differences from other primates and of polymorphic differences that vary among humans? Third, how do the evolutionary bases of important aspects of human biology interact with social and cultural factors in shaping problems we currently face such as violence, overpopulation, and disease? In order to address these questions, the department seeks to include and integrate behavioral ecology of human and non-human primates, genetics and genomics, developmental and functional morphology, paleontology, and physiology.

The objective of the PhD program is to provide students with comprehensive training taking a strongly evolutionary and comparative approach to human adaptations and their evolution. Faculty research spans a broad range of approaches aimed at understanding the evolution of humans and their closest primate relatives. Our interdisciplinary approach includes field and/or laboratory programs in endocrinology, human behavioral biology and ecology, ape behavioral ecology and biology, disease ecology and cultural dynamics, human and primate paleobiology, experimental functional and developmental anatomy, and the genetics and genomics of humans and primates.

We are open to interdepartmental PhD programs. We have strong collaborative links to faculty in the departments of Anthropology, Organismic and Evolutionary Biology, Psychology, and Harvard Medical School. Primary advisors of graduate students must be faculty members within the Department of Human Evolutionary Biology.

The department is located mainly on the fifth floor of the Peabody Museum, Harvard University, 11 Divinity Avenue, Cambridge, Massachusetts 02138 and houses laboratory research facilities in genetics, paleontology, skeletal and dental biology, experimental biomechanics, endocrinology, nutritional analysis, and isotopic and materials analysis. Other Harvard resources include: FAS Center for Systems Biology, Museum of Comparative Zoology (including the Concord Field Station in Concord, Massachusetts), the Center for Nanoscale Systems, the Peabody Museum’s extensive human and non-human skeletal collections, and extensive facilities for human and non-human experimental research.

Degrees Offered

The graduate program in human evolutionary biology is a PhD degree program. There is no terminal masters degree program in human evolutionary biology. Students apply to and are admitted to the doctoral degree program only.

Since the program’s principal objective is to prepare students for college or university teaching or research, for which the doctoral degree is required, the master’s degree in human evolutionary biology is usually not taken as an end in itself. While a student enrolled in the doctoral program may earn a masters degree en route to their doctoral degree, as the student qualifies for it, the masters degree is not normally taken as an end in itself, unless an enrolled student is unable or chooses not to continue to the dissertation phase of the doctoral program.

Admission Requirements

Our PhD program is small, admitting each year only a few students with good backgrounds in evolutionary biology and with research interests that correspond with those of our faculty. Applicants must hold a Bachelor’s degree, ordinarily with distinction, and take the verbal, quantitative, and analytical aptitude tests of the Graduate Record Examination (GRE). Successful applicants normally have strong backgrounds in math and sciences, particularly in biology, some acquaintance with statistics, and some laboratory or field research experience. We look for students with high grade-point averages, strong letters of recommendations from professors, and high GRE scores. Application for admission is submitted at www.gas.harvard.edu.

The department considers a period of five or six years in residence to be the norm for PhD candidates. For financial residence requirements, see www.gas.harvard.edu.

Financial Aid

Students admitted to the PhD program receive full tuition and ten months of living support for the first four years and a final year of dissertation completion support. In the first two years they receive their living support as stipends; in the third and fourth years, as teaching or research fellowships. They also receive two-month summer research awards for the summers following the first four years in graduate school. Dissertation completion support is available as soon as the student is prepared to finish the dissertation, ordinarily in the fifth or sixth year. Progress is reviewed annually and financial awards are contingent upon students making satisfactory progress in the program.

Prospective graduate students are urged to apply for outside fellowships that offer tuition and stipend support during graduate school. These include the National Science Foundation Graduate Research Fellowship, the Ford Foundation Diversity Fellowship, and the US Department of Education’s Jacob K. Javits Fellowship. Application deadlines for these fellowships are in the fall, well before Harvard’s admissions deadline. Eligible applicants are encouraged to investigate these funding opportunities early in the application season.

Students in the department are also eligible for summer or term-time research awards and traveling fellowships funded by Harvard University. They also receive research support from the National Science Foundation, Wennergren Foundation for Anthropological Research, or L.S.B. Leakey Foundation.

Programs of Study

Higher Degrees in Human Evolutionary Biology

Introduction

Research in the Department of Human Evolutionary Biology asks the question “Why are humans the way we are?” using evolutionary and comparative approaches to human biology and behavior. The faculty view several major, interrelated research questions as most important to the study of human evolutionary biology. First, what selective forces operated at different times in primate and human evolution, including today, to make humans the way we are behaviorally, anatomically, physiologically and genetically? Second, what are the genetic versus environmental underpinnings of the human phenotype—both behavioral and physical—in terms of fixed differences from other primates and of polymorphic differences that vary among humans? Third, how do the evolutionary bases of important aspects of human biology interact with social and cultural factors in shaping problems we currently face such as violence, overpopulation, and disease? In order to address these questions, the department seeks to include and integrate behavioral ecology of human and non-human primates, genetics and genomics, developmental and functional morphology, paleontology, and physiology.

The objective of the PhD program is to provide students with comprehensive training taking a strongly evolutionary and comparative approach to human adaptations and their evolution. Faculty research spans a broad range of approaches aimed at understanding the evolution of humans and their closest primate relatives. Our interdisciplinary approach includes field and/or laboratory programs in endocrinology, human behavioral biology and ecology, ape behavioral ecology and biology, disease ecology and cultural dynamics, human and primate paleobiology, experimental functional and developmental anatomy, and the genetics and genomics of humans and primates.

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tified primary areas: human evolution, genetics, human anatomy and biology, behavior and ecology of humans, behavior and ecology of primates. Successful completion of the proseminar and the three area courses within the first two years constitutes the major portion of the qualifying examination process.

In addition, students must submit a draft of a research proposal (the "mock NSF") and be examined orally by the faculty. The oral examination is based on the research proposal, which students develop in consultation with their advisors, as well as their command of relevant areas of human evolutionary biology. The proposal is written in the form of a Doctoral Dissertation Improvement Grant proposal to the National Science Foundation and is circulated to the faculty at least a week before the oral examination. Students are expected to fulfill this requirement by the end of their second year in residence.

Competence in appropriate statistical analysis is required by the time of the qualifying examination.

Students must acquire both theoretical grounding and technical skills. This means gaining experience with designing research projects, collecting data in the laboratory or field, and analyzing those data. To achieve this, appropriate field and/or laboratory training is required, as determined in consultation with faculty advisors. Depending upon the nature of the research to be undertaken for the PhD, the faculty may prescribe further skills, such as fluency in a field language, advanced laboratory skills, or further quantitative skills.

Years Three Through Five

After completion of the qualifying examination, the student, in consultation with his or her advisors, will select a dissertation topic. The faculty will appoint a dissertation prospectus committee, ordinarily consisting of at least three members, at least two of whom will be department members. The student, in consultation with his or her committee, will further develop the scope of the dissertation topic.

The student will submit to this committee a thesis prospectus that embodies the general planning of the work and shows what contribution it will make to the field. The prospectus should give a concise statement of the problems being studied or hypotheses tested and a description of the manner in which the field or laboratory investigation will be carried out. The prospectus should conform to the format and length of an NSF Doctoral Dissertation Improvement Grant application. Ideally, it will also be a grant application. The candidate will meet with the dissertation prospectus committee to discuss the prospectus and consider any necessary revisions, including the possibility that an alternate prospectus would be required. Approval of a dissertation prospectus, including any revisions, is expected by the end of the sixth term in residence.

An approved dissertation is normally expected by the end of the twelfth term. The dissertation committee is composed of at least three readers, two of whom must be members of the Faculty of Arts and Sciences. At least one reader will be a member of the Human Evolutionary Biology faculty, and at least one reader will normally be outside that faculty. The form of the dissertation may vary depending on the student’s research but the content should ordinarily be substantive enough to represent or to produce at least three published articles.

The dissertation defense consists of an oral presentation for a general audience followed by an oral examination attended by the dissertation committee and other interested faculty. Only after successful completion of this examination and the incorporation of any revisions required by the dissertation committee will a candidate’s dissertation be approved for submission to the Registrar.

Recent PhD Dissertation Titles
Margaret Crofoot, “Intergroup Competition in White-Faced Capuchin Monkeys (Cebus capucinus)”
Rachel Carmody, “Energetic consequences of thermal and non-thermal food processing”
Alexander Georgiev, “Energetic costs of reproductive effort in male chimpanzees”
Amanda Lobell, “The Evolution of Matrix Metalloproteinase 9 and the Invasive Primate Placenta”
Karola Kirsanow, “Animal Physiology of Biomineral Diagenesis, and the Isotopic Reconstruction of Palaeoenvironment”
Katherine McAuliffe, “The Evolution and Development of Inequity Aversion”
Meredith Reiches, “Female Adolescent Energy Expenditure in The Gambia”
Victoria Webber, “Comparative Cognitive Development and Endocrinology in Pan and Homo”
Brian Wood, “Household and Kin Provisioning by Hadza Males”
Qu Zhang, “Understanding Genome Evolution by Comparative Genomics”
Katherine Zink, “Mechanical and thermal food processing effects on mastication and craniofacial morphology”

Faculty Research Interests
Terence D. Capellini (PhD, City University of New York & New York Consortium in Evolutionary Primatology, 2007) Assistant Professor. Human and primate functional genetics and evolutionary-developmental biology; cis- and trans-regulation of morphological development in mice and primates.

Peter Ellison (PhD, Harvard 1983) John Cowles Professor of Anthropology. Biological anthropology, human biology, reproductive physiology, endocrinology, demography.

Katherine Hinde (PhD, UCLA 2008) Assistant Professor. Mother’s milk and infant physical, behavioral, and social development in humans and non-human primates.

Daniel Lieberman (PhD, Harvard 1993) Edwin M. Lerner II Professor of Biological Sciences; Harvard College Professor; Affiliate in the Department of Organismic and Evolutionary Biology. How and why the human body looks the way it does; functional, developmental and evolutionary anatomy of the skull and postcranium.

David Pilbeam (PhD, Yale 1967) Henry Ford II Professor of Human Evolution. Paleoanthropology, hominoid evolution, anatomy, paleoecology; Africa and Asia.

Maryellen Ruvolo (PhD, Harvard 1983) Professor in Human Evolutionary Biology, Harvard College Professor; Affiliate in the Department of Organismic and Evolutionary Biology, Associate of the Broad Institute of Harvard and MIT. Human and primate molecular adaptations, detection of selection in primates, hominoid genetic evolution, comparative genomics.

Tanya Smith (PhD, Stony Brook 2004) Associate Professor. Dental development and three-dimensional tooth structure in fossil and living apes and humans.

Noreen Tuross (PhD, Brown U 1985) Landon T. Clay Professor of Scientific Archaeology. Application of biogeochemical techniques, including immunology and mass spectrometry, to archaeological questions. Ancient DNA and DNA damage. Human impacts on the land, paleodiet, migration and seasonality.


Lecturers
John Barry, Lecturer on Human Evolutionary Biology
Judith Chapman, Lecturer on Human Evolutionary Biology
Lara Saipe Durgavich, College Fellow in Human Evolutionary Biology

Carole Hooven, Lecturer on Human Evolutionary Biology

Kristi Lewton, Preceptor in Human Evolutionary Biology

Susan Lipson, Lecturer on Human Evolutionary Biology

Zarin Machanda, Lecturer on Human Evolutionary Biology

Stephanie Meredith, College Fellow in Human Evolutionary Biology

Linda Reynard, Lecturer on Human Evolutionary Biology

Anna Warrener, Lecturer on Human Evolutionary Biology

Katherine Zink, College Fellow in Human Evolutionary Biology
Inner Asian and Altaic Studies

Inner Asian and Altaic Studies deal with the history and cultures of the peoples in the steppe, mountain, forest, and oasis areas between China, Russia, western Iran, and Pakistan. This geographic area comprises Central Asia (formerly Soviet Central Asia, Xinjiang, eastern Iran, and Afghanistan), Kazakhstan, the northern regions of Pakistan, Tibet (including Qinghai, eastern Sichuan, Gansu, and northwestern Yunnan), Mongolia, and Manchuria. The Altaic languages include the Turkic group, the Mongolian group, and the Tungusic group.

The Committee on Inner Asian and Altaic Studies was established in the fall of 1972 for the purpose of stimulating and integrating instruction and research in these areas. Harvard is preeminent among the very few universities where Inner Asian and Altaic studies may be pursued. Harvard's library holdings in East European, East Asian, Islamic, and South Asian areas led to a development of strength in the Inner Asian and Altaic fields prior to the actual establishment of this program. The research centers and degree programs that exist at Harvard on the four sides of the Inner Asian area have contributed much material directly relevant to the study of this region. Harvard possesses outstanding collections in the Arabic, Chinese, Indian, Iranian, Russian, Tibetan, and Turkish languages, which comprise the most important primary sources for the study of this area, as well as in Manchu and Mongolian. These collections are variously held by the Widener, Harvard-Yenching, Houghton, Dumbarton Oaks, Gibb, Tozzer, and Fine Arts libraries. The East Asian Research Center and Harvard's microfilm collection also contain important source material.

The PhD program in Inner Asian and Altaic Studies is modeled on similar joint degree programs for adjacent areas, in particular the PhD programs in History and East Asian Languages and in History and Middle Eastern Studies. Like these, the PhD program in Inner Asian and Altaic Studies is not training in area studies as such but rather a program in an established discipline (i.e., anthropology, art and architecture, history, linguistics, literature, or religious studies) with emphasis on Inner Asia and/or the Altaic languages. The program includes a language requirement and a general examination in three fields, and is restricted to candidates for the PhD degree. It does not offer a Master's program.

Prerequisites for Admission

All students in the program are expected to meet the requirements of the Graduate School of Arts and Sciences, including a bachelor's degree from a recognized institution, a superior undergraduate record, and the reading knowledge of at least one appropriate foreign source language such as Arabic, Chinese, Manchu, Persian, Russian, or Turkish. A master's degree in hand is advantageous.

The requirements for the degree are:

Academic Residence

A minimum of two years is required. In most cases, however, fulfillment of all requirements for the degree will involve at least one additional year of course work. In consultation with the student, the committee members and advisors will arrange a particular program of study.

Financial Requirements

See GSAS Guide to Admission and Financial Aid or The Graduate School of Arts and Sciences Handbook.

Introductory Courses

All first-year students in this program should take an introductory course in at least one of the following fields given by members of the committee.

1. History of Inner Asia
2. Archaeology and Art of Inner Asia
3. Comparative and Historical Turkic, Mongolian, Manchu, Tibetan, Tungusic, or Altaic Linguistics
4. Inner Asian Philology (Khotanese Saka, Sogdian, Tibetan, Tokharian, Gandhari [Niyal] Prakrit, etc.)

Language Examinations

Upon enrolling in graduate school the candidate should offer proof of competence in at least one foreign "tool" language (this will be done by way of examination in the first term of study), and by the end of the second year, he or she should also demonstrate competence by way of examination in a second "tool" language, selected from among those especially pertinent to the student's topic of specialization. "Tool" languages, such as French, German, Italian, Russian, and Japanese, are to be distinguished from "source" languages such as Arabic, Chinese, Manchu, Mongolian, Persian, Sanskrit, Tibetan, and Turkic; in particular cases, where one of the latter is not a "source" language it may be considered a "tool" language. Students are expected to be competent in the language(s) of their primary focus and will be required to take written examinations in their "source" language or languages, both with and without the aid of a dictionary.

General Exam

Normally at the end of the second year of residence or in the third year of residence, the candidate will write a general examination in three fields approved in advance by the committee. One of these fields should cover the history or culture of a major society outside of Inner Asia (e.g., Western Europe, Russia, Islamic Middle East, East Asia, South Asia, or the Americas). The other two will be focused on:

1. Pre-Islamic History of Inner Asia (to the 10th century)
2. Medieval and Early Modern History of Inner Asia (10th century to 1750)
3. Modern History of Inner Asia (1750 to the present)
4. Philology and Religion of Pre-Islamic Inner Asia (to the 10th century)
5. Philology and Religion of Medieval and Early Modern Inner Asia (10th century to 1750)
6. Altaic or Tungusic Linguistics
7. Archaeology and Art of Inner Asia
8. Ethnology and Anthropology of Inner Asia

There will be a three-hour written examination in each of the three specified fields, plus one three-hour oral examination in Inner Asian studies, broadly defined. In some cases, students may, with the approval of the committee, choose to take an additional fourth general examination field.

Prospectus

Within one academic year of completing the general examination, students will be required to present a written prospectus of their dissertation, of at least five to ten pages in length, for approval by the committee.

Dissertation

The doctoral dissertation must demonstrate the candidate’s ability to use primary source material and to produce a piece of original research. After the acceptance of the dissertation, the candidate must defend his or her dissertation in a special oral examination. The final manuscript must conform to the requirements described in The Form of the PhD Dissertation.

Further information regarding IAAS programs of study can be obtained online at www.fas.harvard.edu/~iaas.
PhD in Linguistics

The Department of Linguistics is home to one of the oldest and most distinguished linguistics programs in the United States. The study of linguistics at Harvard draws much of its strength from the unique range and depth of the University’s offerings in related fields, especially ancient and modern languages. Students are encouraged to take advantage of the full spectrum of Harvard’s resources in planning their schedules; they are also free to cross-register for linguistics and linguistics-related courses at the Massachusetts Institute of Technology. While all PhD candidates are expected to acquire a solid background in contemporary linguistic theory, the department places great emphasis on the inseparability of good theoretical work and detailed empirical research, and on the interrelatedness of diachronic and synchronic approaches to the study of linguistic phenomena.

Since the department is relatively small, discussion among faculty, graduate students, and undergraduates is ongoing and informal. Special workshops funded by the Graduate School of Arts and Sciences, together with frequent departmentally sponsored lectures and seminars, bring an unusually large number of outside speakers to Harvard every year. Widener Library contains a matchless linguistic and philological collection, supplemented by a special non-circulating collection accessible only to linguistics students and faculty.

Request further information regarding departmental courses, faculty, and facilities from the Department of Linguistics, Boylston Hall, Harvard University, Cambridge, MA 02138 (telephone: 617-495-4054; fax: 617-496-4447), or by visiting the departmental website at www.fas.harvard.edu/~lingdept/index.html.

Admission and Financial Aid

Requirements for admission are flexible. Preference is normally given to candidates with a previous background in linguistics, but students with a mature interest in the field and a strong language background are encouraged to apply as well. GRE scores are required of all applicants.

All new graduate students in Linguistics receive a five-year support package, either from GSAS, or from an outside funding source (e.g., the National Science Foundation), or from a combination of the two. The standard GSAS package provides sufficient funds to make teaching unnecessary in the first and second years. Support in the third and fourth years takes the form of teaching fellowships. The department regards teaching as an essential part of the PhD program. Courses open to participation by teaching fellows include undergraduate tutorials, beginning-level linguistic theory courses, and large-enrollment undergraduate courses such as Social Analysis 34 (Knowledge of Language). Full support is again provided in the dissertation-completion year, freeing the student of teaching obligations. Stipends are provided for summer research in the first two years.

Inquiries regarding admission and financial aid should be directed to the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138. We encourage online submission of the application. See www.gsas.harvard.edu.

The Structure of the Program

Coursework – To acquire a basic grounding in the core areas of the field, students must complete the following courses, normally in their first two years of residence:

- Linguistics 112a (Introduction to Syntactic Theory) and 112b (Intermediate Syntax)
- Linguistics 115a (Introduction to Phonetics and Phonology) and 115b (Intermediate Phonology)
- Linguistics 116a (Introduction to Semantics)
- Linguistics 117r (Linguistic Field Methods)
- Linguistics 224 (Historical and Comparative Linguistics)

In addition, second- and third-year students are required to enroll in Linguistics 241r (Practicum in Linguistics).

There is also a language requirement, which is described separately below. Course requirements are flexibly enforced. Students with a substantial background in one or more areas of linguistics may substitute more advanced courses for those listed above, with the approval of the director of graduate studies (DGS). Only rarely are course requirements waived completely.

Advising – First-year students are advised by the DGS until they choose a major field (see below), at which time they also choose a major advisor from the regular departmental faculty. Thereafter, progress toward completion of the PhD requirements continues to be monitored by the DGS, but primary responsibility for overseeing study in the major field shifts to the major advisor. Students may change their major advisor at any time. By the end of the second year they should also select a co-advisor, who serves as a second advisor and faculty mentor.

Major and Minor Fields – Students choose a major and a minor field during their first year. The major field is typically a large sub-area of linguistics, such as phonology, syntax, semantics, or historical linguistics. The minor field may either be another major sub-area or a more specific one (e.g., Germanic syntax, psycholinguistics, Greek historical grammar). Competence in the major field is demonstrated by a) advanced coursework, as determined in consultation with the major advisor; b) submission of an original research paper of publishable quality (see below); and c), optionally, in certain fields, a special written examination. Competence in the minor field is demonstrated by satisfactory performance in three courses above the introductory level, or in two courses with submission of a research paper.

Research Paper Requirement – In lieu of a formal admission to candidacy examination (“general exam”), students are required to submit and orally defend two publishable research papers, preferably by the end of the third year. One of the two papers should be in the area of the declared major field, and the other should be in a different area of linguistics, which may, but need not be, the same as the minor field. If the second paper is in the area of the minor field, it may count in place of a third course in the minor field (see above).

Language Requirement – The department’s language requirement has two components:

1. Reading knowledge of two languages of scholarly other than English. Native speakers of qualifying languages may count their native language for this purpose. Non-native speakers may satisfy the requirement by completing a second-year language course at the university level or by passing a one-hour departmental reading exam (dictionary permitted).

2. Knowledge of the structure of a non-Indo-European language. This requirement may be met by taking a “structure” course (e.g., Linguistics 171 (Structure of Chinese), a course in linguistic typology, or a second term of Linguistics 117r (Linguistic Field Methods). Practical reading and/or speaking knowledge cannot be used to satisfy this requirement.

Satisfactory Progress – A B+ average must be maintained in each year of graduate study. Grades below B cannot be counted toward departmental requirements; two grades below B in required courses may result in termination of candidacy. Ordinarily, a grade of Incomplete can only be converted into a letter grade if the work is made up before the end of the following term. No grade of Incomplete can be used to satisfy a departmental requirement.
All requirements, including the research papers, should ideally be completed by the end of the third year, but in no case later than the end of the fourth. The dissertation prospectus (see below) is also due by the end of the fourth year. Failure to meet program requirements in timely fashion may result in termination of candidacy.

**AM Degree** — Graduate students who have completed two years of residence and who have fulfilled all the course requirements and language requirements for the PhD may upon petition receive an AM degree.

**The Dissertation**

**Dissertation Prospectus** — A prospectus of the PhD dissertation must be submitted to the department by the end of the fourth year. The prospectus should contain a summary (in approximately ten pages) of the goals and methodology of the dissertation research, a bibliography of relevant literature, and a schedule for progress toward completion.

**Committee** — As part of the prospectus submission procedure, students nominate a three-person committee to serve as readers of the completed dissertation. Final membership of the dissertation committee is subject to departmental approval. The head of the committee, if not already the major advisor, assumes this role as soon as the prospectus is approved. Students are urged to maintain regular communication with all three members of the dissertation committee during the dissertation-writing process.

**Dissertation Defense** — Acceptance of a PhD dissertation requires a successful public defense, which should take place one to three months before the Registrar’s due date for final submission of the dissertation. Sufficient time must be allowed to permit any required corrections or revisions, as well as to have the dissertation bound.

**Recent PhD Dissertation Titles**

- “Bardi Verb Morphology in Historical Perspective”
- “Canadian French Vowel Harmony”
- “Case, Referentiality, and Phrase Structure”
- “Ditransitive Structures and the (Anti-) Locality Principle”
- “Elliptical Predicated Constructions in Mandarin”
- “Finiteness, Case and Clausal Architecture”
- “Focusing on Negative Concord and Negative Polarity: Variations and Relations”
- “Indo-European Origins of the Nasal Inchoative Class in Germanic, Baltic, and Slavic”
- “Linguistic Practice, Social Identity, and Ideology: Mandarin Variation in a Taipei County High School”
- “Multiple Dominance in Syntax”
- “Referential-access Dependency in Penobscot”
- “Relativization and Ellipsis”
- “Studies in Japanese Prosody”
- “Studies in the Language of Three Northumbrian Poems”
- “Studies in Ancient Anatolian Language and Culture”
- “Symmetries in Coordination”
- “The Interaction of Verb Semantics and Functional Features in Korean Syntax”
- “The Syntax of Negation in Spanish”

**Faculty of the Department of Linguistics**


Higher Degrees in the Department of Mathematics

The graduate mathematics program at Harvard is designed for students who hope to become research mathematicians and show definite promise in this direction. Once the student has demonstrated a command of basic mathematical concepts by passing the qualifying examination, the emphasis is on getting to the frontiers of some field by independent reading, advanced courses, and seminars. The Cambridge area is one of the most active centers of mathematics in the world. Harvard, Brandeis, Northeastern University, and the Massachusetts Institute of Technology have an especially close association in mathematics, sharing several seminars and a weekly colloquium.

The PhD Program

The degree of doctor of philosophy is awarded to students who have demonstrated their mastery of the basic techniques of mathematics and their ability to do independent research. The former is tested in the qualifying examination the latter in the dissertation. The dissertation, however, is the more important of the two.

The qualifying examination is given twice annually, and students are encouraged to take it as soon as possible so that they may begin work towards their dissertation research. Most students pass the exam during their first year, but if need be, the exam may be retaken a number of times. Students are expected to pass the examination by the end of the second year.

The PhD dissertation is an original treatment of a suitable subject leading to new results, usually written under the guidance of a faculty member. The final manuscript must conform to the requirements described in The Form of the PhD Dissertation, which is available in the publications section on the GSAS web site.

Many of the more advanced courses and seminars are designed to lead the student to areas of current research.

The University requires a minimum of two years of academic residence (16 half-courses).

(See The Graduate School of Arts and Sciences Handbook for financial residence requirements.) On the other hand, the PhD usually takes four to five years.

A reading knowledge of two modern languages, French, Italian (if deemed related to the student’s field of study), German, or Russian, is required of PhD candidates. One language requirement must be passed by the end of the second year of graduate study and the other by the end of the third year. Each candidate must also write a “minor thesis.” This is an original presentation of a standard subject about which the student is ignorant but wishes to learn. It is intended to give the student experience in assimilating and presenting unfamiliar material.

The research and writing must be done during a three-week period, soon after the qualifying examination is passed. Each candidate must also participate in the Teaching Apprentice Program and have two semesters of classroom experience of teaching, usually as a teaching fellow.

Applications for transfer from other programs granting PhDs in mathematics are not ruled out, but are discouraged.

AB-AM Degree

Candidates for the AB-AM degree in mathematics must meet both the academic and course requirements for the AB degree in mathematics and for the AM degree in mathematics. A given course can be counted for only one of the two degrees, i.e., one course cannot meet the requirement for the AB degree and then be counted again for the AM degree. See below for the AM requirements. Any undergraduate who wishes to apply for this degree must file an application form for the graduate program in mathematics just as any other student files for graduate work at Harvard. Only students with advanced standing are eligible to apply for this four-year program. Undergraduates taking graduate courses in their third year may bracket those courses they wish to apply toward their graduate degree. Candidates for the AB-AM degree must bracket courses by the beginning of the final term before graduation.

Requirements for the AM Degree

The Master of Arts (AM) degree is not a prerequisite for the PhD, but is often obtained by students on their way to a doctorate. However, applicants are not accepted for the terminal AM in mathematics. The formal requirements are a minimum academic residence of one year, eight half-courses in mathematics at 100 or 200 level, with at least four at the 200 level; a reading knowledge of one of three languages—French, German, or Russian—is also required. (See The Graduate School of Arts and Sciences Handbook for financial residence requirements.)

Financial Aid

All students in the Department of Mathematics receive substantial financial support during their graduate training. This support may be in the form of grants or teaching fellowships from Harvard, or fellowships and research assistantships from outside organizations such as the National Science Foundation. Students are strongly encouraged to apply for outside awards.

Sources from outside the University support a great many graduate fellowships. In particular, students who are US citizens should investigate the predoctoral fellowship opportunities provided by:

- The Fannie and John Hertz Foundation
- The National Defense Science and Engineering Graduate Fellowship Program
- The National Physical Science Consortium for Minorities and Women
- The National Science Foundation

International students are encouraged to apply for the Fulbright IIE, Knox and Kennedy fellowships (applications for the Kennedy and Knox are available through the Harvard Committee on General Scholarships), and other private and government scholarships and fellowships available in their home country.

Students without outside support are required to teach as part of their financial aid package. Graduate students do not teach in their first year. Students begin as teaching fellows for one half-course (i.e., for a one-semester course) in their second through fourth years, and for two half-courses if they stay for a fifth year. Teaching fellows ordinarily teach their own sections of undergraduate calculus, but have a course assistant to help with grading and problem sections.

There are a few upper-class tutorials taught by experienced teaching fellows. All students must participate in the Teaching Apprentice Program run by the department and demonstrate English proficiency before they may teach.

Applications for admission and for scholarships or nonteaching fellowships, together with information regarding admissions procedures, are available on the Graduate School of Arts and Sciences Prospective Students page on the GSAS website: http://gsas.harvard.edu/prospective_students/prospective_students.php Applicants may apply for admissions beginning in the fall. All applications and accompanying materials must be submitted online at https://apply.embark.com/grad/Harvard/GSAS
Senior Faculty Research Interests

Noam D. Elkies, Professor of Mathematics.
Number theory, computation, classical algebraic geometry, music.

Dennis Gaitsgory, Professor of Mathematics.
Geometric aspects of representation theory.

Robin Gottlieb, Professor in the Teaching of Mathematics.

Benedict H. Gross, George Vasmer Leverett Professor of Mathematics.
Algebraic number theory, Diophantine geometry, modular forms.

Joseph Harris, Higgins Professor of Mathematics.
Algebraic geometry.

Michael J. Hopkins, Professor of Mathematics.
Algebraic topology.

Mark Kisin, Professor of Mathematics.
Number theory and arithmetic geometry.

Peter Kronheimer, William Caspar Graustein Professor of Mathematics.
Topology, differential and algebraic geometry, and their applications.

Jacob Lurie, Professor of Mathematics.
Algebraic geometry, algebraic topology, and higher category theory.

Barry Mazur, Gerhard Gade University Professor.
Number theory, automorphic forms and related issues in algebraic geometry.

Curtis T. McMullen, Maria Moors Cabot Professor of the Natural Sciences.
Riemann surfaces, complex dynamics, hyperbolic geometry.

Martin Nowak, Professor of Mathematics and Biology.
Mathematical biology, evolutionary dynamics, infectious diseases, cancer genetics, game theory, language.

Wilfried Schmid, Dwight Parker Robinson Professor of Mathematics.
Lie groups, representation theory, complex differential geometry.

Yum-Tong Siu, William Elwood Byerly Professor of Mathematics.
Several complex variables.

Shlomo Sternberg, George Putnam Professor of Pure and Applied Mathematics.
Differential geometry, differential equations, Lie groups and algebras, mathematical physics.

Clifford Taubes, William Petschek Professor of Mathematics.
Nonlinear partial differential equations and applications to topology, geometry, and mathematical physics.

Horng-Tzer Yau, Professor of Mathematics.
Probability theory, quantum dynamics, differential equations, and nonequilibrium physics.

Shing-Tung Yau, William Caspar Graustein Professor of Mathematics.
Differential geometry, partial differential equations, topology, mathematical physics.

Junior and visiting faculty interests represent a diverse and important addition to the department. As these appointments vary in length from one term (on the part of visitors) to three-year appointments as a Benjamin Pierce Lecturer on Mathematics, Assistant Professor of Mathematics, they will be listed annually in the Courses of Instruction. Generally there are from 12–15 appointments in these categories.
AM in Regional Studies — Middle East
PhD in Anthropology and Middle Eastern Studies
PhD in History and Art and Architecture and Middle Eastern Studies
PhD in History and Middle Eastern Studies

Center for Middle Eastern Studies
The Center for Middle Eastern Studies (CMES) was established in 1954 for the purpose of supporting research and teaching in the languages, literatures, history, governments, economics, and cultures of North Africa, the Middle East, and Central and South Asia, with the emphasis on the modern period.

At the core of its teaching and research is the pursuit of firsthand knowledge about the Middle East based on literacy in its languages and an understanding of its political and economic realities, its culture and traditions. To achieve these aims, the Center cooperates with faculty having a Middle Eastern interest, with other regional studies centers, and with Harvard libraries and museums holding collections related to Middle Eastern and Islamic studies.

The Center’s aim is to offer a comprehensive program of training for those planning careers in education, government service, and in the private sector, as well as to support research on the area. More than 50 members of the Faculty of Arts and Sciences are associated with the Center; in addition, Middle East specialists are found in the Law School, the Business School, the Kennedy School of Government, the Divinity School, and the Graduate School of Design.

The Center publishes a listing of courses relating to the Middle East each year, usually totaling over 200 undergraduate and graduate courses and seminars offered in the departments of Anthropology, Government, History of Art and Architecture, History, Religion, Sociology, and Near Eastern Languages and Civilizations.

Committee on Middle Eastern Studies
The Committee on Middle Eastern Studies is a standing committee of the Faculty of Arts and Sciences charged with the administration of graduate degree programs in Middle Eastern studies. The members of this committee are drawn from the faculty associated with the Center for Middle Eastern Studies. The committee offers the following programs:

Regional Studies — Middle East, a two-year program of study leading to the Master of Arts (AM) degree.

Joint Programs for the PhD — Joint programs for the degree of PhD in Middle Eastern Studies and Anthropology, History of Art and Architecture, and History are currently active.

Admission
All students admitted to the degree programs are expected to meet the requirements of the Graduate School of Arts and Sciences, presenting specifically a bachelor’s degree from a recognized institution (or a satisfactory equivalent), a superior undergraduate record, and other indications of promise. The GRE General Test is required. Requests for admission and financial aid application forms should be addressed to the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center, 3rd floor, 1350 Massachusetts Avenue, Cambridge, MA 02138. We encourage online submission of the application. See www.gsas.harvard.edu.

Master of Arts (AM) in Regional Studies — Middle East
The program for this degree requires two years of study. It seeks to give the student both a broad background and a special competence in selected fields of Middle Eastern affairs. Each student’s needs and interests, as well as previous experience and qualifications, are taken into account in planning his or her course of study.

Admission — Admission is based on the applicant’s previous record, general ability, and promise. Knowledge of a modern Middle Eastern language is not a prerequisite but will be taken into consideration as well as all previous experience in the Middle East.

Financial Aid — There is no financial aid for AM students. Prospective AM students may apply for an academic year Foreign Language and Area Studies (FLAS) fellowship at the same time as they apply for admission. AM students who are US citizens or permanent residents may apply for federal aid, including Perkins Loans, Federal Direct Subsidized and Unsubsidized Loans, and Federal Work-Study. All students may apply for HELP loan funding regardless of citizenship status. Prospective students are encouraged to apply for independent grants and fellowships to fund their studies.

Academic Residence — Students must be registered as full-time students in the Graduate School of Arts and Sciences for four terms (two academic years).

Program of Study — Academic research and writing skills are emphasized in both the students’ elective and required coursework. In the first semester, all students are required to take the CMES Proseminar NEC 200a “Approaches to Middle Eastern Studies,” a writing-intensive course on notable books in Middle Eastern studies. Students intending to write a masters thesis must take NEC 200b, “Middle East Studies Research Seminar,” a course in research methods, during the spring semester of their first year. Additional course requirements include:

- Four courses in a Middle Eastern language (Arabic, Hebrew, Persian, or Turkish)
- One course in medieval (pre-1500) Middle Eastern history
- One course in modern Middle Eastern history
- One course related to the Middle East in anthropology, economics, history of art and architecture, government, law, or religion
- Seven elective courses, two of which must be seminars

The student’s program of study must meet with the approval of the director of the AM program.

Languages — All students in the program are expected to attain a reading and speaking competence in one of the major modern Middle Eastern languages: Arabic, Hebrew, Persian, or Turkish. Students who are native speakers will be required to study a second language.

Joint Programs for the PhD
Admission — A student for a joint PhD degree is normally expected to have completed an AM program in Middle Eastern Studies or another relevant field, at Harvard or elsewhere, before admission as a PhD student.

There is not, however, an official link between Harvard’s AM and PhD programs. Applicants to the PhD program who are in Harvard’s AM program in Middle Eastern Studies are treated as any other out-side applicant. In exceptional cases, unusually well-qualified students may be considered for admission after a bachelor’s degree program with requisite specialization. Strong preference will be given to applicants who are adequately prepared to meet the European and Middle Eastern language requirements for the doctorate. Students may also choose to apply directly to one of the departments in which the programs and requirements are closer to their particular Middle East interests.

Financial Aid — Prospective students apply for financial aid at the same time they apply for ad-
mission (see the GSAS Guide to Admission and Financial Aid). All registered continuing students receive applications for the forthcoming year in early December. Incoming CMES PhD students are guaranteed a financial aid package including grants covering tuition and living expenses in their first two years, tuition and living expenses in the form of assured eligibility for a Teaching Fellowship in their third and fourth years, and tuition in their final year. In addition, they are eligible for summer research awards in the summers following their first and second years in the program. Some aid offers are granted on the basis of merit, others are based on an analysis of student resources, while still others reflect a combination of merit and need. For detailed information about financing study at GSAS, please see the GSAS Guide to Admission and Financial Aid.

Academic Residence — A minimum of two years is required. In most cases, however, fulfillment of all requirements for the degree in the joint program will involve at least one additional year of preparation.

Dissertation — After completion of the General Examination, students are required to submit within one year a dissertation prospectus for approval by the Joint PhD Subcommittee of the Committee on Middle Eastern Studies. Specific requirements for individual programs are detailed below.

Programs of Study — The requirements for the joint PhD programs are as follows:

PhD in History and Middle Eastern Studies

The student will fulfill the requirements for the PhD in History of Art and Architecture, with minor adjustments to be discussed with his or her advisor. In addition, the student will also fulfill the following language and area requirements of the Committee on Middle Eastern Studies.

Languages — Each student must complete at least two years of residence, fulfill the department’s language requirement in French, German, or Russian, and obtain proficiency in one of the following Middle Eastern languages: Arabic, Persian, Ottoman Turkish, or another appropriate ancient Near Eastern language.

Courses — In addition to the work on Near Eastern art and architecture, the student must take at least one half-course and one seminar in another period of art history, and at least one-half course and one seminar in another aspect of Middle Eastern studies. Classes should be chosen in consultation with the advisor.

General Examination — The student will be expected to take four General Examinations: two in Near Eastern art (either different periods or different techniques, the scope being determined by the student’s committee), one in another period of the history of art and in Near Eastern studies, and the last one a language examination in Arabic, Persian, Ottoman Turkish, or an ancient Near Eastern language consisting of a translation (with dictionary) of one or two passages from a list of sources provided at least a year before the exam, and of a commentary. One of the exams (other than language) could be oral.

A written examination in the Middle Eastern language selected will be administered by the Committee on Middle Eastern Studies and must also be taken before the completion of course work.

While not required to do so, students are strongly encouraged to master at least one additional Middle Eastern language. The expectation is that the student learn the languages necessary to teach and work in his or her chosen field.

Courses — The student will take at least three half-courses in Middle Eastern history, economics, religion, or political science. Other fields of study from related areas may be approved to meet this requirement by petition to the committee.

Dissertation — The dissertation will normally be based on fieldwork conducted in the Middle East, or in other areas of the world with close cultural ties to the region. The dissertation should demonstrate the student’s ability to use source material in one or more relevant Middle Eastern languages. A copy of the completed dissertation must be filed with CMES.

PhD in History of Art and Architecture and Middle Eastern Studies

The student will fulfill the requirements for the PhD in History of Art and Architecture, with minor adjustments to be discussed with his or her advisor. In addition, the student will also fulfill the following language and area requirements of the Committee on Middle Eastern Studies.

Languages — Each student must complete at least two years of residence, fulfill the department’s language requirement in French, German, or Russian, and obtain proficiency in one of the following Middle Eastern languages: Arabic, Persian, Ottoman Turkish, or another appropriate ancient Near Eastern language.

Courses — In addition to the work on Near Eastern art and architecture, the student must take at least one half-course and one seminar in another period of art history, and at least one-half course and one seminar in another aspect of Middle Eastern studies. Classes should be chosen in consultation with the advisor.

General Examination — The student will be expected to take four General Examinations: two in Near Eastern art (either different periods or different techniques, the scope being determined by the student’s committee), one in another period of the history of art and in Near Eastern studies, and the last one a language examination in Arabic, Persian, Ottoman Turkish, or an ancient Near Eastern language consisting of a translation (with dictionary) of one or two passages from a list of sources provided at least a year before the exam, and of a commentary. One of the exams (other than language) could be oral.

A written examination in the Middle Eastern language selected will be administered by the Committee on Middle Eastern Studies and must also be taken before the completion of course work.

While not required to do so, students are strongly encouraged to master at least one additional Middle Eastern language. The expectation is that the student learn the languages necessary to teach and work in his or her chosen field.

Courses — The student will take at least three half-courses in Middle Eastern history, economics, religion, or political science. Other fields of study from related areas may be approved to meet this requirement by petition to the committee.

Dissertation — The dissertation will normally be based on fieldwork conducted in the Middle East, or in other areas of the world with close cultural ties to the region. The dissertation should demonstrate the student’s ability to use source material in one or more relevant Middle Eastern languages. A copy of the completed dissertation must be filed with CMES.

PhD in History and Middle Eastern Studies

Fields of Study — As soon as possible after entering the program, and no later than the end of the first year, the student should select an advisor (who must be a member of the history department) with whom four fields of study will be chosen for presentation at the General Examination. This selection of fields is to be set down in written form and signed by the advisor. This plan will also state the student’s choice of courses and language examinations during the first two years. A student wishing subsequently to propose changes in this study plan must do so in the form of a written petition to the advisor.

Languages — Each student must pass the history department’s language exam in one of the following: French, German, Russian or Italian. Students must attain proficiency in a modern Middle Eastern language: Arabic, Hebrew, Persian, or Turkish. Depending on the student’s specialization, another Middle Eastern or Islamic language (e.g., Kurdish, Urdu) may be substituted with the approval of the Committee on Joint PhD Programs. “Thorough knowledge” would normally translate into a minimum of four years of language study with a final grade of B- or above. Native speakers of these languages will be required to master a second Middle Eastern language. A written examination in the Middle Eastern language selected will be administered by the Committee on Middle Eastern Studies and must be taken within a year of passing the General Examination.

While not required to do so, students are strongly encouraged to master at least one additional Middle Eastern language. The expectation is that the student learn the languages necessary to teach and work in his or her chosen field.

Courses — In the first semester, each student must pass the introductory seminar on methodology, History 3910: The Writing of History: Approaches and Practices, with a grade of satisfactory. Students must take at least two seminars for a letter grade; one in Middle Eastern history, and one in Western history. A student wishing to substitute for Western history a seminar on African or East Asian history, or other pertinent field, may petition the Committee on Joint PhD Programs.

General Examination — The General Examination examines four established fields of the Department of History and the Committee on Middle Eastern Studies. One of the four fields must be in Western history and two must be in Middle Eastern history. The three established fields
in Middle Eastern history are medieval Islamic history, Ottoman history, and modern Middle Eastern history. Students who wish to offer another Middle East-related field (for example, Byzantine history) in place of one of the established Middle Eastern fields should petition for permission. The Department of History’s chronological requirements for historical fields do not apply to the fields submitted for the joint program.

The fourth field is a written language comprehension examination of a major text in the student’s primary Middle Eastern language; it is a separate examination from that which covers the three historical fields.

**Prospectus** – The dissertation prospectus must be completed and approved within one year of passing the first three fields of the generals. It must be written in conformity with the Department of History guidelines, as detailed in the *History Department Graduate Student Handbook*.

**Dissertation** – The dissertation must be read and approved by a three-member dissertation committee, two of whom are normally permanent members of the GSAS faculty.

A copy of the completed dissertation must be filed with CMES.

**Recent PhD Dissertation Titles**

“Ottoman Modernity: The Nitziami Courts in the Late 19th Century”

“Households, Guilds and Neighborhoods: Social Solidarities in Ottoman Aleppo, 1640–1700”

“The Atik Valide Mosque Complex: A Testament of Nurbanu’s Prestige, Power, and Piety”

“And Sulh is Best: Amicable Settlement and Dispute Resolution in Islamic Law”

“The Ottoman Interregnum (1402–1413): Politics and Narratives of Dynastic Succession”

“Signs Taken for Wonder: 19th-Century Persian Travel Literature to Europe”

“Family and Society in a 17th-Century Ottoman City: The Alamis of Jerusalem”

“Levantine Trajectories: The Formulation and Dissemination of Radical Ideas in and between Beirut, Cairo, and Alexandria, 1860–1914”

“Seeking Loyalty: The Inner Asian Tradition of Personal Guards and its Influence in Persia and China”

“The Muḥ’tasib, Law, and Society in Early Mamluk Cairo and Fustat (1250–1400)”

“The Nimaturrulah Sayyids of Taft: A Study of the Evolution of a Late Medieval Iranian Sufi Tarikah.”

“The Ottoman Age of Exploration: Spices, Maps, and Conquest in the 16th-Century Indian Ocean”

“The Sultan and the Sultanate: The Theory of Rulership during the Reign of Suleiman II (1520–1566)”

“When the Messiah Converts: Research on the Ottoman Origins of the 17th Century Jewish Messianic Movement”

“Sheikhs in the Life of a 17th-Century Ottoman Alim: A Study on Nevizade Atai’s Hadaiku’l-Hakik”

“The Ottoman State and the Greek Orthodox of Istanbul: Sovereignty and Identity at the Turn of the 18th Century”

“Community and Nation-State: The Shi’is of Jabal ‘Amil and the New Lebanon, 1918–1943”

“Pedagogies of Patriotism: Teaching Socio-Political Community in 20th-Century Turkish and Egyptian Education”

“Challenging Power and Authority in Pre-Protectorate Morocco: Shaykh Muhammad al-Kattani and the Tariqa Kattaniyya”


“Muhammad’s Grave: Death, Ritual, and Society in the Early Islamic World”

“From Holy Warriors to Chivalric Order: The ‘Ayyars in the Eastern Islamic World, AD 800–1055”

“Recombination and Forensics: Cancer Risk Among Two Cappadocian Communities in Turkey, Sweden, and Germany”

**Fellowships**

The FLAS program (Foreign Language and Area Studies), funded by the US Department of Education, is designed to meet the need for American specialists in education, government, and other fields who will use their skills in training others and promoting a wider knowledge of non-Western languages and cultures. FLAS applications for new students are found in the admissions application.

Other Harvard fellowships and grants are competitively open to CMES students each year.

**Research in Middle Eastern Studies**

The Center for Middle Eastern Studies encourages and promotes research on the Middle East in the fields of the social sciences and the humanities. The Center also participates in interdisciplinary research projects in the Middle East, cooperating with other departments in the University and with other Middle East Centers and research institutes both in the United States and abroad. There are opportunities for advanced graduate students to work on these projects. A limited number of research appointments (usually without stipend) are available to advanced scholars who wish to pursue their research on a specific project in the Middle East field. These fellowships normally run for one academic year beginning in the fall term. Further information may be obtained by writing to the Center for Middle Eastern Studies, 38 Kirkland Street, Cambridge, MA 02138.

**Library Facilities**

The Harvard libraries are particularly rich in materials for the study of Middle Eastern countries, and are continually being expanded. Outstanding Arabic and Hebrew collections are supplemented by extensive Persian and Turkish resources, as well as holdings in other languages of the region. The Law School, the Divinity School, the School of Business Administration, and the Littauer Library, as well as the libraries of various museums, also have substantial specialized collections.

**Museums**

The Cambridge and Boston area is especially fortunate to be endowed with important Near Eastern collections in its major museums. The Museum of Fine Arts in Boston has one of the outstanding collections of ancient Egyptian art and archaeology in the world, many of the objects deriving from the joint expeditions of Harvard University and the Museum of Fine Arts to Egypt and the Sudan. It also possesses a fine collection of Islamic art and a selection of ancient Mesopotamian and Syrian objects. The Peabody Museum of Archaeology and Ethnology has a useful study collection of early material from the Middle East as well as a significant North African collection. In addition, the Sackler Art Museum has a fine collection of Islamic art and good examples of sculpture and bronzes of earlier periods.

**Course Offerings**

Course offerings vary from year to year; for specific details see Courses of Instruction offered by the Faculty of Arts and Sciences, or the annual listing of Middle East-related courses published online by CMES. The Department of Near Eastern Languages and Civilizations offers language instruction at all levels in Arabic, both modern and classical, Hebrew, Persian, Turkish, Urdu, and other relevant languages. History courses usually cover ancient, Byzantine, Islamic, and Ottoman history; in addition, several courses are offered on the history of the modern Middle East. Courses on Islam include Islamic doctrines and sects, Islamic institutions, and Islamic law. Courses and seminars are also given in Middle Eastern anthropology, economics, history of art and architecture, government, linguistics, religion, and sociology.
Graduate Study in Music

The Graduate Program of the Department of Music offers advanced training in historical musicology, ethnomusicology, theory, and composition, leading to the degree of PhD in music. There is no admission to an AM program separate from these PhD programs. In unusual cases, students who cannot successfully complete the General Examination may be given the option of completing the requirements for a terminal AM degree.

The Graduate Program of the Department of Music also offers an AM Degree in Music with a specialty in Performance Practice. This two-year program is designed for a small number of specialized students who are preparing or engaged in careers as performers and teachers. The program description and requirements follow the description of the PhD program.

The faculty of the department includes about 20 members. There are 60 to 70 graduate students in residence; six to ten new graduate students enter each year. The Music Building contains a concert hall (the John Knowles Paine Hall), classrooms, faculty and graduate offices, a superb research library (the Eda Kuhn Loeb Music Library), a microfilm library of primary source materials (the Isham Memorial Library), an archive of world music recordings, listening facilities, an electronic music studio (HUSEAC), an ethnomusicology lab, a Sound Studies lab, a collection of early instruments, chamber music rehearsal rooms, and individual practice rooms. Other facilities throughout Harvard University include the vast resources of Widener Library, the Houghton Library (which contains rare music prints and manuscripts, and autographs of major composers), Lamont Media, and the libraries and practice rooms of Dudley House, the center of graduate student activities. In addition, a wealth of musical opportunities is readily available to students at Harvard and at the many neighboring universities (e.g., Boston University, Brandeis University, the Massachusetts Institute of Technology, and New England Conservatory) and civic and professional institutions (e.g., Boston Public Library, Museum of Fine Arts with the Mason Collection of Musical Instruments, and the Boston Symphony Orchestra).

Since teaching is an integral part of graduate training, most graduate students are teaching fellows during part of the time they are at Harvard. Teaching fellows are also eligible to apply for a resident or nonresident tutorship in one of the 12 undergraduate houses or the graduate center, Dudley House. In addition to financial benefits, teaching fellowships and tutorships provide excellent professional experience.

In recent years virtually every graduate student has received one or more of the fellowships and grants awarded by the University and the music department. Awards given by the department each year include several prizes in composition, the John Knowles Paine Traveling Fellowships, the Oscar S. Schafer Fellowship, the Richard F. French Fellowship, the Ferdinand Gordon & Elizabeth Hunter Morrill Fellowship, and the Nino and Lea Piritotta Research Grant. Graduate students are awarded six years guaranteed funding (including living expenses) when accepted to a PhD program.

All applicants are required to take the GRE General Examination and must submit, along with their applications, samples of their previous scholarly work in musicology (for the musicology PhD), ethnomusicology (ethnomusicology PhD), or theory (theory PhD). The online application will allow you to upload up to 20 pages of material. Applicants to the composition program must submit three to four compositions, both scores and recordings where possible, along with their application. Printed scores and CDs are accepted; links to samples and downloads are not. All supplemental materials should be sent to the Admissions Office of the GSAS. Samples of work should be sent with a self-addressed, stamped envelope if they are to be returned to the student. Applications for admission and for financial aid must be received at the Admissions Office of the Graduate School by January 2 for candidates who seek entrance in the following fall term. For applications for admissions and financial aid write: Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138. The application must be submitted online at www.gsas.harvard.edu.

The Program in Musicology and Ethnomusicology

At Harvard, musicology is broadly defined as the disciplined study of music and includes the historical, comparative, and systematic aspects of the field. The program incorporates two tracks: historical musicology, with an emphasis on the history, theory, and literature of Western music in its contexts, from antiquity to the present; and ethnomusicology, which concentrates on the ethnographic study of any musical tradition in relationship to its cultural setting. Most graduate courses in historical musicology and ethnomusicology are research seminars; many treat specific topics, periods, and regions, while others deal with current problems and methods. On the completion of preparatory training and the passing of the General Examinations, PhD dissertations may be written in either field.

The Program in Theory

The PhD in music theory is characterized both by a deep involvement in the inner workings of music and by an engagement with the wider philosophical, cultural and psychological questions surrounding music. The program reflects this interdisciplinary interest of our students, and seeks to explore the links of music theory to other areas of critical engagement, while providing our theorists with the specialized skills they require.

The teaching in the program emphasizes analytical techniques—all students take courses on Schenkerian theory and on a range of tonal and post-tonal analytical practices, as well as an introductory course to explore current issues in the field. At the same time, the program also encourages students to build a framework in which to place these techniques and to reflect on the underpinnings of music theory. Regular courses on questions in psychology, temporality, history of music theory, and aesthetics round off our course offerings and often take music theory into interdisciplinary territory. Graduate courses on challenging repertoires—e.g. modal theory, non-Western music, or very recent composition—frequently round off our offerings.

The dissertation projects our theory graduates work on reflect this unique combination of interests. Recent and current PhD topics include feminist approaches to performance analysis, microtonality and tone imaginations, multi-modal analysis of boy-band videos, Athanasius Kircher’s Musurgia universalis (1650), and neuro-scientific imaging of perceptual parameters.

Our theory faculty is honored on a regular basis by exciting visiting faculty, who complement our existing research and teaching strengths in interesting new ways. Recent visitors have included Allan Keiler (Brandeis), Fred Lerdahl (Columbia), Allen Forte (Yale), Ellie Hisama (Columbia), and Martin Scherringer (NYU)—as well as Brian Ferneyhough (Stanford), Helmut Lachenmann (Stuttgart), and Harrison Birtwistle (London).

The Program in Composition

Harvard’s program in composition is designed to give students the time and opportunity to develop as composers by offering general musical guidance as well as specific individual criticism of their works. The program is centered on students’ achieving clarity of expression through developing their command of compositional technique. In addition, acquaintance with the
PhD Program and Degree Requirements

Courses
A total of sixteen half-courses is required to receive the PhD. Fourteen courses are usually taken during the first two years. Historical musicology students must take two half-courses in ethnomusicology and two half-courses in either theory or composition. No more than one seminar in Medieval theory will count toward the theory requirement; no more than one analysis course can be counted toward the theory requirement. Ethnomusicology students are required to take at least two half-courses each in historical musicology and in offerings outside the department. Ethnomusicology students must also take at least two half-courses in music theory. It is recommended that at least one theory seminar be in cross-cultural music theory. The choice of courses will be determined in consultation with the ethnomusicology advisor. Theory and Composition students do not have a set curriculum and should plan their course of study with their advisor.

Students may be allowed academic credit (normally no more than two half-courses) for work done in other graduate schools in the United States or abroad, subject to the evaluation by the department and acceptance by the Graduate School. Petitions may be submitted after the completion of one full year of graduate work in the department.

In general, for all students, 100-level courses should be taken as supplemental to the graduate program, and should not be the major portion of the student’s coursework. In order to receive graduate credit, permission to take any half-courses at the 100 level must be granted by the graduate advisor before taking the course.

Graduate students who have one or more incompletes will not be considered for department summer grants.

Analysis/Tonal Writing
Competence and fluency in traditional harmony, counterpoint, strict composition, and analysis (including analysis of 20th-century music) are prerequisites for taking the General Examination. Incoming students will be given a placement test to assess skills. Music B will address these musicianship skills but does not count as one of the required 16 courses. Work must be undertaken in the first year of study.

Languages
Written language examinations are given at specified times throughout the year. Reading knowledge of the following languages must be proved before taking the General Examination:

- **Historical musicology students** must pass German and French or Italian. Alternative language choices should be discussed with the musicology advisor.
- **Ethnomusicology students** must pass two research languages, to be determined in consultation with the ethnomusicology advisor.
- **Theory students** must pass German plus one other language (French, Italian, Latin).
- **Composition students** must pass German, Italian or French unless an alternative language is approved in writing by the graduate advisor.
- **Historical musicology students and ethnomusicology students** must pass a third language appropriate to the field of specialization after completing the General Examinations and within one year of the approval of a dissertation proposal.

Requirements for languages not tested regularly within the department may be satisfied through special examination, or through presentation of other documentation at the discretion of the graduate advisor.

Advising
Advising in the department during the pre-graduate period is primarily handled by the appropriate graduate advisors and faculty members in the various programs, with the director of graduate studies available for further advice. After successful completion of the general examination, students consult with individual faculty members on their proposed fields of concentration, and when a dissertation proposal has been completed it is presented to the faculty in that field of study. When the dissertation proposal has been approved by the faculty in the program, it is brought to the entire department for final approval, and a dissertation committee is set up for each student. The dissertation committee consists of an advisor and two readers. Any questions or concerns about advising in the department may be brought to the attention of the director of graduate studies or the chair.

Review
The progress of all graduate students is reviewed at the end of each year. In addition to adequate course work, there are special requirements for first- and second-year students. Every student must submit at least one paper written for a graduate course as part of the first-year review. In musicology, every first- and second-year student must write at least one seminar paper per term.

General Examinations
The General Examination consists of two parts: written and oral. The orals are taken within one or two weeks of passing the written. The exams differ by program but are usually taken between May and August of the student’s second year. Both the written and the oral parts can be repeated, but no more than once. The format, which is significantly different for each program, is as follows:

**Historical Musicology**—For historical musicologists, the general test will have three main parts—written, analysis and oral. The written exam consists of essays and short answer questions related to six of eight topics chosen by the student. The two prepared topics not selected for the written exam will be presented in the oral exam. The open-book analysis exam will be given in the summer, around mid-July. This will be a take-home exam, distributed on a Friday, and returned on Monday, mid-afternoon. It consists of two pieces of music chosen from a) before 1700, b) 18th or 19th century, or c) 20th century. Students will choose one topic on which they will make a ten-minute presentation in the oral examination. Students will choose a second topic on which they will prepare a syllabus for a thirteen-week graduate seminar on the subject. This syllabus will be presented in written form, and
may be the subject of discussion in the oral examination.

Ethnomusicology—The written exam consists of an analysis test and a general test. The analysis test includes two musical examples, one from the student’s major area (i.e., North Indian music, Swedish music, etc.) and a second drawn from a contrasting musical tradition agreed upon in advance in consultation with the ethnomusicology faculty. The general test is divided into four sections: one on ethnomusicological theory and method; a second on world music a third on interdisciplinary problems, and a fourth on the intellectual history of ethnomusicology. By request of the student and in consultation with the ethnomusicology faculty, another subject area may be substituted as the focus of the fourth section of the test. The oral examination in ethnomusicology focuses on the special field or area chosen by the student, but may include questions about general ethnomusicology not necessarily related to topics covered in seminars. The remainder of the examination focuses on questions posed in the written examination.

Theory—The examination consists of four different parts: 1. A preliminary oral examination on repertoire and analysis (“single sheets”), lasting 30 minutes, with 30 minutes preparation time, usually taken at the beginning of the summer. 2. Four written exams of 3 hours each: (a) systematic theories, (b) history of music theory, (c + d) two examinations in special fields relevant to dissertation research. 3. Analytical essays on two musical works from different periods (take-home paper over four days). 4. A two-hour oral examination will allow discussion on the written work and may broaden to engage a variety of related issues in music theory.

Composition—For composers, a written analysis is to be completed in three days at the end of the spring term of the second year of graduate study. It consists of a piece or set of pieces that should be analyzed by the student in the allotted time period. Students are also required to write an original composition of seven–ten minutes length with an imposed instrumentation, to be submitted by mid-August. The oral examination is based on an in-depth discussion of three major works that are assigned in the late spring of the second year of graduate study, plus an analytical presentation of the student’s original composition.

Teaching
Beginning in the third year, graduate students in good standing are eligible for teaching fellowships. Most teaching fellows devote 2/5 TIME to teaching. Following successful completion at the general exam, students are required to take M250ht (Teaching Practicum). This course does not count toward the 16 required courses.

Additional third-year requirements
The third year is primarily devoted to developing a dissertation proposal and the beginning of work on the dissertation. All students will complete their required courses; in most cases, that will mean two half-courses. Musicology students will begin their third language (to be completed within one year of the approval of a dissertation proposal).

Dissertation
Within the academic year in which the General Examination is passed the PhD candidate is expected to develop a proposal for a dissertation, which should be a major original contribution to the field. The proposal must be submitted for approval to the department, which is responsible for assigning the student a committee consisting of a dissertation advisor and two other faculty members. Normally, the complete dissertation must be submitted within five years after passing the General Examination, and satisfactory progress must be demonstrated every year in order for the student remain in good standing. If the dissertation is submitted thereafter the department is not obligated to accept it. The formal requirements for the dissertation are set forth in The Form of the PhD Dissertation, provided by the Graduate School of Arts and Sciences. The department requires one bound copy submitted to the department for the Music Library, in addition to the two copies required for the Registrar: one bound and one digital (for submission to ProQuest).

Doctoral Colloquium/Conference
All departmental doctoral candidates (including composers) who are about to submit or have submitted their dissertation are required to make a final presentation of their work. A dissertation workshop (Doctoral Conference) is required of all dissertation-writing students in historical musicology, ethnomusicology, and theory.

Final Steps in the Dissertation Process
The procedure for completing the dissertation is as follows:
1. The full text must be submitted to the members of the dissertation committee for suggestions, corrections, changes, etc. Candidates are encouraged to discuss drafts of individual chapters with all members of the dissertation committee.
2. The candidate should check with the Director of Administration to be sure that all degree requirements have been met.
3. The application for the degree must be submitted to the Registrar by the date published in The Graduate School of Arts and Sciences Handbook for the November, March, or May degree (usually six weeks before anticipated graduation).
4. After the committee has approved the dissertation in its final form, an unbound copy must be submitted to the department at least four weeks before the Registrar’s deadline. During this period the members of the department are free to examine the completed dissertation.
5. For all students a public colloquium on the dissertation is required shortly before or after it has been approved.
6. Copies: one bound copy and one digital copy (to be submitted to ProQuest) for the Registrar. One bound copy for the Music Library must be submitted to the department office at the same time that the Registrar copy is submitted. The university microfilms and RILM forms must be completed at that time.

Satisfactory Progress
A student in the Graduate School of Arts and Sciences must be making satisfactory progress in order to be eligible for any type of financial aid. The following nine items provide a general definition of satisfactory progress that has been adopted for this purpose by the Music Department. It is hoped that this requirement will have a healthy effect on students’ academic progress, and that it will enable us to preserve resources for those most deserving of financial assistance.
1. During the first two years of graduate study any student who is permitted to register is considered to be making satisfactory progress.
2. A prospective third-year student must have achieved the minimum grade-point average required by this faculty (B+).
3. A prospective third-year student must have passed general examinations.
4. A prospective fourth-year student must have obtained approval of a dissertation prospectus.
5. A prospective sixth-year, or more advanced student must have produced at least one acceptable chapter of the dissertation or its equivalent for each year beginning with the fifth.
6. Requirements 2–5 shall be cumulative.
7. A student who fails to meet a requirement may, upon the department’s recommendation, be considered to be an “exception”—and remain eligible for financial assistance—for a grace period of up to one year. At the close of the grace period, in order to be considered to be making satisfactory progress, the student must have met both the requirement missed earlier and the requirement that would normally be imposed at that time.
8. No student may have more than one such year of grace during his or her study.
9. In addition, the requirements of this calendar may be deferred by a department during...
one year of departmental approved leave. A department may, if it wishes, defer requirements for a more extended period of approved leave in order to facilitate a student’s obtaining a professional degree.

**AM Program and Degree Requirement**

The A.M. Degree in Music with a specialty in Performance Practice is designed to provide intellectual and scholarly background to finished musicians who are preparing or engaged in careers as performers and teachers.

The emphasis is on preparing students to work with sources, editions, theoretical writings, organology and other matters of importance to performance styles as related to repertories. Additional areas such as differences in the meaning of terminology and notation from composer to composer or from era to era; ornamentation; liberties of tempo and declamation; and improvisation will be addressed.

The A.M. in Performance Practice is a two-year program in which students take a selection of departmental courses focused on this specialty, and write an A.M. thesis. The student’s program must be approved by the department before study cards are submitted. The A.M. degree will be awarded on completion with passing grade (B- or above) of at least 8 and no more than 12 half-courses. The Registrar requires a minimum of 4 blocks per term.

Students interested in pursuing the A.M. degree should submit the GSAS Admissions form. Ordinarily, the department expects to enroll 1-2 A.M. students a year or every two years. No auditions are required. A cassette or CD representing the level and breadth of accomplishment should accompany the application form.

**Languages** — Students will be expected to demonstrate a reading knowledge of French, German, or Italian. An examination must be passed before entering the second year of graduate work (by the beginning of the third semester).

**Analysis/Tonal Writing** — Competence and fluency in traditional harmony, counterpoint, and strict composition, and analysis (including 20th-century analysis) are expected. Music Bhf must be passed before entering the second year of graduate work.

**Thesis** — A thesis proposal (subject and scope to be decided in consultation with the Advisor) should be submitted for department approval by March of the 1st year of graduate work. A masters committee, comprised of one advisor and two readers is approved by the faculty following the acceptance of the proposal.

Theses should be approximately fifty pages in length and submitted to the department no later than May 15 for the June degree and September 1 for the November degree. Applications for degree are due to the Registrar’s Office in March (for June degree) and August (for November degree). Please note that thesis deadlines are updated each year. Student ID cards are valid until the last day before fall registration. Health insurance expires on July 30th.

**Financial Aid** — Financial Aid for this program is very limited. Students may apply for travel and research funding such as Paine Traveling Fellowships and/or the Department Travel Fund. All fellowship funding is at the discretion of the Scholarship Committee. Other University funding may be available.

**Residence** — There is a minimum residence required of three terms. Two years will ordinarily be required to complete the degree.

Students wishing to continue at Harvard for the PhD will wish to apply for travel and research funding in the normal manner, and their applications will be considered in the customary way. Students admitted to the PhD program will be granted credit for work done at Harvard or elsewhere according to departmental guidelines, which normally grant credit for two graduate courses taken before entering the PhD program.

NOTE: Some aspects of the graduate programs in music may be under review and in process of revision. For additional or updated information, applicants are advised to visit our website: www.music.fas.harvard.edu/gradinfo.html

**Faculty of the Department of Music**

**Carolyn Abbate**, *Professor of Music*

**Richard Beaudoin**, *Preceptor on Music*

**Andrew Clark**, *Senior Lecturer on Music and Director of Choral Activities*

**Suzannah Clark**, *Gardner Cowles Associate Professor of Music*

**Federico Cortese**, *Senior Lecturer on Music and Director of the HRO*

**Chaya Czernowin**, *Walter Bigelow Rosen Professor of Music*

**Christopher Hasty**, *Walter W. Naumburg Professor of Music* (on leave spring 2014)

**Jill Johnson**, *Senior Lecturer on Music, Director of Dance at Harvard*

**Thomas F. Kelly**, *Morton B. Knafel Professor of Music*

**Robert D. Levin**, *Dwight P. Robinson Jr. Professor of Music* (on leave 2013–14)

**Ingrid Monson**, *Quincy Jones Professor of African American Music*

**Carol J. Oja**, *William Powell Mason Professor of Music*

**Alexander Reehling, (Chair)** *Fanny Peabody Professor of Music*

**Sindhumathi Revuluri**, *Associate Professor of Music*

**Kay Kaufman Shelemay, G. Gordon Watts Professor of Music & Professor of African and African American Studies***

**Anne C. Shreffler**, *James Edward Ditson Professor of Music*

**Daniel Stepner**, *Preceptor in Music*

**Hans Tutschku**, *Fanny P. Mason Professor of Music* (on leave 2013–14)

**Katherine van Orden**, *Professor of Music*

**Richard K. Wolf**, *Professor of Music*
Higher Degrees in Near Eastern Languages and Civilizations

The Department of Near Eastern Languages and Civilizations (NELC) offers a number of distinct graduate programs in different fields of study, all of which are concerned in some way with the peoples and civilizations of the Near East. There have been significant changes to the structure of the NELC program offerings. Applicants are encouraged to visit the NELC website at www.nelc.fas.harvard.edu for updated information as it becomes available.

Resources

Harvard’s library resources in the various fields of Near Eastern Studies are virtually unparalleled. Widener Library, for example, has vast holdings in Arabic, Armenian, Hebrew, Persian, Turkish, and Yiddish literature. The reading rooms of the Center for Middle Eastern Studies and the Andover-Harvard Theological Library of the Harvard Divinity School also have excellent resources available to students. Also at the Divinity School is the Center for the Study of World Religions.

Students wishing to specialize in modern Near Eastern political or social studies should familiarize themselves with the resources and personnel of the Center for Middle Eastern Studies, as well as the Islamic Legal Studies Program at the Harvard Law School. Those interested in Jewish studies should become familiar with the resources and personnel of the Center for Jewish Studies.

The Harvard Semitic Museum, in which the department is housed, has a superb collection of ancient and medieval artifacts representing many of the cultures of the Near East. As a University teaching museum, the Semitic Museum is committed to providing access to these materials for study and teaching. For students interested in Biblical or other ancient Near Eastern studies, or in the archaeology of the Near East, a variety of opportunities for archaeological work in the Middle East are available, including the Leon Levy Expedition to Ashkelon.

NELC offers many resources in addition to those listed above. For further details, please email (nelc@fas.harvard.edu) or visit NELC online at www.nelc.fas.harvard.edu.

Fields of Study

The Department of Near Eastern Languages and Civilizations (NELC) offers PhD and AM degrees in three distinct fields:

1. Ancient Near Eastern Studies, whose subfields include:
   a. Akkadian and Sumerian Studies
   b. Archaeology of the Levant
   c. Armenian Studies
   d. Hebrew Bible/Old Testament
   e. Egyptology

2. Jewish History and Culture, whose subfields include:
   a. The Hebrew Bible in its Jewish Interpretive Context
   b. Jewish History and Culture of Antiquity
   c. Medieval Jewish History and Culture
   d. Modern Jewish History and Culture
   e. Modern Jewish Literatures

3. Histories and Cultures of Muslim Societies, whose subfields include:
   a. Arabic language and literature
   b. Islamic religion and culture
   c. Islamic intellectual history (especially philosophy and theology)
   d. Islamic institutional history
   e. Islamic law
   f. Modern Arabic literature and culture
   g. Indo-Muslim Culture: The Study of Muslim Societies in South Asia
   h. Islam in Africa

In addition, students may apply for a fourth comparative or diachronic field that will draw on the strengths of the faculty across the boundaries presupposed by the fields outlined above. Examples might include comparative Semitic linguistics; Jewish and Islamic law or scriptural interpretation; the intersection of Jewish and/or Arabic cultures with the Iranian/Zoroastrian world.

General Rules

In addition to the specific requirements of each program, there are general rules governing all masters and doctoral programs within the department. These are summarized below. Please note: An expanded list of departmental requirements is contained in the GSAS Handbook. All students in the department are responsible for meeting the requirements as put forth here and in the GSAS Handbook.

Advising — All incoming NELC graduate students are assigned a committee, composed of three faculty members, to help orient them to the program and to Harvard. Students will meet with the committee during their orientation to NELC and throughout the first year as needed. In their consultations with these faculty members, students have a right to expect assistance in planning their course of study and in developing an awareness of the overall structure of their program. At the beginning of each semester, students and advisors should agree on meeting times allowing the students regularly to bring their concerns and questions before their advisors and the advisors to monitor the student’s progress.

Master of Arts (AM)
The AM degree is a terminal degree.

Prerequisites for Admission — The bachelor’s degree (AB). Before seeking admission to the department, applicants will normally have attained a basic knowledge of a Near Eastern language central to their field of concentration. In addition, advanced reading knowledge of French or German is normally required before admission. GRE is required.

Residence — There is a minimum residence requirement of one year. The AM degree is designed to be completed in one year. However, students may elect to complete the degree over two years. The student’s advisor must submit a letter of explanation to the department should the student require more than two years to complete the AM degree.

Program of Study — The advising committee must approve the student’s program of study at the time of registration. One of the members of the department will act as primary advisor. The AM degree is awarded upon completion with passing grade (B or above) of at least eight and no more than twelve half-courses, of which at least two must be seminars or their equivalents, and upon completion of any additional requirements of the individual program.

General Field Requirements — Each field of study has particular course requirements. These are specified in the field’s written program description, both basic requirements and optional requirements for various directions within the field. Students are expected to consult with their advisor(s) in their fields concerning these requirements.

Languages of Modern Scholarship — Advanced reading knowledge of either French or German is ordinarily required before admission. The student will be tested on that language at the beginning of the first semester. If the competence level is insufficient, the student is expected to pass the departmental French/German exam at the end of the first semester. In some fields, knowledge of an additional language may be required. The level of competence in the second language will be determined by the student’s advisor(s).

Satisfactory Progress — At the end of every fall term, the faculty discusses the progress of each student; if there are problems, a letter is sent to the student at that time. At the end of every
The student must demonstrate reading proficiency in the second modern language by the beginning of the Fall semester of the third year of study. Students who have failed to do so will be placed into unsatisfactory status. Students will not be permitted to take General Examinations until six months after fulfilling the modern language requirements, so that they may credibly include articles and books in the research languages on their bibliographies. Applications to the PhD will be reviewed with this requirement in mind.

Advisors must assist their advisees in acquiring the needed proficiency, which, inter alia, will mean building language training into the planning of student programs in the first two years.

Where necessary (as determined by the advisor) students will be advised to take three graduate level courses in one or both semesters of the first year, freeing up space to take a course or two in the required modern language. In addition, it will be the responsibility of advisors to work with their advisees to identify the best summer language program in the required language. Students will be expected to make use of the summer grants they receive as part of their funding package to attend such programs. Advisors will be expected to strongly encourage their (prospective) advisees to begin their language work before they arrive, either in the summer after they are admitted, or even earlier, where practicable.

**Note:** Courses in the languages of modern scholarship do not count toward the required sixteen half-courses or the equivalent (see above).

**Satisfactory Progress:** A prospective third-year student must have achieved a minimum grade point average of “B” up to that point. At the end of every full term, the faculty discusses the progress of each student; if there are problems, a letter is sent to the student at that time. At the end of every spring semester, the faculty again reviews the progress of each graduate student and, in accordance with graduate school policy, assigns a status of “satisfactory,” “grace,” or “unsatisfactory.” The terms “grace” and “unsatisfactory” are defined in the GSAS Handbook (http://www.gsas.harvard.edu/).

**Year Three**

**Teaching:** Teaching is not required during the first two years of study. Only under the most unusual circumstances is a student allowed to teach before the third year of study.

As noted in the acceptance letters NELC students receive, students are expected to earn their stipends in the form of teaching fellowships in their third and fourth years. These fellowships begin in the fall term of the third year and extend through the spring term of the fourth year at a rate of two sections (2/5) per term. The department will assist the student in securing teaching fellowships, but students are required to
make every effort to find suitable teaching arrangements, whether in NELC or in other departments or programs. Priority for teaching fellow positions in NELC is given to students in their third and fourth years of graduate study.

Additional resources for teaching fellows may be found at the Derek Bok Center for Teaching and Learning: http://bokcenter.harvard.edu.

General and Special Examinations: By the end of the third year a student must have passed the general examinations and by the end of the fall term of the fourth year, a student must have passed the special examinations. Special exams relate to the student’s particular area of study, and may involve work leading to the generation of a dissertation prospectus. The General Examinations are written and will consist of two areas: (a) one broad exam, the first part of which will be common to all enrolled in that field, with a second part whose focus will be determined by the student and his/her advisors (b) that field’s major language(s); the Special Examinations will also be written and will also consist of two areas related to the student’s field of expertise, although the exact configuration of these exams should be determined by the student’s advisory committee in consultation with the student. One of the Special Exams may involve a related field or discipline outside of NELC; Linguistics, Anthropology, History, inter alia, are all common areas of study for students in NELC.

The student’s advisors are expected to assist the student in preparing for the General and Special Examinations by defining as closely as is deemed useful the scope of the examinations and indicating the literature the students are expected to have read and the degree of familiarity with this literature that is expected.

The two written General Examinations may be followed by an optional oral review covering the same material as the written examinations. The two Special Examinations will be followed by a mandatory oral review of the same material covered in the examinations. Each set of exams (the generals and the specials) will be administered over a two-week period.

If requested by a student, take-home examinations may be substituted at the discretion of the student’s advising committee.

If a student fails any part of the General or Special Examinations, permission to repeat all or parts of them is not automatically granted, but is considered in each individual case by the examining committee.

If permission to repeat the examinations is not granted, the student will be offered the possibility of taking an A.M., if the appropriate conditions are met.

Each field in the department determines its own timing of general and special examinations, in consultation with the department’s administration. Specifically, each field chooses between a floating General and Special Examination schedule (individual students will be examined when they are deemed prepared for the examinations) and a fixed schedule (students will be examined during one of two set times during the academic year—November or May). Students whose field uses the fixed schedule may take their examinations only on the two assigned dates.

Year Four
Within one year after the successful completion of the general examinations—normally by the end of the fourth year—a student must have obtained approval of a dissertation prospectus in order to show satisfactory progress. Exceptions to this rule require a petition well before the expected submission of the prospectus.

Dissertation Prospectus: After the successful completion of the general examinations, and usually during preparation for the Special Examinations, students will consult with their advisors to choose a topic for their dissertation and a prospectus committee of at least three faculty members, two of whom must be from Harvard.

During the writing of the prospectus, students and advisors are expected to interact closely; the advisors are expected to guide the students with respect to planning and bibliographical research. Often, the principal advisor is the one most closely involved in the early stages and will decide when a draft should be submitted to the other members of the committee. The advice of the members of the committee normally results in the need for several drafts of the prospectus over a number of weeks.

When the prospectus is approved by the entire prospectus committee, it will be submitted to the faculty of the department for comments before being presented by the committee at a department meeting. The student is responsible for distributing copies of the prospectus to all regular members of the department at least one week before the meeting at which the prospectus is to be considered (a tentative schedule of department meetings is circulated each September, and the student coordinator has the list of regular department faculty). The copying of the prospectus and the cost of the copying are also the student’s responsibility.

Acceptance of the prospectus then requires a majority vote of the members present. Not infrequently, a prospectus is not accepted in its present form and is then sent back with the department’s comments (before or after the department meeting) for further revisions. Sometimes the department accepts the prospectus contingent upon specific changes being made.

Form of the Prospectus: The prospectus should include a title page listing the name of the members of the prospectus committee, specifying the principal advisor. The prospectus should contain:

- The nature of the problem that the student intends to study.
- Its importance to the overall field of study in which the student is working.
- A broad review of scholarship on the question being examined, such as:
  a. Which (principal) scholars have dealt with this or similar issues?
  b. What, in the student’s opinion, remains to be done (i.e., why the student is writing this particular dissertation)?
- A discussion of the methodologies the student will use to tackle the problem (i.e., how does the student intend to argue the point?).
- An outline of each of the chapters; if there are foreseeable difficulties in gathering the material necessary, this should also be noted.
- A schedule of approximate dates for submission of first drafts of each chapter.
- A select and relevant bibliography.
- Tablet samples should be included with prospectus submissions where applicable.

The length of the prospectus should not exceed approximately 3,000 words (for text, footnotes, and schedule inclusive; brief bibliography not inclusive).

Year Four and Beyond
Dissertation Progress: After the Acceptance of the Prospectus, if so desired and accepted by the department, non-Harvard members (usually not more than one) may be included on the Dissertation Committee as secondary advisors.

While the Graduate School of Arts and Sciences requires a student to complete the PhD program within ten years of entering the program, the target for all students is completion within seven years, and under current rules no Harvard funding will be available to students beyond the seventh year. Beyond these requirements, the faculty is the final arbiter of what constitutes satisfactory progress. In order to make satisfactory progress on the dissertation, the student must submit and have approved at least one chapter of the dissertation by the end of the first year after the approval of the prospectus (ordinarily by the end of the 5th year).

Dissertation Completion Grant: Beginning with the cohort entering in 2005–06, students are guaranteed five years of funding; the first four years plus a Dissertation Completion Grant awarded to qualified PhD candidates. This grant
will be available as early as G-4 and as late as G-7. After G-7, the grant is no longer guaranteed. The deadline for applying for this grant will be early in the preceding spring term. In order to be eligible, the student must have two advanced draft chapters of the dissertation approved by the time of application.

G-10 Enrollment Cap: Students still in the program in the tenth year should plan to finish that year or else withdraw from the program. They may reapply for admission when they have completed their dissertations.

Only in extraordinary extenuating circumstances, and only if there is demonstrable evidence that the dissertation will be completed, will the department support an application through the Dean’s office for a one-year grace period. Students who fail to complete the dissertation will be required to withdraw from the Graduate Program. They may then also reapply for admission when they have completed their dissertations.

Dissertation Defense: Following are the rules for completing the PhD program:

When the dissertation is complete, it is to be read by a jury of at least three readers, two of whom must be members of the Faculty of Arts and Sciences.

Copies are to be submitted to each of the readers, as well as to the department, at least two months before the date on which the degree is to be awarded and at least one month before the date of the dissertation defense.

The student will be asked to defend the dissertation orally after it has been read, at least one month before the degree is to be awarded. The date and time of the dissertation defense will be announced in writing to the entire faculty of the department and all will be invited to attend.

The student may then be required to revise parts of the dissertation according to comments made by the advisors, occasionally also other faculty, before submitting a final version.

The student is responsible for having spiral-bound (or hard-bound if the student desires) copies of the final dissertation made. One copy should be deposited with the department, to be placed in the departmental library, and one with the Registrar.

Students are solely responsible for meeting all GSAS degree application deadlines and for submitting their final dissertations. Schedules (as well as advice) are available in the NELC office and the Registrar’s office (20 Garden Street, room 109).

Admissions
Admissions and financial aid information is available from the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138.

We encourage online submission of the application. See www.gsas.harvard.edu.

Faculty
Irit Aharony, Preceptor in Modern Hebrew: Modern Hebrew language and literature.
M. Shahab Ahmed, Assistant Professor of the Study of Religion
Sami Alkayam, Preceptor in Arabic
Ali S. Asani, Professor of Indo-Muslim Languages and Civilizations. Islam and Indo-Muslim studies, and Swahili.
Nour Barmada, Preceptor in Arabic
Shaye J. D. Cohen, Littauer Professor of Hebrew Literature and Philosophy. Judaism in antiquity, development of Rabbinic law.
Khaled El-Rouayheb, Gardner Coules Associate Professor of Islamic Intellectual History
John Lee Ellison, Lecturer on Near Eastern Languages and Civilizations. Classical Hebrew and epigraphy.
William A. Graham Jr., John Lord O’Brien Professor of Divinity, Murray A. Albertson Professor of Middle Eastern Studies. Islamic studies, classical Arabic texts.
William Granara, Professor of the Practice of Arabic. Arabic language and literature.
Rachel Greenblatt, Associate Professor of Near Eastern Languages and Civilizations
Jay M. Harris, Harry Austryn Wolfson Professor of Jewish Studies, Chair. Modern Jewish cultural history and ancient Judaism.
Feryal Hijazi, Preceptor in Arabic
Susan M. Kahn, Lecturer on Near Eastern Languages and Civilizations
Ousmane Kane, Professor of Near Eastern Languages and Civilizations; Prince Alwaleed Bin Talal Professor of Contemporary Islamic Religion and Society (HDS)
Eitan Kensky, Preceptor in Yiddish
Chad Kia, Lecturer on Persian Literature and Culture
Luke Leafgren, Lecturer on Near Eastern Languages and Civilizations
Jon Levenson, Albert A. List Professor of Jewish Studies (Divinity School)
Peter B. Machinist, Hancock Professor of Hebrew and Other Oriental Languages, Director of Undergraduate Studies. Hebrew Bible, study of ancient Israel, ancient Mesopotamia, history of the ancient Near East.

Other Faculty Offering Courses in the Department
Cemal Kafadar, Vehbi Koc Professor of Turkish Studies (Department of History)
Roy Mottahedeh, Gurney Professor of History (Department of History)
Andrew Teeter, Assistant Professor of Hebrew Bible/Old Testament (Divinity School)

Affiliates of the Department of Near Eastern Languages and Civilizations
Baber Johansen, Professor of Islamic Studies (Divinity School)

Peter Der Manuelian, Philip J. King Professor of Egyptology
Daniel Rafinejad, Preceptor in Russian
Richard Saley, Lecturer on Near Eastern Languages and Civilizations
P. Oktor Skjaervo, Aga Khan Professor of Iranian. Old Iranian language, literature, and religion.
Piotr Steinkeller, Professor of Assyriology, Director of Graduate Studies. Sumerian and Akkadian languages, Mesopotamian history and religion.
Himmet Taskomur, Preceptor in Ottoman and Modern Turkish
Ruth R. Wisse, Harvard College Professor, Martin Perez Professor of Yiddish Literature and of Comparative Literature. Yiddish language and literature, Jewish studies.
Malika Zeghal, Prince Alwaleed Bin Talal Professor in Contemporary Islamic Thought and Life
The PhD in Organizational Behavior

The PhD in Organizational Behavior program is a joint degree offered by the Harvard Business School together with the Department of Sociology in the Faculty of Arts and Sciences. The doctoral program in Organizational Behavior trains scholars who are able to draw on the concepts and methods of psychology and sociology in conducting research on behavior and management within complex organizations. Special attention is given to studies that bridge the gap between research and theory on one hand, and constructive organizational practice on the other. The program combines training in theory and methods of psychology or sociology, the study of business administration, and empirical research on organizational phenomena. Students have the choice of focusing their research at either the micro (i.e., psychological, individual, interpersonal, group) or macro (i.e., sociological, organizational) level.

Program

Students in the OB program specialize in micro-organizational behavior or sociology. Students receive core disciplinary training in either psychology or sociology, and gain knowledge of existing research and theory about organizations through advanced coursework in organizational behavior. An advisor from Harvard Business School or the Faculty of Arts and Sciences is appointed for each student upon matriculation. They aid the student in planning her or his program of study.

The sociology track deals with the macro aspects of organizational behavior. It focuses primarily on organizational processes and structures and on organizations in relation to their environments. Students also become familiar with some of the more micro issues emphasized within the micro-organizational track.

The micro-organizational track is for students who wish to concentrate on the psychological aspects of organizational behavior. The primary focus is on the psychology of individuals as they engage in decision-making, interpersonal relations, and small group activities. Students also become familiar with some of the more macro issues emphasized within the sociology track.

To complete the PhD in organizational behavior, students must fulfill the following requirements:

Coursework

Students in the OB program specialize in micro-organizational behavior or sociology. Students receive core disciplinary training in either psychology or sociology, and gain knowledge of existing research and theory about organizations through advanced coursework in organizational behavior.

Students also take the Business Education for Scholars and Teachers (BEST) Series, which is designed to provide doctoral students with immersion in topics critical to business school scholarship and teaching.

Examinations

Sociology track students complete a written general examination in Sociology.

Both micro-organizational behavior and sociology track students complete the Organizational Behavior Exam. This examination completes the student’s preparation for work on the doctoral dissertation. It provides an excellent occasion for the student to draw on all of his or her academic preparation and training to demonstrate readiness for first-rate conceptual and empirical work on organizational phenomena.

Teaching Requirements

Students are required to complete a teaching engagement of one full academic term that includes at least 8 hours of front-of-class teaching experience and at least 16 hours of teaching preparation time.

Dissertation

The dissertation is the culminating event in the Program, in which the student develops a substantial original contribution to knowledge in the field of Organizational Behavior. Dissertations may take the form of an extended study of one topic, or a set of three or more related research papers.

Students must prepare a dissertation prospectus which will be reviewed by the prospectus committee typically consisting of three or four faculty members. Micro-Organizational Behavior track committees are ordinarily chaired by a member of the HBS faculty, and students should consult the chair of their committee while choosing other members. Committees must include at least two Harvard faculty having ladder appointments, at least one of whom must be from HBS. Ideally dissertation committees will include both HBS and FAS faculty.

Sociology track committees must include at least one member from the HBS faculty and at least one from the FAS faculty. They are typically chaired by a member of either the HBS or the Sociology faculty.

Recent PhD Dissertation Titles

"Encouraging Healthful Dietary Behavior in a Hospital Cafeteria: A Field Study using Theories from Social Psychology and Behavioral Economics"

"Intentional Ambiguity"

"The Impact of Visual Cues on Judgment and Perceptions in Performance Contexts"

"Social Structure and Mechanisms of Collective Production: Evidence from Wikipedia"

"Men and the Ideal Worker Image"

"Social Capital Activation during Times of Organizational Change"
“Remembrance of Things Past: Individual Imprinting in Organizations”

“The Invisible Hand and the Good of Communities: The Influence of Institutional Logics on the Founding Teams of Local Banks”

“The Timing and Type of Team Coaching Interventions”

“Deadly Decisions: An Examination of Racial Bias in the Decision to Shoot Under Threat”

“Mission Goes Corporate: Employee Behavior in a Mission-driven Business”

Faculty

Organizational Behavior faculty members come from both the Faculty of Arts and Sciences and the Harvard Business School. They include, but are not limited to:

Jeffrey T. Polzer, Chair, UPS Foundation Professor of Human Resource Management. Global collaboration; diverse teams; effect of group affiliations on individuals’ decisions, perceptions, and social interactions.

Terese M. Amabile, Edsel Bryant Ford Professor of Business Administration. Creativity and innovation, primarily impact of work environments and everyday events on motivation, emotion, individual creativity, team creativity, and organizational innovation.

Michel Antebay, Associate Professor of Business Administration. Organizational cultures, occupational identities, morals, qualitative methods.

Mahzarin Banaji, Richard Clarke Cabot Professor of Social Ethics. Social cognition, unconscious cognition, institutional corruption.

Julie Battilana, Assistant Professor of Business Administration. Conditions that enable actors to initiate change that diverges from the institutional status quo, process by which they implement such change.

Max Bazerman, Jesse Isidor Straus Professor of Business Administration. Decision making, negotiation, creation of joint gains in society, and natural environment.

Michael Beer, Cahners-Rabb Professor of Business Administration Emeritus. Organization effectiveness, human resource management, and organization change.

Iris Bohnet, Professor of Public Policy. Trust and decision-making, gender or cross-cultural perspective.

Clay Christensen, Robert and Jane Cizik Professor of Business Administration. Management issues related to the development and commercialization of technological and business model innovation.

Roy Chua, Assistant Professor of Business Administration. Creativity and innovation, multiculturalism, social networking dynamics.

Amy Cuddy, Assistant Professor of Business Administration. Social categories, origins and outcomes of how we perceive and are influenced by other people, roles of culture, emotions, nonverbal behaviors.

Frank Dobbin, Professor of Sociology. Organizational theory, comparative/historical sociology, economic sociology, public policy, and stratification.

Amy C. Edmondson, Novartis Professor of Leadership and Management. Learning processes in teams and organizations.

Robin Ely, Warren Alpert Professor of Business Administration. Race and gender relations, diversity, leadership, and group dynamics.

Heidi Gardner, Assistant Professor of Business Administration. Teams and use of members’ expertise, organizational design and knowledge-based innovation.

Francesca Gino, Associate Professor of Business Administration. Judgment and decision-making, ethics, social influence, emotions and creativity.

Joshua Greene, John and Ruth Hazel Associate Professor of the Social Sciences. Moral judgment and automatic processes and controlled cognitive processes, decision-making using behavioral experiments, functional neuroimaging (fMRI), transcranial magnetic stimulation (TMS), and genotyping.

Boris Groysberg, Thomas S. Murphy Associate Professor of Business Administration. Managing service firms, sustainable competitive advantage.

Ranjay Gulati, Jaime and Josefa Chua Tiamo Professor of Business Administration. Strategic and organizational issues in firms, intra- and inter-firm partnerships, patterns of network of ties.

Monica Higgins, Professor of Education. Leadership development and organizational change, higher education and urban public schools.

Rosabeth Moss Kanter, Ernest L. Arbuckle Professor of Business Administration. Strategy, innovation, and leadership for change.

Rakesh Khurana, Marvin Bower Professor of Leadership Development. CEO labor market, search, and succession.

Karim Lakhani, Associate Professor of Business Administration. Management of technological innovation and product development, distributed innovation systems, open source software communities, innovation and product development strategies.

Michele Lamont, Robert I. Goldman Professor of European Studies; Professor of Sociology and African and African American Studies. Sociology of inequality, race and ethnicity, the sociology of knowledge, the sociology of higher education, sociological theory and comparative and qualitative sociology.

Ellen Langer, Professor of Psychology. Mindlessness and mindfulness; leadership, charisma, decision making, perceived control, creativity, authenticity.

Jennifer Lerner, Professor of Public Policy and Management. Decision sciences, emotion, and accountability.


Joshua Margolis, James Dinan and Elizabeth Miller Professor of Business Administration. Ethical challenges in organizations, ethical complexity in business, and how to equip and enable people to handle both.

Christopher Marquis, Associate Professor of Business Administration. Corporate governance, corporate social responsibility, economic sociology, and networks.

Peter V. Marsden, Edith and Benjamin Geisinger Professor of Sociology and Harvard College Professor; Dean of Social Science. Social networks, organizational analysis, quantitative methods, survey research methods.

Kathleen L. McGinn, Chair; Cahners-Rabb Professor of Business Administration. Gender in negotiations and organizations, impact of interpersonal relationships on negotiations and social change.

Sendhil Mullainathan, Professor of Economics. Development economics, behavioral economics, and corporate finance.

Tsedal Neeley, Associate Professor of Business Administration. Global collaboration and working across national and linguistic boundaries; the impact of language, power, status, and emotions on social dynamics.

Michael Norton, Associate Professor of Business Administration. Social norms on people’s attitudes and behavior; addressing the key role that social factors play in shaping the preferences of individuals; the psychology of investment.

Orlando Patterson, John Cowles Professor of Sociology. Sociology of economic development with special reference to Caribbean, historical sociology of slavery and freedom, sociology of slavery, Caribbean and Afro-American culture and
social structure, and ethnicity from critical and social-philosophical perspective.

Leslie A. Perlow, Konosuke Matsushita Professor of Leadership. Interaction during work and implications on organizational productivity, individual careers, and family life.

Mikolaj Piskorski, Associate Professor of Business Administration; Marvin Bower Fellow. Social networks and on-line social platforms.

Lakshmi Ramarajan, Assistant Professor of Business Administration. Effects of multiple identities and group boundaries on interpersonal and intergroup relations.

Todd Rogers, Assistant Professor of Public Policy. Socially consequential problems, cognitive and social factors, intention and action, behavioral science.

James Sidanius, Professor of Psychology; Professor Africa and African American Studies. Political psychology of gender, group conflict, institutional discrimination and the evolutionary psychology of intergroup prejudice.

Michael Tushman, Paul R. Lawrence MBA Class of 1942 Professor of Business Administration. Relations among technological change, senior executive teams, and organizational evolution; senior team and organization design challenges associated with exploration and exploiting current capabilities.

Ruth Wageman, Associate Faculty in Psychology. Design and leadership of task performing teams, effective leadership of teams, leadership development.

Noam Wasserman, Associate Professor of Business Administration. Founder dilemmas: the difficult early choices faced by founders that have long-term implications for them and their start-ups.

Daniel Wegner, Professor of Psychology. Role of thought in self-control and social life.

Martin K. Whyte, Professor of Sociology. Comparative sociology, sociology of the family, sociology of development, the sociological study of contemporary China, and the study of post-communist transitions.

Christopher Winship, Diker-Tishman Professor of Sociology. Analysis of quantitative data, changes in social and economic status of African-Americans, transition to adulthood, and family formation process.
Higher Degrees in Philosophy

The Department of Philosophy offers a program covering a wide range of fields in systematic philosophy and the history of philosophy. Among the special strengths of the department are moral and political philosophy, aesthetics, epistemology, philosophy of logic, philosophy of language, the history of analytic philosophy, ancient philosophy, Kant, and Wittgenstein.

The department’s graduate program is essentially a PhD program. Because the principal employment for men and women with advanced training in philosophy is in college teaching requiring the PhD, the department ordinarily does not admit applicants who wish to study only for the master’s (AM) degree. The AM may be taken as a step toward the PhD after a minimum of two terms in residence. A candidate for the AM must satisfy the Preliminary, Distribution, and Logic requirements for the PhD; however, the Preliminary Requirement is reduced to ten half-courses, and only seven of the eight distribution units are required for the AM. In addition, the Second-Year Paper requirement must be satisfied. There is no language requirement for the AM.

Doctor of Philosophy

Admission — Substantial previous knowledge of philosophy is normally required. Candidates usually have a bachelor’s or master’s degree in philosophy. Applicants less prepared in philosophy may be admitted under special conditions if they have grounding in mathematics or the natural or social sciences. Applicants are required to take the GRE (general), and to submit a sample of their written work.

Financial Aid — Financial aid is administered by the Graduate School of Arts and Sciences. (See the GSAS Guide to Admission and Financial Aid for further information.) Teaching fellowships, which are administered by the department, normally are restricted to graduate students who have completed at least two years of work in the department and are making satisfactory progress toward the doctorate.

Preliminary Requirement — Candidates must pass at least 12 approved half-courses or seminars during their first four terms in the department. Courses numbered 301 or above do not count toward this preliminary requirement, but the two required terms of Philosophy 300, the First-Year Colloquium, may be counted as three of the 12. If a letter-graded course record is to be considered satisfactory, the candidate’s grades in these courses must be B or higher.

Courses taken to meet the preliminary requirement must be approved in advance by the department’s director of graduate studies. Students must take and complete Philosophy 300a plus two letter-graded half-courses or seminars during their first term and Philosophy 300b plus three letter-graded half-courses or seminars more in their second term, thus completing five letter-graded half-courses during the first two terms of residence, with grades of B or higher.

These courses, like the rest of the 12, should be among those designated “For Undergraduates and Graduates” or “Primarily for Graduates” in the course catalogue. In addition Empirical and Mathematical Reasoning 17 may be counted if needed for the Logic requirement. At least ten of the courses must be taught by members of the Department of Philosophy (including visiting and emeritus members). This requirement can be modified for students specializing in classical philosophy.

Students who have done graduate work elsewhere may petition to obtain credit for up to three half-courses, which may be counted toward the Preliminary Requirement. If they are in philosophy as would normally be the case) such courses will be regarded as equivalent to those taught by members of the department.

Distribution Requirement — This requirement, intended to ensure a broad background in philosophy, is met by completing eight distribution units of work before the beginning of the fourth year of graduate study. A distribution unit may be fulfilled (i) by completing an approved half-course or seminar (which may also be counted toward the Preliminary Requirement) or (ii) by writing a paper under the guidance of a faculty member, with the approval of the director of graduate studies. In the latter case the work does not count toward the Preliminary Requirement. The units are to be distributed as follows:

a. Contemporary Theoretical Philosophy: Three units in core areas of 20th–21st century metaphysics, epistemology, philosophy of science, philosophy of mind, philosophy of language, philosophy of mathematics, and the like.

b. Practical Philosophy: Two units in contemporary or historical ethics, political philosophy, aesthetics, and the like.

c. History of Philosophy: Three units so chosen that one course unit treats primarily Plato or Aristotle and the other two units treat primarily representatives from two of the following: the Rationalists, the Empiricists, Kant, the Idealists. At most one of these three courses may emphasize primarily practical philosophy.

Note: The First-Year Colloquium (Philosophy 300a and 300b) may not be used to fulfill any part of the distribution requirement. Philosophy 299hf, the second-year paper, may be used to fulfill a distribution requirement.

Logic Requirement — Students are required either (i) to pass Empirical and Mathematical Reasoning 17 or a higher level course in logic, such as Philosophy 144, with a grade of B or better, or (ii) to pass an examination in logic, equivalent to the final examination in Empirical and Mathematical Reasoning 17, with a grade equivalent to B+ or higher. The requirement must be satisfied by the end of the second year of study.

Second-Year Paper — Students are required, in their second year of study, to take Philosophy 299hf and to submit by the end of that year a 30–40 page research paper (maximum 12,000 words), written under the supervision of a faculty advisor. The paper may be on any philosophical topic, but the topic should not be so broad that it cannot be treated in reasonable depth in 30–40 pages. It must demonstrate a capacity to do independent reading and research.

Language or Research Tool Requirement — Students must demonstrate a reading knowledge of French, German, Greek, or Latin. The language requirement may be fulfilled by (i) passing an examination set by the Department, or (ii) passing with a grade of B or better, two years of college-level coursework in the language, or (iii) passing, on the competency exam given by the relevant language department at Harvard, at a third-year level, or (iv) participating in a reading course within the Philosophy Department devoted to the study of one or more philosophical texts, in the original language.

Alternatively, students may petition to pursue a “Research Tools” option, by taking four approved half-courses, or the equivalent, on topics directly relevant to their dissertation research, with the joint permission of their faculty advisor and the director of graduate studies. One of these courses may be taken pass/fail; two of them may be counted towards the preliminary requirement. Graduate courses or degrees outside of Philosophy completed before entering the program may be counted towards the research tools option at the discretion of the Director of Graduate Studies; students taking more than one graduate or professional degree at Harvard may count the second degree as fulfilling the research tools option if it is relevant to their philosophical research, and with the consent of their faculty advisors and the Director of Graduate Studies. Students who wish to take the research tools option should submit their petition to their committee and the Director of Graduate Studies when they are beginning work on their dissertation; the petition should demonstrate that the research tools option will serve their research goals better than the study of a language.
Dissertation Workshops – Students who have completed their second year paper are required to enroll each semester in one of the two dissertation workshops, Philosophy 311, Workshop in Moral and Political Philosophy, or Philosophy 312, Workshop in Metaphysics and Epistemology. Permission not to enroll in a workshop must be granted by the director of graduate studies.

Teaching Fellowships – Graduate students are urged to take full advantage of opportunities to acquire teaching experience while working for the doctorate. Students in the third and fourth years will ordinarily teach as part of their graduate school funding. Teaching fellowships are restricted to those who have completed at least two years of work in the department (under exceptional circumstances, one year) and are making satisfactory progress toward the doctorate. In addition to a satisfactory grade record, the criteria of normal progress is as follows for each of four years of graduate study. First year: completing five letter-graded half-courses or seminars and Philosophy 300. Second year: satisfying the preliminary requirement, the logic requirement, and the second-year paper requirement. Third year: satisfying the distribution requirement and formulating a dissertation topic. Fourth year: passing the topical examination. Students in their first year of teaching must, and in their second year of teaching may, take Philosophy 315hf, Instructional Styles in Philosophy.

Oral Topical Examination – After completing the second year paper, each candidate will enroll in Philosophy 333 under his or her third-year advisor. In consultation with this advisor, the candidate will develop a dissertation topic and choose a prospective principal dissertation advisor. To receive formal approval of the dissertation topic a candidate must pass the oral topical examination. If the topical examination is not passed, it must be taken again and passed by the beginning of the winter recess in the year immediately following. Although called an examination, approximately 90 minutes in length, it is in fact a conference on the dissertation topic, not an occasion on which the candidate is expected to produce a complete outline of arguments and conclusions. It is intended to determine the acceptability of the topic on which the candidate wishes to write a dissertation, the candidate’s fitness to undertake such a dissertation, and the candidate’s command of relevant issues in related areas of Philosophy. A dissertation on the proposed topic may be submitted only if the topical examination is passed.

Application to take the topical examination must be made to the director of graduate studies at least two weeks in advance. At the same time, the candidate must submit three copies of a dissertation prospectus to the members of the student’s prospective committee. The prospectus should be 25–30 pages long, and should explain the problem the student proposes to address and the methods by which he or she proposes to address it. It should include a tentative chapter breakdown and a bibliography of sources the student expects to use. The examination is conducted by the dissertation committee.

Dissertation – When the topical examination is passed, the examining committee normally becomes the dissertation advisory committee. One member of this committee is designated the candidate’s principal advisor. At least three months before the deadline for formal submission of the dissertation, the candidate must submit to the advisory committee a legible draft of the dissertation or a considerable part of it. With the consent of the committee, the candidate may then go on to prepare a final draft for submission to the department. The dissertation must show a mastery of the field in which it is written; it must demonstrate the candidate’s insight, originality, and power of independent research; and it must add to the sum of human knowledge and understanding. Apart from these general requirements, there are no formal restrictions on the subject or construction of the dissertation, but the candidate is advised to write on a distinct and sharply limited problem. Dissertations of more than 75,000 words ordinarily will not be accepted.

Final Examination – The completed dissertation is read and appraised by a committee of three, usually identical to the candidate’s dissertation advisory committee. This committee, if it finds the dissertation sufficiently promising, conducts the final oral examination, in which the dissertation must be adequately defended before its acceptance by the department. (The examination is public and may be attended by other members of the department if they wish.) The purpose of this last examination, which is normally about two hours in length, is not so much to test the range and detail of the candidate’s information as to judge the candidate’s skill in presenting and discussing matters considered in the dissertation and the candidate’s ability to meet friendly but searching criticism.

Classical Philosophy – The departments of the Classics and of Philosophy collaborate in an interdisciplinary doctoral program in Classical Philosophy for students registered in either department. Candidates whose majors in philosophy are expected to take the Proseminar for graduate students in the Classics, as well as to attend seminars or other courses in classics relevant to their interests. With the approval of the director of graduate studies, students in the Classical Philosophy program may be permitted to count an appropriate course in ancient philosophy toward the distribution requirement in metaphysics and epistemology and one (in addition to the one already required) toward the requirement in history of philosophy.

Language Requirements: Candidates who plan to write a dissertation in Classical Philosophy are expected to have learned at least one of the classical languages (Greek or Latin) before they are admitted. Depending on the level of fluency they have reached before entering the program, they may be asked to take additional language or reading courses. If they have not previously studied the second language, they will be required to reach the level of one year of college coursework. This can be done either by taking courses or by passing a language examination. In addition, candidates will be expected to have acquired a reading knowledge of German sufficient for reading scholarly literature and to pass a departmental examination on a suitably chosen text.

The rules and procedures for the dissertation will, in general, be those established for candidates in philosophy.

Law and Philosophy – A coordinated JD/PhD in Philosophy and Law is available. Students wishing to obtain the coordinated degrees must be admitted separately to both programs. Students admitted for the coordinated degrees must begin either with the first full year of law school or the first two years of philosophy; after that they may alternate semesters as they choose. The program in Law may be completed in five semesters. The requirements for philosophy are the same as for regular philosophy graduate students.

Application Procedures
1. Further information regarding courses and programs of study may be obtained by writing to the Director of Graduate Studies, Department of Philosophy, Emerson Hall, Harvard University, Cambridge, MA 02138; www.fas.harvard.edu/phildept/; e-mail: phildept@fas.harvard.edu.
2. Applications for admission and financial aid may be obtained by writing to the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138. The application may be submitted online at www.gas.harvard.edu.

Selected Recent Dissertation Titles:
“Divorcing the Good and the Right”
“Giving Reasons: Interpersonal Relationships and Conditions of Autonomy”
“Making up One’s Self: Commitments, Agency, and Identity”
“The Structure of Thought”
“Is Thought Explanatorily Prior to Language?”
“Nonsense, Truth, and Ineffability”

Faculty

Sean D. Kelly, Professor of Philosophy; Chair.
PhD, University of California at Berkeley.
Philosophy of mind, philosophy of science.

Selim Berker, Associate Professor of Philosophy.
PhD, Massachusetts Institute of Technology.
Ethics, epistemology.

Matthew Boyle, Associate Professor of Philosophy.
PhD, University of Pittsburgh. Kant;
Philosophy of mind.

Cheryl Chen, Senior lecturer on Philosophy.
PhD, University of California at Berkeley. Episte-
mology, philosophy of mind.

Warren Goldfarb, Walter Beverly Pearson
Professor of Modern Mathematics and Mathema-
tical Logic; Head Tutor. PhD, Harvard
University. Wittgenstein; logic; analytic
philosophy.

Güven Güzedere, Senior Lecturer on Philosophy
and Psychology. PhD, Stanford University. Philos-
ophy of mind, psychology.

Edward J. Hall, Professor of Philosophy. PhD,
Princeton University. Philosophy of science; phi-
losophy of quantum mechanics; metaphysics;
probability.

Russell Edward Jones, Assistant Professor of
Philosophy. PhD, University of Oklahoma
Ancient philosophy.

Frances Kamm, Professor of Philosophy (FAS)
and Littauer Professor of Philosophy and Public
Policy (Kennedy School). PhD, Massachusetts
Institute of Technology. Ethics.

Peter Koellner, Professor of Philosophy. PhD,
Massachusetts Institute of Technology. Logic and
philosophy of mathematics.

Christine Korsgaard, Arthur Kingsley Porter
Professor of Philosophy. PhD, Harvard University.
Ethics and the history of ethics.

Douglas Lavin, John J. Loeb Associate Professor
of Philosophy. PhD, University of Pittsburgh.
Ethics and philosophy of action.

Jeffrey K. McDonough, John L. Loeb Associate
Professor of Philosophy. PhD, University of Cal-
ifornia at Irvine. Early modern philosophy; Phi-
losophy of science.

Richard Moran, Brian D. Young Professor of
Philosophy. PhD, Cornell University. Philosophy
of mind; aesthetics; philosophy of literature;
moral psychology.

Bernhard Nickel, Associate Professor of Philoso-
phy. PhD, Massachusetts Institute of Technology.
Philosophy of science, philosophy of language.

Mark Richard, Professor of Philosophy, Director
of Graduate Studies. PhD, University of Massa-
chusetts at Amherst.

Thomas M. Scanlon Jr., Alford Professor of
Natural Religion, Moral Philosophy and Civil
Polity. PhD, Harvard University. Moral and
political philosophy.

Amartya Sen, Lamont University Professor.
PhD, University of Cambridge. Moral and politi-
cal philosophy, philosophy and economics.

Tommie Shelby, Professor of African and
African American Studies and Professor of Philos-
ophy. PhD, University of Pittsburgh.
African American philosophy, social and
political philosophy, social theory, philosophy
of social science.

Susanna Siegel, Edgar Pierce Professor of Philos-
ophy. PhD, Cornell University. Philosophy of
language; philosophy of mind.

Alison Simmons, Samuel H. Wolcott Professor of
Philosophy. PhD, University of Pennsylvania. His-
tory of early modern philosophy.
Higher Degrees in Physics

General Information
Physics at Harvard
Graduate students in the Department of Physics study matter and energy on a wide variety of scales and pave the way for innovations in science and technology that reshape the world around us.

The department’s research areas include atomic and molecular physics, quantum science, computational physics, quantum optics, condensed matter physics, biophysics, astrophysics, mathematical physics, particle physics, quantum field theory, string theory, relativity, and cosmology. The department also encourages students to pursue interdisciplinary work with other departments like applied physics, astronomy, mathematics, biology, and chemistry.

The Department of Physics has 40 full-time faculty members and a graduate enrollment of about 200 students. The department is committed to fostering an inclusive and welcoming environment and attracting the widest possible range of talents. At present, approximately a quarter of current graduate students are women and 40 percent are international students.

The primary on-campus buildings of the Department of Physics are Jefferson and Lyman Laboratories, and many of the department’s members also carry out research in Cruft, Pierce, McKay, and the Laboratory for Integrated Science and Engineering (LISE). Jefferson Laboratory is the oldest physics laboratory in the United States and, after extensive renovations, now includes areas designed specifically for study and collaboration among the department’s graduate students.

Intellectual Community
Cambridge and Boston offer extraordinary opportunities for keeping current with the latest developments in physics. A weekly calendar (http://www.physics.harvard.edu/events/) lists the many colloquia and seminars in physics at Harvard and neighboring universities. The Morris Loeb and Lee Historical Lectureships bring eminent physicists to Harvard each year for more extensive presentations.

Facilities and Resources
The physics department and its collaborators are leaders in a broad spectrum of physics research, utilizing facilities and technologies that are continually being modified and improved. Students have opportunities to work in first-class facilities and research centers at Harvard that emphasize scientific collaboration:

- The Center for Ultracold Atoms (CUA) cuawb.mit.edu
  The CUA brings together a community of scientists from MIT and Harvard to pursue research in the new fields opened up by the creation of ultracold atoms and quantum gases. The CUA’s research is currently organized around the themes of strongly correlated states of ultracold atoms and quantum state control of atoms and photons, and is carried out in dedicated facilities at MIT and Harvard University by a community of approximately 100 graduate students, postdoctoral researchers, undergraduate students and visitors who work under the supervision of the Center’s senior investigators in collaborative projects.

- Harvard-Smithsonian Center for Astrophysics (CfA) www.cfa.harvard.edu
  The CfA combines the resources and research facilities of the Harvard College Observatory and the Smithsonian Astrophysical Observatory to pursue studies of the basic physical processes that determine the nature and evolution of the universe. At the CfA, 300 Smithsonian and Harvard scientists cooperate in broad programs of astrophysical research touching on almost all major topics in astronomy.

- Center for Nanoscale Systems (CNS) www.cns.fas.harvard.edu
  The scientific focus of the CNS is on how nanoscale components can be integrated into large and complex interacting systems. In addition to studying very small structures and how their behavior differs from macroscopic objects, researchers at the CNS also investigate how physical systems emerge, how they can be built, and how they behave.

- Engineering and Physical Biology (EPB) www.physicalbiology.fas.harvard.edu
  EPB is a collaboration of 25 Harvard science faculty members who study living systems through the lens of physics and engineering. Research in EPB spans a variety of subjects at the intersection of biology and physics, including dynamics, collective behaviors, and signaling, with a primary focus on processes at the molecular and cellular levels.

- Institute for Quantum Science and Engineering (IQSE) www.iqse.harvard.edu
  The IQSE is a Harvard Science and Technology Initiative whose mission is to foster cross-disciplinary research and education in new areas at the intersection of nanoscience, atomic physics, device engineering and computer science, and seeks to apply principles of quantum mechanics to advanced technologies.

- Institute for Theoretical Atomic and Molecular Physics (ITAMP) itamp.harvard.edu
  ITAMP trains, mentors, and sponsors postdoctoral and visiting fellows in theoretical atomic, molecular, and optical science. ITAMP’s research topics include precision measurements and tests of fundamental laws, ultracold physics, the development and application of ultra-intense, short wavelength light sources, ultra-fast quantum control of atoms, molecules and electrons, nanoscience, and quantum information science.

- Laboratory for Particle Physics and Cosmology (LPPC) www.lppc.physics.harvard.edu
  The Laboratory for Particle Physics and Cosmology conducts cutting-edge research in experimental particle physics and observational cosmology, and provides educational resources for graduate and undergraduate students.

- Materials Research Science and Engineering Center (MRSEC) www.mrsec.harvard.edu
  The Harvard MRSEC identifies new interdisciplinary areas of materials research and trains students in materials science and engineering.

- Nanoscale Science Engineering Center (NSEC) www.nsec.harvard.edu
  Through a close integration of research, education, and public outreach, the NSEC combines top-down and bottom-up approaches to constructing novel electronic and magnetic devices with nanoscale sizes and understanding their behavior, including quantum phenomena.

- Center for the Fundamental Laws of Nature hetg.physics.harvard.edu
  The Center for the Fundamental Laws of Nature encompasses Harvard’s high-energy theory group, and carries out research in particle phenomenology, collider physics, model-building, relativity and cosmology, quantum gravity, holography, and formal aspects of string theory.

Graduate students in the Department of Physics are also engaged in research at centers outside of Cambridge, including the Fermi National Accelerator Laboratory, the European Organization for Nuclear Research (CERN) in Geneva, and the National Institute of Standards and Technology (NIST).
Higher Degrees in Physics

Doctor of Philosophy (PhD)

The graduate program in physics accepts applications only for the PhD degree. Although many graduate students earn a continuing AM (Master’s) degree along the way to completing their PhDs, the department does not accept applications specifically for terminal AM degrees.

Timeline. Incoming graduate students are not technically candidates for the PhD until they have completed a set of candidacy requirements. Before obtaining the PhD, students must therefore satisfy two sets of requirements—those for official doctoral candidacy, and those for the PhD degree itself.

Although no two PhD students follow precisely the same path, students should keep in mind the following general timeline, with details to be explained in later sections:
• During both semesters of the first year, students’ tuition, fees, and stipends are covered by either Harvard’s Purcell fellowship or outside sources of funding, and students should devote their attention to coursework and getting acquainted with research groups. Each student should consult regularly with his or her assigned academic advisor in planning a program of study and research.
• In the summer after the first year, students arrange for their own funding. For those without external fellowships, options include research assistantships (RAs) with research groups, teaching fellowships (TFs) with summer courses, or attending summer schools and conferences.
• Starting in the second year, a student without outside funding should plan on securing either a research assistantship (RA) or a teaching fellowship (TF) per semester. Students typically use their second year to complete their coursework and transition into a research group.
• During the second year, the student should organize a three-member faculty committee—ideally chaired by his or her prospective thesis advisor—and take the qualifying oral examination. After completion of the examination and acceptance by a thesis advisor, the student has fulfilled the requirements for official candidacy for the PhD degree.
• Once the student has completed the requirements for candidacy—ideally by the end of the second year but certainly before the end of the third year—the student should proceed with a research program that eventually culminates in a thesis. Toward the end of each year, the student submits a progress report to his or her faculty committee for review.
• After joining a research group, students typically receive their summer funding by working in a research assistantship (RA) with that group.
• Each student is required to serve as a teaching fellow (TF) at least one fall or spring semester during the course of the PhD program. Note that to fulfill this requirement, the TF position should consist of at least 15 hours per week (3/8 time) and involve a teaching component and not merely grading.
• After writing a thesis under the guidance of a thesis advisor, typically by the end of the fifth or sixth year, the student presents the thesis to a dissertation committee of three faculty members in a final dissertation defense. Once the completed thesis is submitted, the student has fulfilled the requirements for the doctoral degree.

Admission. Candidates for the graduate physics program can submit their applications online. The department’s admissions committee reviews each candidate’s entire application, including statement of purpose, transcript, experience, GRE scores, and letters of recommendation—the statement of purpose and letters of recommendation being especially important, as they directly attest to the student’s research experience and capabilities.

The only specific requirements for admission for the graduate program in physics are those stipulated by the Graduate School of Arts and Sciences. However, prospective students should be well-versed in intermediate physics and mathematics. Ideally, applicants should have devoted approximately half their undergraduate work to physics and mathematics and have completed a one-year introduction to quantum mechanics. The results of the Graduate Record Examinations (GRE) general tests and physics subject test are normally required of all applicants, and are waived only in exceptional circumstances.

A prospective student who has a marked interest in a particular branch of physics should describe it in the statement of purpose. Applicants should also indicate whether they are inclined toward experimental or theoretical research; note that this stated preference will not be construed as a binding commitment to any particular course of study or research.

Each applicant should submit a brief description of the six most advanced courses (four in physics and two in mathematics) completed or to be completed by graduation. If a standard textbook is used, it suffices to write, for example, “Quantum Mechanics, Merzbacher, chapters 1–15.”

Financial Support. The Department of Physics guarantees full financial support on a twelve-month basis for all its graduate students as long as they remain in good standing and complete assigned duties in a satisfactory manner. Support packages consist of Harvard scholarships and some combination of teaching fellowships, outside fellowships, and research assistantships. Some students choose to serve as resident tutors in one of the undergraduate dorms or Houses, receiving room and board but no additional cash stipend.

The department’s financial support package is set so that all students, whatever the stage of their graduate studies, receive at least a minimum gross (taxable) stipend for living expenses. This stipend is adjusted each year to help meet increases in the cost of living, within the limitations of available funds. Additional support includes:
• tuition and fees,
• cost of medical insurance,
• cost of access to Harvard’s University Health Services,
• support for professional travel ($1,000 annually, up to a maximum of $2,000) for the first two years of graduate study, as well as for the third through fifth years after completing the qualifying exam.

For graduate students who do not have outside funding, the primary source of this basic support during the first two semesters of graduate study is the Purcell Fellowship, which covers the full stipend as well as tuition and fees and affords students with the opportunity to explore the activities of all the department’s research groups.

In addition, students may receive other fellowship offers that can be used at Harvard. A fellowship can release departmental or research funds to support other students. After receiving a fellowship, the student should inform the graduate program administrator immediately so that it can be integrated with the rest of the student’s financial package. If a first-year fellowship provides fewer resources than what the department offers, the department will provide a supplement.

Research assistantships (RAs) and teaching fellowships (TFs) are important sources of support for graduate students after their first year. Because of the importance of teaching skills for a successful physics career, a one-term TF is required of all graduate students, generally within the first five years of study. This teaching experience provides an opportunity for students to develop the communication skills that are vital for careers in academics and industry.

Advising. The department assigns each incoming graduate student a faculty academic advisor to help the student make decisions about coursework and research opportunities. Each student is free to choose a new advisor at any subsequent time, but should inform the graduate program administrator of such a change after obtaining
the new advisor’s consent. In particular, by the end of the second year, the student should choose an advisor who will supervise the student’s thesis.

In planning a program, students should study the catalogue of Courses of Instruction (www.registrar.fas.harvard.edu/fasro/courses/) offered by the Faculty of Arts and Sciences, as well as the description in the Programs of Study. After drawing up a tentative program, each student should discuss it with his or her faculty advisor. Students are also welcome to discuss their plans at any time with the Director or Associate Director of Graduate Studies.

Requirements for Candidacy

Course Record. Students who propose to present theses in experimental fields should demonstrate promise in experimental work and a satisfactory understanding of theoretical physics. Applicants for candidacy in theoretical physics should demonstrate strength in courses of a mathematical nature and a satisfactory acquaintance with experimental aspects of physics. Detailed course requirements are given below under “Requirements for Degree.” Note that award of the continuing AM degree does not automatically qualify the student as a candidate for the PhD.

Faculty Committee. Each student is required by the end of the second year to select a faculty chair for a committee to advise the student on his or her research progress. The committee chair is normally one of the department members and, when feasible, a prospective thesis advisor. Under the advisement of the faculty chair, the student should also select two more faculty members to bring the total to three, at least two of whom should be members of the Department of Physics.

Qualifying Oral Examination. Each student is also expected to pass an oral examination given by his or her faculty committee ideally by the end of the second year, and certainly by the end of the third year. The purpose of the examination is two-fold: The examination aids in estimating the candidate’s potential for performing research at a level required for the doctoral thesis, and also serves as a diagnostic tool for determining whether the candidate requires changes to his or her program of research and study.

For the examination, each student is asked to select, prepare, and discuss in depth a topic in physics, and to answer questions from the faculty committee both about that topic specifically and more broadly about the student’s larger subfield. Originality is welcomed but not required.

The student selects the topic—preferably but not necessarily related to the proposed field of thesis research—and then submits a title and abstract together with a list of completed course requirements (described under Program of Study) and a decision as to whether the prospective doctoral research will be experimental or theoretical. The student then confers in detail with the committee chair about the topic to be discussed and concrete expectations for the examination. The committee chair provides written approval of the topic, and the overall composition of the examination committee must be approved by Director of Graduate Studies. To ensure adequate preparation, this conference should take place at the earliest possible date, typically one to two months before the examination.

Oral examinations are evaluated on the knowledge and understanding students demonstrate about their chosen topic as well as about their general subfield. Students are also judged on the clarity and organization of their presentations. The examining committee may take into account other information about the candidate’s performance as a graduate student.

The student will pass the examination if the committee believes that he or she has demonstrated adequate comprehension of physics in the area of the chosen topic and in the larger field, as well as an ability to perform the thesis research required for the doctoral degree. Students who do not pass the qualifying oral examination on their first attempt will be encouraged by the committee to take a second examination at a later date.

The committee may upon petition grant a deferral of the examination for up to one year. Students who have not passed their oral examinations by the end of their third year of graduate study must seek approval from the Committee on Higher Degrees prior to being allowed to register for a fourth year of graduate study. If satisfactory arrangements cannot be made, the student will be withdrawn by the department. A student who wishes to change from an experimental to a theoretical thesis topic, or vice versa, may be required to pass a second qualifying oral examination.

Acceptance as a Candidate for the PhD. The final requirement for acceptance as a doctoral candidate is formal acceptance by a suitable thesis advisor, who should be a faculty member of the Department of Physics or a related department. This requirement should be met soon after the oral examination is passed.

Sometimes a student may wish to do a substantial portion of his or her thesis research under the supervision of someone who is not a faculty member of the Department of Physics or a related department. Such an arrangement must have both the approval of the student’s official departmental advisor as well as that of the Committee on Higher Degrees and the department chair.

In order to become acquainted with the various programs of research in progress and promising areas for thesis research, students should attend seminars and colloquia, and consult with their faculty advisors and upper-level graduate students. A list of the current faculty and their research programs is available at www.physics.harvard.edu.

Requirements for the Degree

Academic Residence. Ordinarily a candidate must be enrolled and in residence for at least two years (four terms) of full-time study in the Harvard Graduate School of Arts and Sciences. Ideally, the PhD is completed within six years. The student’s committee reviews his or her progress each year. For financial residence requirements, see the GSAS Guide to Admission and Financial Aid or The Graduate School of Arts and Sciences Handbook (www.gasas.harvard.edu/gsas_handbook.php).

Program of Study (Credit and Course Requirements). Each student is required to accumulate a total of sixteen half-courses of credit, which can include any combination of 200- or 300-level Harvard courses in physics and related fields, graduate-level courses taken by official cross-registration at MIT, and units of TIME-R (research time) or TIME-C (course time). These sixteen half-courses may overlap with some of the eight required half-courses for the optional continuing AM degree.

In fulfilling this requirement, students must obtain grades of B- or better in eight half-courses specified as follows:

A. Four mandatory core courses: Physics 251a, Physics 251b, Physics 232 or Applied Physics 216, and Physics 262 or Applied Physics 284.

B. Four elective courses: Four additional half-courses drawn from the following list, with at most two half-courses in any one field. Note: Not all courses listed are given every year and course offerings, numbers, and contents sometimes change. Students therefore should occasionally confer with their advisors or the chair of the Committee on Higher Degrees about their programs of study.

Particle Physics, Field Theory, String Theory, and Mathematical Physics: Physics 245, 248, 253a, 253b, 253c, 254, 264, 283b, 283, 287a, 287br, and 289r.


Relativity and Astrophysics: Physics 210, 211, any 200-level Astronomy.


Biological and Medical Physics: Engineering Sciences 218, and physics-related courses at the 200 level from Biophysics and Biology offerings.


Electronics for Scientists: Physics 223.

Course Descriptions: Courses of Instruction (www.registrar.fas.harvard.edu)

Other Fields: With the approval of the Committee on Higher Degrees, a student may use 200-level courses or fields not officially listed. In place of demonstrating proficiency by satisfactory course performance, a student may also demonstrate proficiency by an oral examination, by submitting evidence of satisfactory work in appropriate courses taken at other institutions, or by other means deemed satisfactory by the Committee on Higher Degrees. Students wishing to utilize this option should submit a petition to the Committee on Higher Degrees before the end of the third year of residence.

Teaching. In addition to research assistantships (RAs), teaching fellowships (TFS) are important sources of support for graduate students after their first year. Because of the importance of teaching skills for a successful physics career, a one-term TF is required of all graduate students, generally within the first five years of study. This teaching experience provides an opportunity for students to develop the communication skills vital for careers in academia and industry.

To fulfill the teaching requirement, students must serve as a teaching fellow at least one fall or spring semester for at least 15 hours per week (3/8-time). The TF position should involve a teaching component and not merely grading.

Language. There is no formal language requirement for the PhD in physics. Students are nonetheless advised that a knowledge of certain foreign languages is extremely useful in many fields of physics.

Criteria for Satisfactory Progress. In addition to the guidelines specified by the Graduate School of Arts and Sciences (see the Graduate School of Arts and Sciences Handbook, Chapter VI: Degree Requirements), the physics department identifies satisfactory progress for graduate students by several key criteria.

Upon successful completion of the qualifying oral examination, the student must arrange for the appointment of a faculty committee that will monitor the progress of the student thereafter. The student must be accepted by an appropriate thesis advisor within 18 months after passing the qualifying oral examination.

During each subsequent year, the student must submit a progress report in the form specified by the Committee on Higher Degrees. The progress report must be approved by the student’s faculty committee and the Committee on Higher Degrees, who will evaluate the student’s progress toward the completion of the degree. The Committee on Higher Degrees will examine with special care students beyond their fifth year.

For other types of extensions or leave-of-absence policies, consult Chapter VI of the Graduate School of Arts and Sciences Handbook.

Dissertation Defense. Toward the end of the student’s thesis research, the student should arrange a dissertation committee, which consists of at least three faculty members and is chaired by a member of the Harvard Department of Physics. At least two members of the dissertation committee, including the chair, must be members of FAS. A non-FAS thesis advisor should be a member of the dissertation committee, but cannot serve as its official chair.

The dissertation defense consists of an oral final examination delivered to the dissertation committee that involves a searching analysis of the student’s thesis. If the student’s coursework does not indicate a wide proficiency in the field of the thesis, the examination may be extended to test this proficiency as well.

The candidate must provide copies of the completed (unbound) thesis for members of the dissertation committee at least three weeks in advance of the examination. The department requires one bound copy of the final thesis, which students can order through the online dissertation submission system. Detailed requirements on the thesis are published in The Form of the PhD Dissertation (available online at www.gas.harvard.edu), available at the department office.

Master of Arts (AM)

The Department of Physics does not admit students whose sole purpose is to study for the master of arts degree. However, the AM degree is frequently taken by students who continue on for the PhD degree. For those who do not attain the doctorate, the AM degree attests to the completion of a full year’s study beyond the bachelor’s degree.

Program of Study (Credit Requirements). Eight half-courses taken while enrolled at Harvard are required for the continuing AM degree. At least four must be physics courses, and ordinarily all must be in physics or related fields like applied physics, applied math, chemistry, biophysics, engineering, or astronomy. Not more than two half-courses may be from the 100-level listing, “for undergraduates and graduates,” and ordinarily not more than one half-course may be from the 300-level group. “Reading and Research.” The remainder must be from the 200-level, “primarily for graduates,” or graduate-level courses taken by official cross-registration at MIT. (There is no limit on the number of the eight half-courses taken at MIT.)

With the permission of their advisors and with the approval of the Committee on Higher Degrees, students may substitute 300-level courses for more than one of the required eight half-courses. For students who were previously undergraduates at Harvard, only bracketed courses taken as an undergraduate can count toward the AM degree. Courses counted toward the AM degree are also counted toward the PhD.

All half-courses counted toward the AM degree must be passed with a grade of C- or better, and a B average must be obtained in these courses. (In calculating the average, a grade of C is offset by a grade of A; no account is taken of pluses or minuses.)

No thesis, general examination, or knowledge of a foreign language is required for the AM degree. The minimum residence requirement is one year.
AB-AM Degree
Undergraduate candidates for the AB-AM degree in physics must meet both the academic and course requirements for the honors AB degree in physics and the AM degree. A given course can be counted for only one of the two degrees—one course cannot meet the requirement for the AB degree and then be counted again for the AM degree.

Any undergraduate who wishes to apply for the AB-AM degree must submit an application to the graduate program in physics. This application should include two letters of recommendation. (The GRE is not required.) Only students with advanced standing are eligible to apply for this four-year program. Undergraduates taking graduate courses in their third year may bracket those that they wish to apply toward their graduate degree.

Additional Information
Further information about courses and programs of study in physics may be obtained from our website, www.physics.harvard.edu, or from the Department Graduate Program Administrator:

Department of Physics
Harvard University
17 Oxford Street
Cambridge, MA 02138
gradinfo@physics.harvard.edu

Dissertation Titles of Recent Harvard Physics PhDs
Please visit www.physics.harvard.edu/academics/phds.html.

Faculty by Research Area
Astrophysics and Astronomy
Professors Finkbeiner, Kovac, Shapiro, Stubbs; Senior Lecturer Walsworth; Professor Emeritus Horowitz

Experimental Atomic, Molecular, and Optical Physics
Professors Doyle, Gabrielse, Golovchenko, Greiner, Hau, Heller, Lukin, Park, Prentiss; Senior Lecturer Walsworth

Theoretical Atomic, Molecular, and Optical Physics
Professors Demler, Glauber, Heller, Lukin, Sachdev; Senior Research Fellow Yelin

Experimental Biophysics
Professors Berg, Cohen, Desai, Golovchenko, Hau, Levine, Mahadevan, Manoharan, Mazur, Park, Samuel, Weitz, Westervelt, Zhuang; Senior Lecturer Walsworth

Theoretical Biophysics
Professors Desai, Levine, Mahadevan, Nelson

Computational Physics
Professors Heller, Kaxiras

Experimental Condensed Matter Physics
Professors Golovchenko, Greiner, Hoffman, Manoharan, Mazur, Narayanamurti, Park, Pershan, Silvera, Weitz, Westervelt, Yacoby; Professor Emeritus Paul; Senior Lecturer Walsworth

Theoretical Condensed Matter Physics
Professors Demler, Fisher, Halperin, Heller, Kaxiras, Mahadevan, Nelson, Sachdev; Professors Emeriti Ehrenreich, Martin

Environmental Modeling and Risk Analysis
Professor Emeritus Wilson

Experimental High Energy Physics
Professors Feldman, Franklin, Guimaraes da Costa, Huth, Morii; Professor Emeritus Wilson, Senior Research Fellow Brandenburg

Theoretical High Energy Physics/String Theory
Professors Georgi, Jaffe, Jafferis, Randall, Reece, Schwartz, Strominger, Vafa, Yin

Experimental High Pressure Physics
Professor Silvera

History of Physics
Professor Galison; Research Professor Emeritus Holton

Experimental Low Temperature Physics
Professors Doyle, Gabrielse, Halperin, Hoffman, Silvera, Westervelt; Research Professor Yacoby; Senior Lecturer Walsworth

Mathematical Physics
Professors Heller, Jaffe

Experimental Mesoscopic Physics
Professors Golovchenko, Mazur, Narayanamurti, Park, Weitz, Westervelt

Theoretical Mesoscopic Physics
Professors Demler, Halperin, Heller, Lukin, Nelson, Sachdev
The PhD under the Committee on Political Economy and Government

The Doctoral Program in Political Economy and Government (PEG) is intended for scholars interested in academic or policy-making careers requiring advanced knowledge of both economics and political science. It is appropriate for students whose academic interests are not fully served by doctoral studies in economics or political science alone. In political economy, candidates have intellectual interests in the impact of politics on economic processes and outcomes, and the reciprocal influence of economic conditions on political life. This interest is often applied to such diverse areas as international political economy, political development, political and economic institutions, institutional transition and reform, environmental resource policies, and social policy.

Admission

The Committee on Higher Degrees at the Harvard Kennedy School (HKS) serves as an admissions committee for applicants to the PhD in PEG. Candidates are expected to have a distinguished undergraduate record regardless of undergraduate concentration. Many of the strongest applicants have completed a master’s degree in a related field. All successful applicants have strong mathematical preparation to the level of multivariable calculus and linear algebra. Admission to the program is limited to a few exceptional students each year. All applicants are required to take the General GRE no later than November 2013.

Applicants whose native language is not English must submit the Test of English as a Foreign Language (TOEFL). Failure to submit the TOEFL will ordinarily result in rejection unless a transcript is submitted verifying receipt of a degree from an institution at which English is the language of instruction.

Information on the program is available from the director of doctoral programs at the Kennedy School, or online at www.hks.harvard.edu/degrees/phd/peg. All applicants must specify in the Statement of Purpose essay whether they wish to apply for the Economics track or the Political Science track. (See website for details.)

They are eligible for the National Science Foundation Graduate Research Fellowship (703-292-8470), the Ford Foundation Predoctoral Fellowship for Minorities (202-334-2872), or the US Department of Education’s Jacob K. Javits Graduate Fellowship (202-502-7542); or go to www.nsf.gov.

Specific Requirements

Economics Track

• Microeconomic Theory (Economics 2010a, 2010b)
• Macroeconomic theory (Economics 2010c, 2010d)
• Econometrics (Economics 2120 or a more advanced course)
• Four half-courses in government, including two in the same major field of political science
• Two half-courses in a major field of economics
• Doctoral Research Seminar

Political Science Track

• Microeconomic theory (Economics 2020a, 2020b)
• Macroeconomic Theory (Economics 2010c or similar course)
• Econometrics (Government 2001 or a more advanced course)
• Two Formal Political Theory courses, or two approved courses in Political Economy
• Two half-courses in a major field of political science
• Two half-courses in a major field of economics
• A field seminar course in government
• Doctoral Research Seminar

PEG General Examination

The Oral Examination is a 90-minute examination in which the student’s mastery of two “special fields” is tested. The fundamental purpose of the Oral General Examination is to determine if the student is prepared for and likely to be successful with dissertation research and writing. One half-hour is devoted to each of the two fields selected by the student. The final half-hour is devoted to an examination of general analytical and research ability, based in part on a research paper (described below) prepared by the student. All coursework and the research paper must be completed in advance of the oral general exam. Students will be expected to sit for the dissertation must be completed by December of the fourth year in residency.

In the final years of residency, the student completes the dissertation under the guidance of a faculty committee. The dissertation must demonstrate a high degree of competence in research, and capacity for making original and significant contributions to knowledge.

Financial Aid

Students may apply for tuition and stipendary support based on financial need. The number of scholarship packages varies between two and four each year. Typical aid packages include four years of tuition plus two years of stipend. In recent years, all students have received some form of financial aid. Most students are eligible for teaching fellowships and loans to help finance their studies. Please consult the GSAS Guide to Admission and Financial Aid for complete instructions. (Note: The GAPSFAS is not required.)

Applicants who are US citizens or permanent residents of the US should determine if they are eligible for the National Science Foundation Graduate Research Fellowship (703-292-5199), the National Science Foundation Minority Graduate Research Fellowship (703-292-8470), the Ford Foundation Predoctoral Fellowship for Minorities (202-334-2872), or the US Department of Education’s Jacob K. Javits Graduate Fellowship (202-502-7542); or go to www.nsf.gov.

Program of Study

During the first two years in residence, students acquire and demonstrate a broad grasp of economic theory and of the area(s) of political or social science theory most appropriate to their prospective research. Normally, students are required to complete sixteen one-term courses in this period. PhD-level proficiency is required in four areas: macroeconomics, microeconomics, two areas of political science, and quantitative methods. Distribution of courses is described in the next section, Specific Requirements.

During the third year of residency, students continue to develop mastery of the three substantive fields that are the focus of the dissertation. A major research paper and oral exam are required by December of the third year. Refer to PEG General Exam under “Specific Requirements” for more details. The prospectus for the
Approved Fields in Economics

**Group A**

- Microeconomics
- Macroeconomics
- Industrial organization and public regulation
- Public finance
- Finance
- International trade and finance
- Labor economics
- Economics of development
- Mathematical economics
- Econometrics
- Decision and control theory
- Economics of health
- Economics of education
- Economics of national security
- Environmental and resource economics
- Socialism and privatization
- Transportation economics
- Urban and regional economics

**Group B**

**Approved Fields in Political Science**

1. Positive political economy
2. Normative political theory
3. Comparative politics
4. International relations
5. American government

**Language Requirement**

There is no foreign language requirement for the degree in political economy and government.

**Dissertation Prospectus**

A dissertation prospectus is required subsequent to the general oral exam. Approval of the prospectus is contingent upon a successful oral presentation to two of the three dissertation committee members. Ordinarily, a student will have an approved prospectus before the beginning of the fourth year in the program.

**Dissertation**

The candidate is required to demonstrate his or her ability to perform original research in political economy by writing a dissertation that represents a significant contribution to knowledge in that field. Three faculty members supervise the writing of the dissertation. One member of the committee must come from the Kennedy School of Government. The other two must come from the Faculty of Arts and Sciences (FAS) or the Kennedy School. If no representative of FAS is on the committee, two members of the Committee on Higher Degrees in Political Economy and Government must serve as advisors.

**Dissertation Defense**

After the candidate has met all other degree requirements, he or she must pass an oral examination focused on the dissertation. Dissertation examiners will normally include the three supervisors to the dissertation. However, if two members of FAS cannot be present, two members of the Committee on Higher Degrees in Political Economy and Government may represent the FAS at the defense. The purpose of this examination is to assure the committee that the methodology and basic approach of the dissertation are sound and that the student has received critical advice at the most appropriate stage of his or her advanced research. The dissertation must be accepted before the formal application for the degree can be activated.

**Degrees**

The graduate program in Political Economy and Government is designed for students preparing for the PhD. Those seeking to enroll for a master’s degree only will not be admitted. Active PhD candidates who wish to be awarded an AM in the course of their work toward the PhD must meet all the course requirements for the PhD and be recommended for the third year oral exam. Application for the PhD degree must be filed by the deadlines noted in the Graduate School of Arts and Sciences Handbook. Three copies of the approved dissertation must be submitted. The dissertation must conform to the requirements described in The Form of the PhD Dissertation, available online from the Graduate School of Arts and Sciences.

Except by special vote of the committee, all work for the PhD degree must be completed within five years of completion of the general oral examination.

For more detailed program information, consult the website at the Kennedy School of Government: www.hks.harvard.edu/degrees/ phd/peg.

**Recent Dissertation Titles**

- "Essays on the Political Economy of Redistribution"
- "Post Communist Capitalism: The Politics of Institutional Development"
- "Federal Policy and the Mid-century Transformation in the U.S. Housing Markets"
- "Essays on Corruption Measurement, Trust and Investors in Eastern Europe"
- "A Liberal Theory of Natural Resource Property Rights"
- "Essays in Development Economics"
- "Political Economy of Media Capturte"
- "Essays on Banking and Corporate Finance"
- "Essays on Causal Inference in Observational Studies"
- "Balancing Land Conservation and Economic Development: Three Essays"
- "Why and When Do Political Parties Adopt Primary Elections? A Theoretical and Comparative Study"
- "Essays on Environmental and Natural Resource Economics"
Faculty

James Alt, Frank G. Thompson Professor of Government. Methods and Formal Theory.

Christopher N. Avery, Roy E. Larsen Professor of Public Policy. Microeconomic theorist. Game theory models used in the study of bargaining, auctions, and herding behavior; rating and selection mechanisms, focusing on the college admissions system.

Robert H. Bates, Eaton Professor, Department of Government. Political economy, including international political economy, political development, and African politics.

Daniel Carpenter, Allie S. Freed Professor of Government. Analyst of the development of political institutions, the political economy of regulation, bureaucratic politics, and health policy.

Suzanne J. Cooper, Senior Lecturer in Public Policy, Kennedy School. Macroeconomist. Inter-generational dynamics of income inequality; special focus on the role of redistributive human capital expenditure.

Jeffry Frieden, Stanfield Professor of International Peace, Department of Government. Politics of international economic relations, with special emphasis on the political economy of international money and finance.

Edward L. Glaeser, Fred and Eleanor Glimp Professor of Economics. Urban labor markets, growth in cities, the externalities of urban areas, estimation of learning models, labor turnover (especially in Japan). Extensive publications in professional journals on these topics.

Michael J. Hiscox, Professor of Government. Recent research has been in factor mobility and structural adjustment within economies, trade adjustment assistance policies, the measurement of barriers to trade, determinants of foreign investment flows, and size of nations.


Torben Iversen, Harold Hitchings Burbank Professor of Political Economy, Chair. Research and teaching interests include comparative political economy, electoral politics, and applied formal theory.

Sendhil Mullainathan, Professor of Economics. Psychology and economics, poverty, and finance.

Joseph P. Newhouse, John D. MacArthur Professor of Health Policy and Management; Director, Interfaculty Initiative in Health Policy. Financing and organization of medical care services, managed care, risk adjustment, improving medical care price indices.

J. Mark Ramseyer, Mitsubishi Professor of Japanese Legal Studies, Harvard Law School. The law and economics, Japanese legal and political institutions.

James Robinson, Professor of Government. Political economy and economics and political development.

Dani Rodrik, Rafiq Hariri Professor of International Political Economy, Kennedy School. International economics, economic development, and political economy, the consequences of international economic integration, the role of conflict-management institutions in determining economic performance, and the political economy of policy reform. Author of The New Global Economy and Developing Countries: Making Openness Work (Overseas Development Council, 1999).

Kenneth A. Shepsle, George D. Markham Professor of Government. Specialization: formal political theory. Political institutions and processes, analytical approaches to parliamentary institutions, intergenerational arrangements, and issues in political economy.

Beth A. Simmons, Professor of Government. International relations, international political economy, and international law. Current research is on the effects of international law and institutions on state behavior and policy choice.

James Snyder, Professor of Government. American Government; elections campaign finance, legislative behavior and institutions, direct democracy, and corruption.

Robert N. Stavins, Albert Pratt Professor of Business and Government, Kennedy School. Environmental and natural resource economics and policy, particular focus on normative and positive analysis of alternative environmental policy instruments, economics of technology change, economic causes and consequences of land-use changes, costs of carbon sequestration, and policies to address global climate change.

Dustin Tingley, Assistant Professor of Government. Specialization: International political economy, international relations, and experimental approaches to political science.

Richard J. Zeckhauser, Frank Plumptre Ramsey Professor of Political Economy, Kennedy School. Possibilities for democratic, decentralized, allocation procedures; ways to promote the health of human beings, to help labor and financial markets operate more efficiently, and to foster informed and appropriate choices by individuals, groups, and government agencies.

Associated Faculty

Philippe Aghion, Robert C. Waggoner Professor of Economics

Robert J. Barro, Paul M. Warburg Professor of Economics

Drew Fudenberg, Professor of Economics

Lawrence F. Katz, Elisabeth Allison Professor of Economics

Andrei Shleifer, Professor of Economics
Higher Degrees in Psychology

The Department of Psychology offers programs of study leading to the PhD degree in psychology. Students are ordinarily admitted only if they intend to complete the doctoral degree.

Prerequisites
Incoming students must have an undergraduate degree with an academic record of distinction. It is desirable but not essential to have majored in psychology; indeed, some breadth of training in biology, computer sciences, mathematics, philosophy, physics, or the social sciences is preferred to overconcentration in psychology. Some college work in elementary statistics or quantitative methods is advisable. In assessing the applications of candidates whose undergraduate training was in the arts or humanities, the admissions committee will need to place more emphasis on such things as general math and science grades, and the GRE scores. Candidates must take the Graduate Record Examination (GRE) General Test in time for the results to reach the Admissions Office by December 16. We do not require the psychology subject test; if you have taken it and feel the score would be an asset in your application, you may elect to have it sent. International applicants must have a bachelor’s degree from an institution where English is the language of instruction, or take the TOEFL test and receive a grade of at least 80.

We do not require a master’s degree for admission. If you have done graduate work elsewhere you may apply for credit for a maximum of eight half-courses after you have been enrolled in the PhD program for one term. It is possible, but very uncommon, for students to have PhD program requirements waived because of previous graduate work.

Admission
Harvard graduate school applications are done online. Information and a link to the online application is at http://www.gas.harvard.edu/prospective_students/admissions_overview.php/. The application deadline is generally December 16 for Psychology.

The department’s Admissions Committee reviews applications in two broad areas: 1) the candidate’s qualifications and aptitude, which are assessed by a review of grades, GRE scores, and letters of recommendation; and 2) the candidate’s appropriateness for this program in terms of goals and research interests. The committee will judge this mainly by an examination of the statement of purpose and letters of recommendation. The “fit” of a candidate with the program is extremely important. While applicants are not required to know exactly what narrow specialty area they will pursue in graduate study, they should know at least in broad terms what area within psychology they are interested in. A candidate is unlikely to be admitted if his or her interests are not in an area studied by any of our faculty. It is important to list, both in the Statement of Purpose and in the front of the application, the faculty member(s) the applicant hopes will serve as mentors.

We urge candidates to read carefully the materials from all programs they apply to, especially information about the research interests of the faculty. In addition to materials from the programs, one may find good information about a variety of doctoral programs in the American Psychological Association’s (APA) publication Graduate Study in Psychology and Associated Fields. This book is available in libraries or may be purchased from the APA publications office (800-374-2721). We also encourage applicants to read recent articles in the scientific literature by faculty whose work is of interest.

In applying, please take special care with the Statement of Purpose. Divide your reply into three parts:
1. Describe reasonably fully any research experience you have had, including assisting in a laboratory or other scientific facility, dissertation research, or individual work. Please include reprints of published work, if any, but do not send unpublished materials such as term papers or other manuscripts;
2. Describe the nature of your interests in graduate education, answering the following questions: Why continue on with your education? Why do you need to learn more? What skills, theories, and knowledge do you lack? What are the kinds of discoveries and theories that sparked your interest in the chosen discipline? In graduate school, what kinds of questions do you hope to address? Why do you think that these questions are important? Given the set of questions that you will focus on, what kinds of methods do you hope to apply? What skills do you bring forward as you enter graduate school and which skills do you hope to acquire? What holes do you see in the current discipline [big picture stuff]? In what ways do you think that they can be addressed during your graduate career? What kind of graduate environment are you looking for? Who are you hoping to work with, and why?
3. Briefly outline the type of career you envision. Please be as concise as is compatible with a clear response on each point; no more than two-three pages are expected.

Admission to the Harvard doctoral program is competitive. The department typically reviews many applications and has an entering class of 12–16 people. Our ability to admit applicants is constrained by the amount of financial aid funds we have available, since typically the number of qualified applicants greatly exceeds the number of students we can support. Therefore, applicants are advised to apply for external funding.

Financial Aid
Admitted students receive a merit-based award consisting of six years of tuition support, a living stipend in the first two years, a summer research fellowship for the first four years, and a living stipend for the final dissertation-writing year. In the third and fourth years, students are guaranteed teaching fellowships. All applicants are urged to apply for outside fellowships from a variety of sources, and are required to accept such awards in lieu of the Harvard award. If an outside award is for twelve months, it takes the place of Harvard stipend and summer research fellowship. Students will be eligible for a prize of up to $4,000 for each academic year of external funding they receive. For US citizens, the primary outside funding sources are the National Science Foundation Graduate Fellowships and the NDSEG fellowships. Applicants outside the US should explore sources of scholarship aid such as from their national governments. Students are required to maintain satisfactory progress in order to be eligible for financial aid.

Teaching
It is our expectation that most graduates of our program will go on to have academic careers. Hence, experience in teaching is an integral part of the graduate training program. This teaching is expected of all students regardless of their source of funding.

Residence
The Graduate School of Arts and Sciences requires that doctoral candidates be in residence, full-time, for at least two years prior to receiving the degree. That is, a minimum of sixteen half-courses, or equivalent units of independent work, must be completed satisfactorily (B, or higher, for those which are graded), and paid for at the full tuition rate. Reduced tuition is charged in the third and fourth years; thereafter, either the facilities fee or active file fee is charged.
It is assumed that students will be enrolled full-time during the first year. A candidate for admission who anticipates being unable to study full-time should consult with the chair prior to being admitted. In later years, part-time work may be approved on petition.

In psychology a period of five years from the date of first registration, or six years for clinical students, is deemed sufficient to satisfy all requirements and to obtain the doctorate. Ordinarily, a candidacy will be terminated if the student has not received the degree within that time. The department reserves the right to terminate a student’s candidacy at any time if the faculty is not satisfied with the progress made.

Advisors
On or shortly after entering the department each student is assigned an advisor. Advisors may be changed from time to time either as a matter of mutual preference or because the student begins to concentrate his or her work in an area distant from the interests of the original advisor.

Organization
The Department is organized into four areas: clinical science; developmental; social; and cognition, brain, and behavior. These groups consist of faculty members whose combined interests span a coherent program of advanced study and research in some subfield of psychology. Individual faculty are encouraged to participate in more than one group. In addition, there are various “themes” that cut across the areas. Faculty in the Department of Psychology have a wide range of interests, and the themes of their research often span the boundaries of traditional areas in the field. Active research is being conducted in each of the topics listed below, primarily by the faculty listed after each entry. There are regular research seminars on these topics, and numerous opportunities to become involved in research with the relevant faculty.

Students enrolled in the PhD program in psychology may currently follow one of two curricula: clinical psychology, and the psychology department may currently follow relevant faculty.

The themes of research and graduate advising in the department, along with the faculty who are associated with each theme, can be summarized as follows.

**Animal Learning and Cognition:** Buckner, Carey, Spelke, Warneken

**Cognitive Development:** Carey, Snedeker, Somerville, Spelke, Warneken

**Behavioral Neurosciences:** Buckner, Buckholtz, Caramazza, Greene, Hooker, Mitchell, Nakayama, Schacter, Somerville, Xu

**Consciousness:** Caramazza, Langer, Schacter

**Development of Social Cognition:** Banaji, Carey, Somerville, Spelke, Warneken

**Emotion:** Buckholtz, Gilbert, Greene, Hooker, Hooley, Nock, Sidanius, Somerville

**Emotional Disorders:** Buckholtz, Hooker, McNally, Nock

**Evolutionary Psychology:** Greene, Krasnow, Pinker, Sidanius, Warneken

**Executive Control:** Buckholtz, Hackman, Hooker, Schacter, Somerville

**Genetics and Individual Differences:** Buckholtz, Buckner, Hooker, Hooley, Nakayama, Pinker, Sidanius, Warneken

**Group and Intergroup Relations:** Banaji, Sidanius

**Health Psychology:** Hooley, Langer, Weisz

**Intervention for Behavioral and Emotional Dysfunction:** Buckholtz, Hooker, Nock, Weisz

**Judgment and Decision Making:** Banaji, Buckholtz, Gilbert, Greene, Langer, Somerville

**Language:** Caramazza, Carey, Pinker, Snedeker

**Learning and Memory:** Banaji, Buckner, Hooker, Krasnow, McNally, Schacter

**Moral Cognition:** Buckholtz, Greene, Langer, Pinker

**Motor Control:** Nakayama

**Neurological Disorders:** Buckholtz, Buckner, Caramazza, Hooker, Schacter

**Perception:** Alvarez, Nakayama, Spelke, Xu

**Psychophysiology:** Buckner

**Reward and Motivation:** Buckholtz, Somerville

**Social and Affective Neuroscience:** Banaji, Buckholtz, Greene, Hooker, Hooley, Langer, Mitchell, Nakayama, Somerville

**Social Cognition:** Banaji, Buckholtz, Gilbert, Hooker, Krasnow, Langer, Mitchell, Somerville, Warneken

**Thought Disorders:** Hooker, Hooley, Nock

**Unconscious Processes:** Banaji, Caramazza, Greene, Langer, Nock, Schacter

**Visual Cognition:** Alvarez, Caramazza, Carey, Nakayama, Pinker, Spelke, Xu

**Degree Requirements**

**Section I. Requirements for Non-Clinical Students**

The non-clinical PhD program in Psychology can and should be completed in five years. Students who require more time must petition the CHD (Committee on Higher Degrees) and receive written approval of their request. Requests for one additional year will typically be approved and—except under extraordinary circumstances—subsequent requests will be denied. Students who have not completed the PhD program at the end of six years will be withdrawn. Students who have been withdrawn may seek readmission, which will be contingent on (a) the willingness of a tenured or tenure-track faculty member in the psychology department to serve as the student’s advisor; (b) approval by the CHD; and (c) successful completion of an examination approved by the CHD.

**A. Courses and Projects**

All students must complete the following requirements. Course requirements are completed by achieving a grade of B+ or better.

1. **Psychology Department Proseminar (PSY 2170)** must be completed by the end of the first year.

2. **Two Survey Courses** must be completed by the end of the Spring semester of the second year.
   - One of the survey courses must be CBB Proseminar (PSY 2020ab) or Social Proseminar (PSY 2500) or Developmental Proseminar (PSY 2110).
   - The second survey course must either be one of the above or a substitute survey course approved by the CHD.

3. **Two elective courses** must be taken from a list of elective courses approved by the CHD. Elective courses are typically substantive seminars offered by psychology department faculty.

4. **Two statistics courses** must be taken.

5. **One of the statistics courses must be PSY 1950 (Intermediate Statistical Analysis in Psychology) which must be completed by the end of the Spring semester of the first year.**

6. **The second statistics course must be PSY 1952 (Multivariate Analysis) or a substitute statistics course approved by the CHD, and must be completed by the end of the Spring semester of the second year.**

7. **Students must complete a first-year project.** Students must write a satisfactory proposal for an original research project (not a review).
The report must be approved by the student’s faculty advisor(s) by the end of the Fall semester of the student’s first year. Students must complete the proposed project and submit a satisfactory written report to their faculty advisor by the end of the Spring semester of the first year.

8. Students must complete a second-year project. Students must write a satisfactory report of an original research project (not a review). The report must be approved by the student’s faculty advisor(s) and an independent reader (i.e., a faculty member who is not a collaborator on the project) by the end of the Spring semester of the student’s second year. Students must also make a satisfactory oral presentation of this work to the department in May of the second year.

B. Master of Arts (AM)

Students may be recommended for the non-terminal degree of Master of Arts upon completion of the relevant GSAS residence requirements and the requirements in I.A.1–8.

Section II. Requirements for Clinical Students

The clinical PhD program in Psychology can and should be completed in six years (prior to internship). Students who require more time must petition the CHD and receive written approval of their request. Requests for one additional year will typically be approved and—except under extraordinary circumstances—subsequent requests will be denied. Students who have not completed the PhD program at the end of seven years will be withdrawn. Students who have been withdrawn may seek readmission, which will be contingent on (a) the willingness of a tenured or tenure-track faculty member in the Psychology Department to serve as the student’s advisor; (b) approval by the CHD; and (c) successful completion of an examination approved by the CHD.

A. Courses and Projects

All students must complete the following requirements. Course requirements are completed by achieving a grade of B+ or better.

1. PSY 2010 (Contemporary Topics in Psychological Research) must be completed by the end of the Fall semester of the first year
2. PSY 1951 (Intermediate Quantitative Methods) or PSY 1950 (Intermediate Statistical Analysis in Psychology) must be completed by the end of the Fall semester of the first year.
3. PSY 1952 (Multivariate Analysis) must be completed by the end of the Spring semester of the first year.
4. PSY 2040 (Contemporary Topics in Psychopathology) must be completed by the end of the Spring semester of the second year.
5. PSY 2050 (History of Psychology) must be completed by the end of the Spring semester of the fourth year.
6. Students must complete a first-year project. Students must write a satisfactory proposal for an original research project (not a review). The report must be approved by the student’s faculty advisor(s) by the end of the Fall semester of the student’s first year. Students must complete the proposed project and submit a satisfactory written report to their faculty advisor by the end of the Spring semester of the first year.
7. Students must complete a second-year project. Students must write a satisfactory report of an original research project (not a review). The report must be approved by the student’s faculty advisor(s) and an independent reader (i.e., a faculty member who is not a collaborator on the project) by the end of the Spring semester of the student’s second year. Students must also make a satisfactory oral presentation of this work to the department in May of the second year.
8. Students must complete a six-hour general examination covering in considerable depth the literature in the area of psychopathology and clinical psychology during the summer preceding the Fall semester of the third year.
9. Students must complete a one-year clinical internship. Students must complete all of the above requirements described in I.I.A.1–8 before beginning the internship. In addition, students must meet the course requirements and the practicum placement requirements of the APA and the Commonwealth of Massachusetts licensing board before beginning the internship.
10. Finally, students must meet or exceed the standards for professional conduct and responsibility that are described in the clinical program handbook. Failure to meet these standards can be grounds for termination from the program, even if a student is in good academic standing.

Section III: Requirements for All Students

A. The Dissertation Prospectus

By the end of the spring semester of their penultimate year, students must complete a dissertation prospectus for an original project that is meant to culminate in the dissertation.

• The prospectus committee will comprise three members, at least two of whom must be faculty members in the Psychology Department.
• The prospectus committee members will be nominated by the student and his or her advisor and must be approved by the CHD. (Nominees who are tenured or tenure-track members of the faculty of the psychology department are automatically approved). The student must supply the CV of any nominee who is not a tenured or tenure-track member of the faculty of the psychology department.
• The prospectus committee will not be approved by the CHD until the student has completed all requirements listed in Section I.A. of this document.
• The department requires that the prospectus be approved by the end of the Spring semester of the penultimate year. (Note that students who wish to apply for the guaranteed Dissertation Completion Fellowship must observe the GSAS deadline, which requires that the prospectus be approved by the prospectus committee by the middle of February of the student’s penultimate year).
• Students whose prospectuses have not been approved by the prospectus committee by the end of the Spring semester of the penultimate year will be considered in bad standing and will be withdrawn from the graduate program. Students in bad standing may not receive financial aid such as tuition grants, and may not hold teaching fellowships.

B. The Dissertation and the Oral Defense

In the ultimate year, students must submit a doctoral dissertation in one of two formats.

• The traditional format is described in The Form of the PhD Dissertation available at www.gsas.harvard.edu/current_students/form_of_the_phd_dissertation.php.
• The 3-paper format consists of:
  1. Three articles describing original empirical research that the dissertation committee deems “of publishable quality.” The student must be the first author on each paper. At least one of the three papers must be under review, in press, or published in a peer-reviewed journal.


2. An introductory chapter that thoroughly reviews the literature relevant to the three papers.

3. A concluding chapter that describes what was learned from the three papers.

- The dissertation committee comprises the members of the prospectus committee and an additional member—the outside examiner—who was not a member of the prospectus committee. The outside examiner must be approved by the CHD. Any tenured or tenure-track faculty member in the psychology department is automatically approved as an outside examiner.

- The dissertation must be approved by the student’s advisor before it is submitted to the dissertation committee.

- Once the dissertation committee is satisfied with the written dissertation, the student may schedule an oral defense of the dissertation. Oral defenses may not be scheduled during summer months.

- The interval between the date that the dissertation committee receives the dissertation and the date of the oral defense may not be less than three weeks.

- The format of the oral defense is determined by the chair of the dissertation committee.

Selected Dissertation Titles

“A Mind of Its Own: Negativity Bias in the Perception of Intentional Agency”

“Mispredictions of the Magnitude and Decay Rate of Happiness Following Positive and Negative Feedback”

“I’ll Have What She’s Having” Influence of General and Prediction-Relevant Similarity on Surroration in Affective Forecasting”

“Attentive Tracking of Moving Targets: Psychophysical and Neuroimaging Evidence for an Attention-Based Motion Process”

“Attention and Eye Movements in Visual Search”

“Beyond Content: The Fate—or Function!—of Contextual Information in Directed Forgetting”

“Attentional Orienting to Information with Emotional Associations”

“The Role of Benzodiazepine Gaba Receptor Complex in Ethanol Consumption and Preference”

“Properties of Infants’ Learning about Objects”

“Understanding Explanation: Studies in Teleology, Simplicity, and Causal Knowledge”

“Encoding Individuals and Sets in Language Acquisition”

“Repressive Coping in People Who Have Lost Loved Ones to Suicide”

“Memory Distortion in Individuals Reporting Recovered Memories of Trauma”

“Emotion Perception and Recognition in Borderline Personality Disorder”

“The Fine Line Between Confidence and Arrogance: Investigating the Relationship of Self-Esteem to Narcissism”

Combination Degrees

The only formal dual-degree program at Harvard involving two different graduate or professional schools is an MD/PhD program. Candidates interested in that program should contact Harvard Medical School. In general, it is difficult to implement combined programs that cross two different professional areas. An individual may only attend one Harvard graduate school at a time. Applicants considering dual degree programs with law, public health, or other programs should think carefully about the practical feasibility of such a program. It is best to do one program immediately preceding or following another, rather than trying to interleave the programs. While the Graduate School of Arts and Sciences allows students admitted to one department to apply to form an ad hoc degree committee, such an option is not common or encouraged in psychology. However, it is relatively easy to combine study in two different areas within a faculty, such as arts and sciences, on an informal basis.

One of the advantages of Harvard is its location. Within the University and the broader Cambridge/Boston area are many labs and researchers doing work of interest to our faculty and students. The department encourages students to seek out opportunities to work with these researchers. Students are also encouraged to cross-register for courses at other Harvard graduate schools and at the Massachusetts Institute of Technology.

Other Information

Course listings and descriptions for both graduate- and undergraduate-level courses are found in the Faculty of Arts and Sciences’ Courses of Instruction catalog. The catalog is available online at www.registrar.fas.harvard.edu, click on Courses and Exams, then Courses of Instruction.

Other Programs

Harvard’s Graduate School of Education has master’s and EdD programs in human development and psychology. For information on that program, visit www.gse.harvard.edu/ hdp/ or write:

Graduate School of Education
Admissions Office, Longfellow 111
Harvard University
Cambridge, MA 02138
(617) 495-3414

A program in neuroscience is offered by the Department of Neurobiology of the Division of Medical Sciences at Harvard Medical School. It is a PhD degree-granting program linking together the clinical and basic science faculties in the neurosciences at Harvard Medical School, the Harvard Affiliated Hospitals, and Harvard’s Faculty of Arts and Sciences into a single unit. The large faculty consists of a diverse group of investigators whose research interests include neurophysiology and biophysics, neurochemistry, neuroanatomy, genetic and molecular biological approaches to the nervous system, immunology, neuroendocrinology, psychiatry, diseases of the human nervous system, and related areas. The goals of the program are to turn out a generation of exceptionally well trained research scientists who are knowledgeable about and interested in the diseases and disorders of the nervous system and to link into a single unit the large faculty working in the neurosciences at Harvard Medical School, its affiliated hospitals and at Harvard’s Faculty of Arts and Sciences. For information, visit www.hms.harvard.edu/dms/neuroscience/index.html, or contact:

Program in Neuroscience
Division of Medical Sciences
Harvard Medical School
260 Longwood Avenue
Boston, MA 02115
(617) 432-0162

Updates to this brochure will be posted on our website at www.wjh.harvard.edu/psych/grad_main.html. Answers to specific questions about the program of study offered by the Department of Psychology may be obtained from the Graduate Office, Department of Psychology, William James Hall 210, 33 Kirkland Street, Cambridge, MA 02138; (617) 495-3810; psyinfo@wjh.harvard.edu.

Faculty Research Interests

For the latest listing of Psychology Department faculty and their research interests, please see: http://www.isites.harvard.edu/icb
The PhD in Public Policy

Offered by the Committee on Higher Degrees in Public Policy

The PhD in Public Policy provides advanced graduate training to exceptional scholars preparing for responsible positions in government, academic institutions, and research organizations. Participants in the program explore the questions of what government should do and how better governance can be achieved. The program furthers the primary mission of training capable leaders for the public sector by facilitating the scholarly research that enables public policy practitioners to make ever more informed policy choices. Recipients of this degree are also qualified to be future teachers in public policy and related academic fields.

Admissions and Residence

Admissions decisions are based on the excellence of the candidate’s academic record, test scores, recommendations, and a demonstrated ability and motivation to pursue research. Solid quantitative skills are an important part of successful applications. All students spend the first three years in residence.

Note to internal applicants from the Kennedy School only: Applicants for doctoral study may apply as early as the first term in residence. In some cases a student may choose to wait until the midpoint of the second year to apply. At the end of the second year of study, doctoral students must pass all PhD qualifying tests. The entire academic focus at this point is generally on the dissertation and any remaining elective coursework.

All applicants are required to take the GRE no later than November 15, 2013. Students whose native language is not English must take the Test of English as a Foreign Language (TOEFL) unless they have already completed the equivalent of a U.S. bachelor degree from an institution in which the language of instruction is English.

Applications for admission are available online at www.gfas.harvard.edu.

Applications must be submitted to the Graduate School of Arts and Sciences not to the Harvard Kennedy School.

For more detailed program information, consult the website maintained at the Harvard Kennedy School: www.hks.harvard.edu/degrees/phd/phd-in-public-policy.

Tuition and Financial Aid

Full tuition is charged during the first two years of study, and reduced tuition is charged in the second two years of study. The facilities fee is charged for any additional years in residence. Doctoral candidates are automatically considered for merit fellowships, ranging from partial tuition alone to full tuition plus stipend. These fellowships are offered over a period of four years.

Applicants who are US citizens or permanent residents of the US should determine if they are eligible for the National Science Foundation Graduate Research Fellowship, the National Science Foundation Minority Graduate Research Fellowship (www.nsf.gov), the Ford Foundation Pre-doctoral Fellowship for Minorities (202-334-2872), or the US Department of Education’s Jacob K. Javits Graduate Fellowship (202-502-7542).

Most students are also eligible for teaching fellowships, research assistantships, and loans. Research assistantships are available through affiliations with the Kennedy School’s research centers in science and international affairs; human rights policy; social policy; business and government; state, local and intergovernmental studies; international development; public leadership; the Hauser Center for Nonprofit Organizations; the Joint Center for Housing Studies; and the Center for Press, Politics, and Public Policy. While most of these centers support students after the first year, the Center for Press, Politics and Public Policy offers research support to eligible first-year students as well.

Program of Study

Mathematical preparation should include multivariable calculus. Accordingly, all PhD candidates must demonstrate proficiency in the areas of theory, methods, and a substantive special field. The theory area includes economics and politics/political philosophy/public management. The methods area includes advanced methodology, quantitative methods and analytical methods. The special field includes, among other areas, environmental policy, international economic policy, science and technology policy, international security relations, risk assessment, economic regulatory policy, and international development. Appropriate courses in the student’s special field must be approved by the PhD Committee. All others should be drawn from the published list of HKS courses and other offerings at the University. In the field of Analytical Methods, students may demonstrate proficiency by a combination of course work and a written qualifying examination. Proficiency in quantitative methods and advanced methodology may be demonstrated by satisfactory completion of one doctoral course in each area. Students have the option of making quantitative methods the field of specialization, to be fulfilled by two doctoral courses in the area. All students must also attend the PhD research seminar, API 901, in their first year.

Students advance to the oral general examination after passing their doctoral coursework and written qualifying examinations. A primary field of substantive interest and a secondary field that may be a disciplinary or methodological area are examined at the end of the second year in residence.

Prospectus and Dissertation

In the third year, doctoral students cross-register for the Kennedy School’s PhD Proseminar (API 902). This portion of the seminar is designed for the presentation and discussion of student research papers in general, and specifically for the development of a dissertation topic. By the end of this course, students must present a completed prospectus to the Committee on Higher Degrees in Public Policy. Approval of the prospectus is contingent upon a successful oral presentation to two of the three dissertation committee members at the end of the third year in residence.

The dissertation is expected to represent a significant contribution to knowledge in a policy area, or to yield insight aimed more broadly at improving the functioning of government. Most dissertations involve the application of analytic techniques to the solution of a substantive problem. A few methodological theses concentrate on developing new analytic techniques, their usefulness to be demonstrated through explicit application to a policy issue.

Dissertation Defense

After completing all other requirements for the degree, the candidate must pass an oral defense of the dissertation. There are three faculty members on a dissertation committee. Dissertation Committees must have at least one HKS appointee and one person on the PhD Standing Committee (this may be the same individual). Non-Harvard faculty and emeritus faculty may serve on a committee. There must be a minimum of three faculty on each dissertation committee. Note: Adjunct Lecturers may not serve on PhD Committees. The Program Chair approves all Dissertation Committees.

General

One chapter of the dissertation must be completed each year after the fifth year in residence at GSAS. Except by special vote of the committee, all work for the PhD degree must be completed within five years.
Members of the Committee on Higher Degrees in Public Policy

Alberto Abadie, Professor of Public Policy, Kennedy School. Econometrics, labor, and public finance.
Joseph Aldy, Assistant Professor of Public Policy, Kennedy School. Climate change policy, energy policy, and morality risk valuation.
Arthur I. Applbaum, Professor of Ethics and Public Policy, Kennedy School. Political philosopher. Normative theories of political legitimacy at home and abroad; human rights; ethics and the professions; ethics of stem cell research; early modern accounts of authority and resistance.
Matthew Baum, Marvin Kalb Professor of Global Communications, Kennedy School. Delineating the effects of domestic politics on international conflict and cooperation in general and American foreign policy in particular, as well as on the role of the mass media and public opinion in contemporary American politics.
Iris Bohnet, Professor of Public Policy, Kennedy School. Negotiations, social capital, behavioral economics, statistics; relevance of fairness and trust for individual and collective decisionmaking. Author of Cooperation and Communication (Mohr/Siebeck, 1997).
Amitabh Chandra, Professor of Public Policy, Kennedy School. Health Policy and unemployment.
David T. Ellwood, Scott M. Black Professor of Political Economy; Dean, Kennedy School. Community revitalization, housing mobility and policy, job opportunities, impacts of segregation and neighborhood poverty, community development. Author of Poor Support: Poverty in the American Family.
Jeffrey A. Frankel, James W. Hartel Professor of Capital Formation and Growth, Kennedy School. International finance, monetary policy, regional blocs, international environmental issues.
Ricardo Hausmann, Professor of the Practice of Economic Development, Kennedy School. Issues of growth, macroeconomic stability, international finance, and the social dimensions of development.
Asim I. Khwaja, Associate Professor of Public Policy, Kennedy School. Economic development, finance, education, political economy, institutions, and contract theory/mechanism design.
Brigitte C. Madrian, Aetna Professor of Public Policy and Corporate Management, Kennedy School.
Erich Muehlegger, Assistant Professor of Public Policy, Kennedy School. Industrial organization, economic regulation, and environmental policy.
Robhini Pande, Mohamed Kamal Professor of Public Policy, Kennedy School. Economic analysis of the politics and consequences of redistribution.
Dani Rodrik, Rafiq Hariri Professor of International Political Economy, Kennedy School. International economics, economic development, and political economy, the consequences of international economic integration, the role of conflict-management institutions in determining economic performance, and the political economy of policy reform. Author of The New Global Economy and Developing Countries: Making Openness Work (Overseas Development Council, 1999).
Ryan Sheehy, Assistant Professor of Public Policy, Kennedy School. Public goods provision and state capacity in Sub-Saharan Africa.
Robert N. Stavins, Albert Pratt Professor of Business and Government, Kennedy School. Environmental and natural resource economics and policy, particular focus on normative and positive analysis of alternative environmental policy instruments, economics of technology change, economic causes and consequences of land-use changes, costs of carbon sequestration, and policies to address global climate change.
Richard J. Zeckhauser, Frank Plumpton Ramsey Professor of Political Economy, Kennedy School. Possibilities for democratic, decentralized, allocation procedures; ways to promote the health of human beings, to help labor and financial markets operate more efficiently, and to foster informed and appropriate choices by individuals, groups, and government agencies.
AM in Regional Studies: Russia, Eastern Europe, and Central Asia

General
The program in Regional Studies: Russia, Eastern Europe, and Central Asia (REECA) is based on the premise that in the study of society and culture, the integration of multiple academic disciplines will produce insights unobtainable within the confines of any single discipline. The program seeks to produce area specialists with a sound knowledge of the societies, cultures, and languages of Russia and other countries of the area.

The program offers preparation for careers in public service, business, or for more advanced academic programs. Each student’s career goals, as well as previous training, experience, and academic qualifications, are taken into account in planning his or her course of study. A limited enrollment in the program facilitates individual guidance and personal attention.

The REECA program is based at the Davis Center for Russian and Eurasian Studies, Harvard University’s center for interdisciplinary research and study of Russia and the countries surrounding it. The Davis Center community comprises over 200 affiliates working in disciplines ranging from political science to literature, and whose regional interests span virtually all of Russia, Eastern Europe, and Central Asia. The Center’s goal is to foster these scholars’ development and to stimulate interdisciplinary thinking by creating opportunities for them to meet and exchange views, and REECA students are a central part of the Davis Center community.

The Davis Center makes its home in a new and beautiful space in the Center for Government and International Studies, a multi-building complex housing the Government Department, faculty of the History Department who have international research interests, and many of the thriving research centers in the Faculty of Arts and Sciences at Harvard University.

Requirements for Admission
All applicants to the program must meet the requirements of the Graduate School of Arts and Sciences. These include a bachelor’s degree from a recognized institution (or an acceptable substitute) and a superior undergraduate record. The statement of purpose, three letters of recommendation, and results of Graduate Record Examinations (GREs) are required for indications of promise and commitment. Three years (or the equivalent) of college-level Russian are strongly recommended. Foreign students must demonstrate proficiency in English by submitting results of the Test of English as a Foreign Language (TOEFL).

Deferrals for admission are not allowed. Students accepted into the program but unable to enroll must reapply for admission for the year in which they expect to take up academic residence. The application deadline typically falls in late December for the academic year beginning the following August; see www.gsas.harvard.edu/prospective_students/program_deadlines.php for this year’s deadline.

Financial Aid
Financial aid is administered under the direction of the Graduate School of Arts and Sciences. Harvard grants are open to all students, regardless of citizenship, and are awarded on the basis of academic merit and financial need, as determined by documents submitted to the Graduate School of Arts and Sciences as part of the financial aid application. Prospective students apply for financial aid at the same time they apply for admission.

The Foreign Language and Area Studies (FLAS) fellowship program, sponsored by the US Department of Education, is designed to meet the critical need for American specialists in education, government, and other fields who have knowledge and understanding of non-Western languages and cultures. Applicants must be US citizens or permanent residents of the United States and pursue a course of study that complies with FLAS requirements. Applicants for financial aid who meet FLAS citizenship requirements will be considered for FLAS funding. The FLAS fellowship program is subject to renewal of funding by the US Congress.

REECA applicants are strongly urged to apply for all eligible outside sources of financial aid. A partial list of potential sources of aid appears on the REECA website at http://daviscenter.fas.harvard.edu/student_programs/fin_aid.html

Degree Requirements
Academic Residence. Two years of full-time study while registered in the Graduate School of Arts and Sciences are required.

Program of Study. Programs are designed individually in consultation with the program’s academic advisor to meet each student’s particular needs. The precise requirements depend upon the student’s background and preparation. Each student submits a draft plan of study to the academic advisor before making final course selections for the first term in the program. At the beginning of each subsequent term, students meet with the program academic advisor to discuss the plan and make any necessary changes.

Language Requirement. Before graduating, all REECA students are required to demonstrate a high level of proficiency in Russian (or by petition) another regularly taught Slavic language of the region. Please consult the REECA program office for details.

Course Requirements. Students must successfully complete at least sixteen approved half-courses. Six half-courses are selected from a pre-approved list of regional course offerings, marked with † on the Davis Center website at http://daviscenter.fas.harvard.edu/study/courses. Of these, four must be in the social sciences (including history). Two half-courses are devoted to the thesis. Up to four half-courses may be used to fulfill the regional language proficiency requirement. Approved electives round out the plan of study and bring the total to sixteen. Approved electives are selected in consultation with the academic advisor and typically include theory courses in a discipline that do not directly address the region; additional language study; or professional school courses that relate to future career plans.

Thesis. The AM thesis is supervised by a member of the Harvard faculty and normally takes the form of a traditional academic work. It should demonstrate original research and be based, to a significant extent, on sources in one or more languages of the region. The thesis should demonstrate the candidate’s familiarity with previous scholarship related to the topic.

Foreign Area Officers
Foreign Area Officers in the US Army who are completing a civilian master’s degree as part of their US Army service are subject to special requirements. Please consult the REECA program office for details.

Sample Thesis Topics
“Framing Chechnya: An Analysis of the News Coverage of Russia’s Chechen Wars”
“A War of Laws: The Crimean Question, Tensions, and Ukrainian-Russian Relations”
“The Political Economy of Mass Privatization in Kazakhstan”
“Blogs and Ballots: The Civic Potential of the Ukrainian Webspace”

Programs of Study
“Russian Experimental Jury Trials: A Preliminary Examination”

“Questions of Identity: Islam and Ethnicity in St. Petersburg and Moscow”

“Claiming Autonomy in Russian Federalism: A Study of Conflict in Russia’s Main Oil and Gas Producing Region”


“Reconciling Reform with Reality: Enforcement of Intellectual Property Rights in Russia”

**Course Offerings**

Current course listings in the Faculty of Arts and Sciences are available online at [http://www.registrar.fas.harvard.edu/fasro/courses/](http://www.registrar.fas.harvard.edu/fasro/courses/). A list of regional course offerings is posted on the Davis Center website at [http://daviscenter.fas.harvard.edu/study/courses](http://daviscenter.fas.harvard.edu/study/courses) and is published in a booklet each fall. Students may cross-register in Harvard’s other professional schools (including the Kennedy School of Government, School of Public Health, Law School, and Business School), as well as in the Tufts University Fletcher School of Law and Diplomacy and the Massachusetts Institute of Technology. You may browse Harvard course catalogs online at [http://coursecatalog.harvard.edu](http://coursecatalog.harvard.edu).

To request a course booklet or additional information about the AM program in general, please contact the program office at: reeca@fas.harvard.edu, (617) 495-1194, or REECA Program, Davis Center for Russian and Eurasian Studies, CGIS South Building, 3rd Floor, 1730 Cambridge Street, Cambridge, MA 02138

**To Apply**

The Graduate School of Arts and Sciences requires online submission of the application. For details about the application and admissions process, see: [http://www.gsas.harvard.edu/prospective_students/admissions_overview.php](http://www.gsas.harvard.edu/prospective_students/admissions_overview.php). For REECA-specific details and advice on the admissions process, please see [http://daviscenter.fas.harvard.edu/study/academic-programs/masters-program.html](http://daviscenter.fas.harvard.edu/study/academic-programs/masters-program.html)

**PhD Programs**

This interdisciplinary program is for the master’s degree only. Some graduates of the program subsequently apply to PhD programs at Harvard or other universities. Students interested in obtaining a PhD may wish to consider one of the programs listed at: [http://www.gsas.harvard.edu/programs_of_study/degree_programs.php](http://www.gsas.harvard.edu/programs_of_study/degree_programs.php)

**Faculty**

Please see the list of Davis Center Faculty Associates at [http://daviscenter.fas.harvard.edu/about-us/people](http://daviscenter.fas.harvard.edu/about-us/people). Please note that faculty whose titles include the designation “Emeritus” have retired from teaching.
Higher Degrees in the Study of Religion

The doctor of philosophy (PhD) program in religion at Harvard dates from 1934, when the Faculty of Arts and Sciences established a degree of PhD in “The History and Philosophy of Religion.” Its purpose, as stated by the Faculty, was “to make possible a course of studies which shall enable the candidate both to lay a broad and sufficient foundation for teaching and study within the field of religion, and to do individual research at some point in that field.” In accordance with that expressed intention, the Faculty voted in 1963 to name the program the Study of Religion.

Programs leading to this degree, and also to the bachelor of arts (AB), master of arts (AM), and doctor of theology (ThD) degrees in the same subject, are administered by the Committee on the Study of Religion, a standing committee of the Faculty of Arts and Sciences with membership from both that Faculty and the Faculty of Divinity.

Admission

Applicants to the PhD program must, at a minimum, have a bachelor’s degree, or its equivalent, with an undergraduate record of outstanding quality. Although a previous master’s degree is not required, it is an advantage in the competition for admission. Similarly, while a previous major in the field of religion is not required, the applicant’s background in this and related subjects is a critical consideration. Please note that GRE scores are required for admission.

All doctoral applicants are expected to have foundational language work in the area of specialization (Hebrew, Latin, Greek, Sanskrit, Arabic, Chinese, etc.) at the time of application. In addition, as described in detail further on, admitted students must demonstrate reading competence in two modern languages of secondary scholarship relevant to their course of study. A background in either or both of these languages is also advantageous in the admissions process.

Applicants should indicate, on the Proposed Program Sheet, the broader area within the study of religion in which they expect to work and the special interests they would like to pursue, according to the description of the PhD program.

Note: At Harvard, advanced programs of study involving religion may be arranged under many auspices. The PhD under this committee, in “The Study of Religion,” is one among various possibilities. Some candidates will find that they can best pursue their interests by becoming a candidate for the PhD in such departments as Anthropology, Classics, History, East Asian or Near Eastern Languages and Civilizations, Philosophy, or Sanskrit and Indian Studies. The ThD program of Harvard Divinity School, also administered by the Committee on the Study of Religion, offers specialized theological study of the Christian, Jewish, and western humanistic traditions. Some candidates may find the program for the MTS, MDiv, or ThM degree in the Divinity School more suitable for focusing their interests and strengthening their preparation for doctoral studies. The Committee reserves the right to advise the applicant to seek training in one of these alternative programs if, in its judgment, such a course would be in the applicant’s interest.

We require online submission of the application. See www.gsas.harvard.edu.

The PhD Degree in the Study of Religion

This degree involves both general and specialized work in the study of religion. Students will be expected to identify a specific field of study, with the understanding that their work within this field will be done within the broader context of the interdisciplinary study of religion.

Fields of Study. The following fields represent the areas in which students currently may concentrate in this program. While students may take courses in any of these fields during their course of study — and there is considerable overlap in the content considered by these areas — the student’s primary field will constitute their principal intellectual and professional orientation within the Study of Religion.

Applying students should indicate in their application which field will be their primary specialization. If you indicate one of the fields marked below by an asterisk*, please specify the religious tradition(s) and/or approximate geographical range(s) or temporal period(s) from which the primary sources for your focus of inquiry will be drawn. You may also propose comparative work within any of these fields.

*Philosophy of Religion
*Religion and Society
*Religion, Gender and Culture
Religions of Late Antiquity: Judaism and Christianity
Religion in the Americas
South Asian Religions
*Theology

Applicants may propose other traditions or historical complexes, e.g., Inner Asian or African religions, for study. Those interested in Iranian or Ancient Near Eastern religions should consult both the Study of Religion and the department of Near Eastern Languages and Civilizations to determine how a program might best be shaped.

General Requirements for the PhD in the Study of Religion

Students admitted to this program will register in the Graduate School of Arts and Sciences. Courses pertinent to their different areas of study are listed in the Courses of Instruction of the Faculty of Arts and Sciences and in the Divinity School catalogue.

Full-time study is required during the first two years of the PhD program. This means four half-courses during each term, with a minimum average grade of B. For tuition requirements, see the Graduate School of Arts and Sciences Handbook or the GSAS Guide to Admission and Financial Aid.

Students are expected to complete the PhD in seven years. Only in unusual cases can the program be completed in less than four-and-a-half academic years.

Languages. A high standard of reading proficiency in two modern languages of secondary scholarship relevant to a student’s course of study (in addition to English) is required. This proficiency is to be demonstrated through coursework or by exam after enrollment in the program. A student and his or her adviser will determine the choice of the two modern languages, which should not be confused with primary source languages necessary for the specialization. Typically French and German are selected as modern languages of secondary scholarship, however in certain fields other modern languages are more relevant. For example, a student focusing on Chinese Buddhism would normally study classical Chinese and Japanese as primary source languages, and then might choose modern Japanese and modern Korean as languages of secondary scholarship.
Coursework Outside the Specialization. The committee requires of each student satisfactory completion of two common seminars in the first two years (normally in the first and fourth term of study), and in addition two courses outside the specialty, focusing on a religious tradition, a geographical-historical complex or a methodological approach other than the one a student elects as the context of study.

Second-Year Review. An oral review (one-and-a-half hours) in the second year will assess the student’s progress in the specialty, ability to pursue self-critically an academic study of religion, and probability of completing the doctoral program successfully. The review normally occurs in the third or fourth term of study.

General Examinations. After the satisfactory completion of two years of full-time study, the modern language requirements, the coursework outside the specialization, and the second year review, a student prepares for the General Examinations. PhD students must take their Generals outside the specialty, focusing on a religious tradition, a geographical-historical complex or a methodological approach other than the one a student elects as the context of study.

The AM Degree
No one is admitted as a candidate for the AM, only for the PhD. Nevertheless, the requirements for the master’s degree must be satisfied by all students as they move toward the doctorate, and are expected to be completed by the end of the fourth term.

The AM degree may be granted when these requirements are fulfilled.

For the AM degree a minimum of two full years of coursework (with a minimum average grade of B) is required, the modern language requirements must be met, the requirement of two courses outside the specialization fulfilled, and a satisfactory second-year review completed.

Recent Dissertation Topics
“Post-WWII American Judaism: How Judaism Became an American Religion”

Exemplarity and its Limits in the Hagio graphical Corpus of Thomas of Cantimpre”

“Martyrdom, War, and Memory in the Jesuit Missions of Northwestern New Spain, 1687-1767”


“Stoning in the Islamic Tradition: The Case of Northern Nigeria”

“Beyond the Religious Pursuit of Race: A Genealogy of Secularization within Scientific Theories of Human Difference”

“Contesting the Theo-ethical Rhetoric of Home: Feminist, Postcolonial Politics of Space”

“Patrul Rinpoch on Self-Cultivation: The Rhetoric of Nineteenth-Century Tibetan Buddhist Spiritual Advice”

“‘Is the LORD in Our Midst or Not?’ Conceptions of Divine Presence in Ancient Jewish and Christian Interpretations of the Calf Incident”

For More Information
For questions regarding the PhD program in the Study of Religion, please contact the Program Administrator, Committee on the Study of Religion, 12 Quincy Street, Cambridge, MA 02138; phone: (617) 495-5781; e-mail: cserel@fas.harvard.edu.

Applications to the program may be obtained online via the Study of Religion website: www.fas.harvard.edu/~cserel/. The website also includes links to many related sites, such as course catalogues, and the masters and ThD degree programs offered through Harvard Divinity School.

Applications for admission and financial aid may be obtained from the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138. We encourage online submission of the application. See www.gas.harvard.edu.

Standing Committee Membership
Eck, Diana L., Frederic Wertham Professor of Law and Psychiatry in Society
Abe, Ryuichi, Reischauer Institute Professor of Japanese Religion
Ahmed, M. Shahab, Associate Professor of Islamic Studies

Asani, Ali, Professor of the Practice of Indo-Muslim Languages and Culture
Cohen, Shaye, Nathan Litwack Professor of Hebrew Literature and Philosophy
Fiorenza, Francis, Charles Chauncy Stillman Professor of Roman Catholic Theological Studies (Divinity School)
Frederick, Marla, Professor of African and African American Studies and of the Study of Religion
Giron Negron, Luis, Professor of Romance Languages and Literatures and of Comparative Literature
Graham, William A., Murray A. Albertson Professor of Middle Eastern Studies (FAS)
Gyatso, Janet, Hershey Professor of Buddhist Studies (Divinity School)
Hardacre, Helen, Reischauer Institute Professor of Japanese Religions and Society
Hempton, David, Alonzo L. McDonald Family Professor of Evangelical Theological Studies, Dean (Divinity School)
Jackson, Michael, Visiting Professor of World Religions (Divinity School)
King, Karen L., Hollis Professor of Divinity (Divinity School)
Lamberth, Courtney, Lecturer on the Study of Religion, Director of Undergraduate Studies
Lamberth, David, Professor of Theology (Divinity School)
Nasrallah, Laura, Professor of New Testament and Early Christianity (Divinity School)
Olupona, Jacob, Professor of African and African American Studies (FAS) and Professor of African Religious Traditions (Divinity School)
Patil, Parimal, Professor of the Study of Religion and of Sanskrit and Indian Studies (Director of PhD Studies)
Patumon, Kimberley, Professor of Evangelical Theological Studies, Dean (Divinity School)
Puett, Michael, Professor of Chinese History (Chair)

Schüssler Fiorenza, Elisabeth Krister
Sendarl Professor of Divinity (Divinity School)

Walton, Jonathan, Plummer Professor of Christian Morals and Pusey Minister in the Memorial Church and Professor of Religion and Society; Assistant Professor of African American Religions

Zeghal, Malika, Prince Alwaleed bin Talal Professor of Contemporary Islamic Thought and Life
Other Faculty Offering Instruction in the Study of Religion

Abraham, Susan, Assistant Professor of Ministry Studies

Ahmed, Leila, Victor S. Thomas Professor of Divinity (Divinity School)

Bazzana, Giovanni, Assistant Professor of New Testament (Divinity School)

Beliso-deJesus, Asha, Assistant Professor of African American Religions (Divinity School)

Braude, Ann, Senior Lecturer in American Religious History (Divinity School)

Browne, Janet, Aramont Professor of the History of Science

Carrasco, David, Neil L. Rudenstien Professor for the Study of Latin American (FAS, Divinity School)

Cesari, Jocelyne, Visiting Associate Professor of Islamic Studies

Clooney, Francis X., Parkman Professor of Divinity and Professor of Comparative Theology (Divinity School)

Hall, David D., John A. Bartlett Professor of New England Church History (Divinity School)

Hamburger, Jeffrey, Professor of History of Art and Architecture

Harris, Jay M., Harry Austryn Wolfson Professor of Jewish Studies

Hempton, David, Alonzo L. MacDonald Family Professor of Evangelical Theological Studies (Dean of the Divinity School)

Henricks, Albert, Eliot Professor of Greek Literature

Higginbotham, Evelyn Brooks, Victor S. Thomas Professor of History and of African and African American Studies

Jackson, Michael, Visiting Professor of World Religions (Divinity School)

Johansen, Baber, Professor of Islamic Religious Studies (Divinity School)

Kienzle, Beverly, Professor of the Practice of Latin and Romance Languages (Divinity School)

Kleinman, Arthur, Esther and Sidney Rabb Professor of Anthropology (FAS) and Professor of Psychiatry and Medical Anthropology (Medical School)

Kloppenberg, James, Harvard College Professor and David Woods Kemper ’41 Professor of American History

Levenson, Jon D., Albert A. List Professor of Jewish Studies (Divinity School)

Machinist, Peter, Hancock Professor of Hebrew and Other Oriental Languages

Madigan, Kevin J., Winn Professor of Ecclesiastical History (Divinity School)

McKanan, Dan, Ralph Waldo Emerson Unitarian Universalist Senior Lecturer on Divinity (Divinity School)

Mitten, David G., James C. Loeb Professor of Classical Art and Archaeology

Ragab, Ahmed, Watson Assistant Professor of Science and Religion (Divinity School)

Rivera, Mayra, Assistant Professor of Theology and Latina/o Studies (Divinity School)

Robson, James, Associate Professor of East Asian Languages and Civilizations

Skjaervo, P. Oktor, Aga Khan Professor of Iranian

Stang, Charles, Assistant Professor of Early Christian Thought (Divinity School)

Teeter, D. Andrew, Assistant Professor of Hebrew Bible/Old Testament (Divinity School)

Van der Kuij p, Leonard, Professor of Tibetan and Himalayan Studies
The Study of Religion Proposed Program Sheet

This sheet must be filled out and submitted with your formal application for admission to the PhD program in the Study of Religion.

Your Name: __________________________________________________________ Date: ______________________________

The following fields represent the areas in which students currently may concentrate in this program. While students may take courses in any of these fields during their course of study—and there is considerable overlap in the content considered by these areas in any event—the student’s primary field will constitute their principal intellectual and professional orientation within the Study of Religion.

Applying students should indicate in their application which field will be their primary specialization. If you indicate one of the fields marked below by an asterisk*, please specify the religious tradition(s) and/or approximate geographical range(s) or temporal period(s) from which the primary sources for your focus of inquiry will be drawn.

African Religions
Buddhist Studies
Comparative Religions
East Asian Religions
*Ethics
Greco-Roman Religions
Hebrew Bible
Hindu Studies
History of Christianity
Islamic Studies
Jewish Studies
New Testament and Early Christianity
*Philosophy of Religion
*Religion and Society
*Religion, Gender and Culture
Religion in the Americas
Religions of Late Antiquity: Judaism and Christianity
South Asian Religions
*Theology

Field: __________________________________________________________________________________________________

Religious Tradition or Geographical /Historical Complex: __________________________________________________________

Topical Interests: ________________________________________________________________________________________

Please upload this sheet with your online Admissions Application.
The graduate program in the Department of Romance Languages and Literatures offers students outstanding opportunities to pursue work in the French and Francophone, Italian, Portuguese and Lusophone, and Spanish and Latin American traditions, alone or in combination, leading to Master of Arts and Doctor of Philosophy degrees. After the first two years of graduate study, students receive practical training in teaching both language and literature courses.

The Romance Languages and Literatures faculty is committed to interdisciplinary work, including history, philosophy, psychoanalysis, film studies, gender studies, literary theory, literary history, and philology. Students are encouraged to situate literature in the broad context of cultural productions, ranging from the canonical to alternative modes. The Harvard program provides students with the opportunity to work in a range of periods, genres, and approaches, and to formulate individual study plans with the help of their advisors. While students take courses primarily with members of the department, they may also participate in courses and seminars with faculty working in related areas in other departments of the University.

Graduate students are required to teach beginning in the third year of the program. Possible assignments include teaching a section of an undergraduate language course or leading a discussion section of a literature course taught by a professor. Teaching opportunities in the Core Program and other departments are sometimes also available. Harvard provides its teaching fellows with state-of-the-art classroom resources, a training program, and feedback from permanent faculty members.

**Master of Arts (AM)**

The AM requirements are considered an integral part of the PhD program. Applicants who wish to pursue only the AM are not admitted. However, a terminal AM may be conferred on students who will not be completing requirements for the PhD.

All students are examined at the end of their second term of study in the department. The full section faculty will evaluate each student’s performance in the examination, as well as in courses taken during the first year. This evaluation determines whether further coursework will be required for the AM, and in exceptional cases, whether the student should continue in the program. The same evaluation determines what credit the department will approve for previous graduate work at other universities. Note: The ultimate decision regarding transfer of credit rests with the registrar of the Graduate School.

All course work for the AM must be completed by the end of the second year of graduate study. Successful completion of all AM requirements is a prerequisite for the PhD program.

**General Requirements for the AM**

1. One year’s residence at Harvard and a program of eight courses, to include three 200-level half-courses.
2. Proficiency in the oral and written use of the chosen Romance language, to be demonstrated either by examination upon entrance or by performance in course work during the period of residence.
3. Students specializing in literature before 1800 must demonstrate the ability to read Latin by successful completion (B- or better, or grade of “Satisfactory”) of Harvard Latin A and Latin B, or their equivalents elsewhere. There will be no graduate credit given for these courses.

Students specializing in literature after 1800 may substitute another language for the elementary Latin requirement. Similarly, no graduate credit is granted for this course work. Note: This language cannot be identical to the second Romance language or its substitute, which is a requirement for the PhD (see 1b under General Requirements for the PhD).

4. Sound knowledge of the major aspects of one Romance literature, to be tested by the examination at the end of the first year of study.

**Doctor of Philosophy (PhD)**

**General Requirements for the PhD**

1. All students entering the PhD program should expect to take two full years of course work (16 half-courses), including course work done in fulfillment of the AM requirement. The 16 half-courses must include:
   a. One half-course in the history of the major Romance language, or course substitute as determined by the section.
   b. One half-course in a second Romance literature at the 100 or 200 level. Certain other options (e.g., German, Greek, Romance Studies) may be considered in place of this requirement by petition to the Curriculum Committee and with the approval of the student’s advisor.

   c. For students specializing in literature before 1800, an additional term of Latin beyond the requirement for the AM.

   d. Romance Studies 201, RS 201 is a seminar on approaches to literary and cultural theory specifically designed for all the graduate students in RLL. It is taught collaboratively among the faculty in RLL. This course offers students an opportunity to discuss literary theory through a range of readings and perspectives, to get to know the faculty of the department, and to learn from their approaches to the study of literature.

   **Note:** Students should consult with their advisors before registering for 320-level (Supervised Reading and Research) courses for credit. Only one such course is permitted for credit, unless an additional 320 course is taken in lieu of a specific requirement not otherwise being offered.

2. Normally, all students teach for at least one year at Harvard as part of their graduate program. Those teaching courses lettered or numbered below 70 in the Harvard Language Program must take Linguistics 200, which includes a practicum on teaching techniques. This course does not count among the 16 required half-courses.

3. The passing of a PhD general examination (see Examinations), which must be taken no later than the end of the third year of graduate studies.

4. A dissertation on a subject chosen by the student in consultation with the advisor, to be completed by the end of the sixth year of graduate studies. Following the general examination (at the latest), the student chooses a dissertation director; together they select a committee to supervise the research and writing of the PhD dissertation. The committee, chaired by the dissertation director, is made up of three (exceptionally four) faculty members, chosen by the student in consultation with the dissertation director. Two of the three readers must be members of the Harvard University Faculty of Arts and Sciences. Visiting professors with renewable term appointments may serve on dissertation committees, but not chair them. Ordinarily, two members of the committee represent the student’s language and field; a third may come from another language or discipline. This committee approves the prospectus, establishes the schedule for dissertation completion, and reviews the student’s progress regularly. The dissertation may be written in English or in the appropriate Romance language. The final manuscript must conform to the requirements described in The Form of the PhD Dissertation. After the committee’s formal acceptance of the dissertation, all PhD candidates make an oral presentation to faculty and
Specific Requirements for the PhD by Language Section

1. French and Francophone, and Italian Literatures. Through a combination of course work, seminars, and individual study, candidates are expected to acquire a general familiarity with major figures, works, and trends in the history of French and Francophone, and Italian literature from the earliest texts to the present day. This competence will be tested at the PhD general examination.

2. Hispanic Literatures. All graduate students are expected to demonstrate basic knowledge in six different areas of Hispanic literary culture, understood amply: 1) Medieval Spanish; 2) Golden Age Spanish; 3) Modern Peninsular (18th-21st centuries); 4) Colonial Latin American; 5) 19th century Latin American; and 6) Contemporary Latin American. Students complete written and oral examinations in at least three areas (one major and at least two minor). Students may satisfy the three remaining areas by substituting pertinent graduate-level courses in Spanish for the exams. Any course in Spanish at the 200 level may be counted as a substitution, pending the instructor’s written approval. The course needs to treat a subject in direct relation to the area in order to be deemed an appropriate substitute. In exceptional cases, and with the approval of the course head in consultation with the head of the Spanish section and the DGS, a course in Spanish at the 100 level may be counted as a substitution.

For each minor field exam, students prepare a reading list of no more than twenty works: a minimum of ten literary texts and up to ten more items, which could include works of criticism, theory, films, paintings, photographs, architecture, etc. For major field exams, the reading list should not exceed eighty works: a minimum of fifty literary works and up to thirty more items, which, again, could include works of criticism, theory, films, paintings, photographs, architecture, etc. While creating their reading lists for both the minor and major field exams, students, with guidance from their committee, will draft two or three questions. For the major field exam, one of the questions should be related to the dissertation topic. The written portions of the major and minor field exams are both to be completed on a take home basis within 48 hours of receipt.

3. Hispanic Literature with a Minor in Portuguese.

a. Proven oral and written proficiency in the Portuguese language.

b. A minimum of 18 courses (instead of the standard 16) distributed as follows:

- 14 courses in or related to Spanish literature, including the required course of History of the Language and literature of a second Romance Language.
- Four courses in Portuguese. At least two of those four should be graduate seminars (200 level); the other two may be advanced undergraduate courses (100 level).

3. A general reading list of 24 Portuguese texts (selected by the section head in Portuguese). Reading lists of Hispanic texts will remain the same for all students.

d. The general exam will be prepared as follows: a two-hour component of Portuguese literature will be added to the second part of the written exam, that is, to the portion on the student’s field of specialization in Hispanic literature. The rest of the exam will not change.

e. The dissertation topic must address significant issues from both Spanish and Portuguese literature.

4. Portuguese and Brazilian Literatures. Candidates for this degree are expected to acquire a detailed knowledge of four fields: medieval and Renaissance Portuguese literature; colonial Brazilian literature; Portuguese literature from the 18th to the 20th century; and contemporary Brazilian literature.

a. Students specialize in one of these fields.

b. Competence in the chosen field of specialization and two other selected fields will be tested in the general examinations. Requirements for the fourth field can be met by taking one course in this field before the examinations.

c. Students of Portuguese and Brazilian literatures are required to complete one half-course at the 100 or 200 level in Spanish.

(Note: This does not fulfill the requirement for a graduate level literature course in a second language.)

5. Other programs in one Romance literature with a minor in another Romance literature may be arranged in consultation with the Directors of Graduate Study in both languages.

Examinations

Oral and Written Language Proficiency Examinations for Incoming Students. (French and Spanish only) Proficiency exams are given to all non-native speaking students in the French and Spanish sections for diagnostic purposes only. These are scheduled during the department’s graduate orientation activities just before the first day of fall classes. Incoming students will be notified during the summer prior to entrance specifying the exact time and place of these examinations.

First-year Examination. See the General Requirements for the AM section.

PhD General Examinations. The General Examinations are made up of written and oral parts; the precise format differs by section. The PhD General Exams are given during the week before classes begin in September, and during the May exam period. Students must take these exams by the end of the third year of graduate study.

In the case of unsatisfactory performance, the student may, if the examining board so recommends, take all or part of the PhD Examination a second time, within one year of the first. Failure to pass the PhD General Examination the second time will result in automatic withdrawal from the PhD program.

Students have six weeks following formal written notification of their General Exam grade in which to constitute their dissertation committees and formulate a general topic for the dissertation.

The prospectus, which should be approximately 15 pages in length, should include a statement or outline of the problem to be addressed, a preliminary indication of argument and method, and a representative bibliography. Students have six months from the date on which they receive a grade for their general exams (including the summer for those taking generals in May) in which to complete the prospectus, in consultation with members of their committee. The prospectus will then be reviewed by the committee for formal approval in a meeting at which the student is present.

Dual Track

The Dual Track in Romance Languages offers highly qualified students a PhD in two Romance languages and literatures, exploring the two fields more in depth than a major/minor program allows them to do. Students pursuing the Dual Track should have equal command of the two languages and literatures, and have a sufficiently clear idea of their fields of interest to design an appropriate, consistent, and feasible individualized course of study that explores various intellectual paths and establishes links across languages. There is no admission into the Dual Track prior to the first year of enrollment. Rather, students are accepted into it after completing one year of single-track graduate studies with outstanding academic performance. Candidates must explain to both of the relevant sections and to the Director of Graduate Studies their intellectual reasons for combining two languages and define the areas of interests they wish to explore in their course of study. Criteria for acceptance into the Dual Track include language
proficiency, strong literary and cultural foundations in both literatures and languages, and intellectual focus. A Dual Track student may revert back to a single track if it appears that this is not the best plan of graduate study for him or her.

Required courses
1. Eighteen courses (that is, two more than in the single track), to be completed in two years. The course distribution between the two languages should be fairly balanced, e.g.: 9:9 or 8:10, and may include Romance Studies courses. (It must include Romance Studies 201.) Students may take a maximum of two courses outside of the Department.

2. Students must satisfy mandatory course requirements in each of their two languages.

Advising
Each dual-track student has one faculty advisor in each language. Advisors are designated prior to enrollment according to the student’s chosen field and stated interests. Students may change advisors later on after discussion with their respective section heads. Advisors are in charge of supervising the plan of studies and of organizing the General Examinations.

General Examinations
1. Reading Lists

List A: Literary Canon. A list of major works from the whole historical range of each literature (approximately 100 works; 50 from each literature.) The list will be established following each section’s specifications and with the help of the advisors.

List B: Area of Specialization. A list of approximately 50 texts that relate to the student’s specific area of interest (be it period, theme or genre) in both fields, plus 10 to 20 theoretical and critical works that are highly pertinent to this special area.

Lists A and B should not duplicate one another.

2. Structure and Timeline

The exam will be carried out in two sessions and is to be completed no later than the end of exam period in the spring of the 3rd year.

Session 1 General Knowledge (100 texts total)

Time: Students will take two separate examinations (one in each field), preferably during the fall term of their third year. If one exam is set in the spring term, it must be at least one month before the examination of session 2.

Content: The materials on List A. (Students should be able to deploy theoretical knowledge acquired from List B.)

Structure: Each section will structure its exam according to its own rules.

Session 2 Area of Specialization and Comparative Approach (120 texts total)

Time: To be taken at the end of the second semester of the 3rd year

Content: List B

Committee: To include three professors, one from each of the two sections of the dual track. The third may come from within Romance languages and Literatures or from outside the department.

Structure: This will be an oral examination, to be completed in around 3 hours and with three parts (order to be determined). Two parts (30-45 mins/part) will be in each of the target languages, testing the readings of List B and the student’s (broad) area of specialization. The third part of the examination (1 hour) will be conducted in English. The student will prepare, based on the extensive bibliography of List B, a conference-style paper that will be delivered to the committee. The paper will bring together the two tracks and treat a topic that is related to a more specific area of interest within the student’s field of specialization (this could be related to the student’s dissertation topic, though is by no means limited to it). A discussion based on the paper as well as the books on list B will follow.

Dissertation

The dissertation should be deeply informed by issues pertinent to both literatures.

For further questions concerning the Dual-Track degree, please consult the Director of Graduate Studies or the graduate coordinator.

Double Doctorate in Italian Studies and Renaissance Culture

This program, introduced in 2009, allows students to complete both a doctorate in Italian Studies at Harvard University and a doctorate in Renaissance Culture at the Istituto Nazionale di Studi sul Rinascimento (INSR) in Florence, Italy, within a period of 5 to 6 years. After successful dissertation defense, Harvard awards students a PhD in Romance Languages and Literatures, while the INSR grants a "Diploma di perfezionamento in civiltà dell'Umanesimo e del Rinascimento." The INSR Diploma is legally equivalent to a doctorate awarded by an Italian university.

Important University and Departmental Regulations

1. The Graduate School requires that students maintain a B average in order to remain in good standing.

2. The departmental faculty strongly discourages students from taking an Incomplete in a course. The Department of Romance Languages and Literatures adheres strictly to the policies established by the Graduate School of Arts and Sciences regarding unfinished coursework. Graduate students in Romance Languages and Literatures may commit to writing a maximum of three article-length research papers per term. Students assigned such papers in 100-level courses should petition for an alternate assignment, such as an exam, a series of smaller papers, etc. Students should consult the graduate coordinator regarding administrative procedures for this.

3. Students must make up Incomplete grades before sitting for general examinations.

4. Students must satisfy the Latin (or other language) requirement before taking general examinations.

5. Students who have not met all the requirements for the AM degree may not hold appointments as teaching fellows.

6. Detailed regulations concerning residence requirements and credit for work done elsewhere may be found in the Graduate School of Arts and Sciences Handbook.

Financial Aid

1. All students are guaranteed five years of full funding plus an additional year of tuition. Ass students receive a summer research stipend following years one through four.

2. Additional awards, should they be needed, may take the form of internal or external fellowships, cash stipends, summer travel subsidies, teaching fellowships, loans, exchanges with universities abroad, etc., to be determined by the personal circumstances and academic progress of the individual graduate student.

To secure financial support during any non-funded years, graduate students are encouraged to compete for travel and research fellowships, sponsored by both the Graduate School and institutions and centers elsewhere. Information on these may be obtained through the GSAS Fellowships Office and the Department’s graduate coordinator.

For further details, see the Financial Aid section of the GSAS Guide to Admission and Financial Aid.
Application Procedures

Applications for admission must be filed electronically. The online application for the coming year will be available at the GSAS website in late August. The filing deadline is 5 p.m. on December 16. Further information regarding courses and programs of study in Romance Languages and Literatures may be obtained by visiting the department’s website: www.fas.harvard.edu/rlr.

Faculty List

French

Janet Beizer, Professor of Romance Languages and Literatures, BA, Cornell University; PhD, Yale University. Interests: 19th- and 20th-century French literature, feminist studies, narrative theory, psychoanalysis and literature, cultural studies, literature and medicine, biography/auto-biography.

Tom Conley, Abbott Lawrence Lowell Professor of Romance Languages and Literatures, MA, Columbia University; PhD, University of Wisconsin. Interests: Early Modern French literature; film and media studies; intersection of literature and graphic imagination.

Verena Conley, Long-Term Visiting Professor of Literature and of Romance Languages and Literatures, BA, MA, PhD, University of Wisconsin, Madison. Interests: Modern French and comparative literature; contemporary cultural theory; ecology and technology.

Virginie Greene, Professor of Romance Languages and Literatures and of History and Literature, and Harvard College Professor, Licence, Maîtrise, Université de Paris IV, Sorbonne; PhD, University of Illinois at Urbana-Champaign. Interests: French medieval literature; Proust and his times; time, death, and subjectivity; images and texts (illuminated manuscripts); literature and logic.

Sylvaine Guyot, Assistant Professor of Romance Languages and Literatures, PhD, University of Paris (Sorbonne). Interests: 17th-century French literature, 16th to 18th-century French Theater, Classical Tragedy, Early Modern poetics and aesthetics; practice, theory, and social history of the performance arts; visual culture as an historical and a contemporary issue; representations and social practices of the human body.

Alice A. Jardine, Professor of Romance Languages and Literatures and the Committee on Degrees in Studies of Women, Gender, and Sexuality, AB, Ohio State University; AM, MPhil, PhD, Columbia University. Interests: 20th and 21st-century French and Francophone literature; feminist theory; women, gender, and sexuality studies; culture, arts, and politics; postmodern and trans-modern theories of culture and society; the American 1950s.

Christie McDonald, Smith Professor of French Language and Literature and Professor of Comparative Literature, BA, Mount Holyoke College; PhD, Yale University. Interests: 18th- and 20th- century French literature; literary theory and cultural studies; feminism; questions of change in thought; the dialogue of literature and criticism with other disciplines.

Mylène Priam, Associate Professor of Romance Languages and Literatures, Maitrise in English Studies, DEA, Université de Cergy-Pontoise; PhD, University of Illinois at Champaign-Urbana. Interests: Francophone literature.

Susan R. Sulciman, C. Douglas Dillon Professor of the Civilization of France and Professor of Comparative Literature, AB, Barnard College; AM, PhD, Harvard University. Interests: 20th-century French literature and culture; avant-garde movements and theories of the avant-garde; feminist theory; problems of narrative; writers and politics; film and literature of the Holocaust.

Italian

Francesco Erspermer, Professor of Romance Languages and Literatures, Diploma di perfezionamento in Filologia moderna, Università di Roma. Interests: Renaissance culture; intellectual history; modern and contemporary Italian novel; literature and politics.

Jeffrey Schnapp, Professor of Romance Languages and Literatures, BA, Vassar College; PhD, Stanford University. Interests: 12th- and 13th-century Romance Literatures with an emphasis on Italy; the Troubadour Lyric; 20th-century Italian architecture and design; The emergence and institutional articulation of fascist culture in Italy; Franco-Italian cultural relations from 1850 to 1950; 18th- and 19th-century travel and transportation literature; and Georges Sorel and French Anarcho-Syndicalism.

Portuguese

Joaquim-Francisco Coelho, Nancy Clark Smith Professor of the Languages and Literature of Portugal and Professor of Comparative Literature, Emeritus, AB (Law), University of Pará, Brazil; AM, PhD (Hispanic Studies), University of Wisconsin at Madison. Interests: comparative literature; Portuguese literature; Camões; Fernando Pessoa; Machado de Assis; theory and practice of translation.

Nicolau Sevcenko, Professor of Romance Languages and Literatures, BA, PhD; University of São Paulo, Brazil. Interests: modern Brazilian culture, particularly the relationship between society and culture; 20th-century Brazil; modernity and post-modernity.

Spanish

Sergio Delgado, Assistant Professor of Romance Languages and Literatures. BA, Philosophy, Spanish Language and Literature (Highest Honors), University of California at Berkeley; MA, PhD, Spanish and Portuguese Languages and Cultures, Princeton University. Interests: modern Latin American literature and visual arts, Mexican literature and culture, Brazilian literature and culture, modern poetry, media and cultural studies, technology, border studies, critical theory, philosophy of perception, philosophy of language, aesthetics and politics, sensation and sensationalism.

Luis Fernández Cifuentes, Robert S. and Ilse Friend Professor of Romance Languages and Literatures. Harvard College Professor, AB, Universidad Complutense, Madrid; PhD, Princeton University. Interests: contemporary Spanish and Latin American literature; 19th-century narrative; Romantic thought; autobiography; cultural studies; travel literature; the city; the body.

Mary Malcolm Gaylord, Sosland Family Professor of Romance Languages and Literatures, AB, Wellesley College; AM, Middlebury College; PhD, Harvard University. Interests: Medieval and Golden-Age Spanish literature; Latin American colonial literature; Hispanic poetry of all periods; poetics; literary theory; history and the novel; Cervantes; comparative study of early Romanesque literature.

Lorgia García-Peña, Assistant Professor of Latino/a Studies. PhD, American Culture, University of Michigan; MA, Rutgers University. Interests: Latino/Latina studies and Hispanic Caribbean literary and cultural studies with a special focus on the Dominican Republic and its Diaspora. The dialogue among history, literature, and cultural studies, especially questions of marginality, migration and racial and ethnic identity formation.

Luis Girón-Negrón, Professor of Comparative Literature and Romance Languages and Literatures, AB, MTS, PhD, Harvard University. Interests: Medieval and Golden Age Spanish literature; Arabic, Latin, and Hebrew literatures of the Middle Ages; history of religions; comparative literature.

José Rabasa, Undergraduate Adviser in Latin American Studies, Long-Term Visiting Professor of Romance Languages and Literatures, BA Universidad de las Américas (Puebla, Mexico); MA (cand) Universidad Nacional Autónoma de México (Mexico City, Mexico); PhD in History of Consciousness, University of California, Santa Cruz. Interests: Colonial/Postcolonial Studies, Subaltern Studies, Nahua Poet and Painting, History of Voice, Historiography, Phenomenology.
Mariano Siskind, Assistant Professor of Romance Languages and Literatures, PhD, New York University. Interests: 19th- and 20th-century Latin American literature, travel writing, histories and theories of globalization, Marxism, deconstruction, critical articulations of literature and philosophy.

Doris Sommer, Ira Jewell Williams Professor of Romance Languages and Literatures, AB, Douglas College; PhD, Rutgers University. Interests: 19th-century narrative in Latin America; aesthetics; bilingualism; gender.

Diana Sorensen, James F. Rothenberg Professor of Romance Languages and Literatures and of Comparative Literature; Dean for the Arts and Humanities, AB, in Letras, Universidad de Buenos Aires; AM, PhD, Columbia University. Interests: 19th- and 20th-century Latin American studies; history and memory.

Recent Dissertations Completed

2013

Alba F. Aragón (Spanish): The Rhetoric of Fashion in Latin America. Advisor: Doris Sommer, [Diana Sorensen, Mariano Siskind, Regina Root (College of William & Mary)]

Sonia Brighenti (Italian): La madre oscura. Trasportazione e letteratura nell’Italia di oggi. Advisor: Francesco Ersnapmer, [Giuliana Minghelli, Stefania Lucamante (The Catholic University of America)]

Javier Carlos De Taboada Amat y León (Spanish): Cineastas y escritores europeos en Latinoamérica: un estudio del contexto de producción. Advisor: Diana Sorensen, [Mariano Siskind, Doris Sommer]

Stefanie Anne Goyette (French): Indiscernible Bodies: The Old French Fabliaux in Relation to Thirteenth-Century Medical and Religious Cultures. Advisor: Virginie Greene, [Tom Conley, Stephen G. Nichols (Johns Hopkins University)]

Brenton Kirk Hobart (French): L’imaginaire de la peste dans la littérature française de la Renaissance. Advisor: Tom Conley, [Virginie Greene, Mary Gaylord, Frank Leasuringt (Université Paris-Sorbonne)]


Néfer Muñoz Solano (Spanish): Novelando en el periódico y reportando en la novela de América Latina. Advisor: Diana Sorensen, [Bradley Epps, George Yudice (University of Miami)]

Cara Elizabeth Takakjian (Italian): The Italian Graphic Novel: Reading Ourselves, Reading History. Advisor: Francesco Ersnapmer, [Giuliana Minghelli, Scott Bukatman (Stanford University)]


2012

Catherine Adoyo (Italian): The Order of All Things: Mimetico Craft in Dante’s Commedia. Advisor: Jeffrey Schnapp [Richard Thomas, Jan Ziolkowski]


Séverine Menunier (French): Que reste-t-il de Proust ? À la Recherche du Temps Perdu comme Laboratoire de la Modernité Littéraire. Advisor: Susan R. Suleiman [Christie McDonald, Tom Conley]

Esmeralda A. Ulloa (Spanish): Fashioning Sovereignty in Latin American Narrative. Advisor: Doris Sommer [Mariano Siskind, Regina Root (College of William and Mary)]


2011

Jean Eudes Biem (French): Towards a Cosmopolitan Reconfiguration of Modernity, Epistemology and Polity: Foundational Perspectives in Francoph-
one Character-writers’ Inclusive Aesthetics. Advisor: Verena Conley, [Christie McDonald, Biola Ikere]


Adriana Chimu Harley (French): Nerval, la parole à double tranche. Le théâtre et le temple, ou l’ornie du littéraire. Advisor: Tom Conley [Janet Beizer, Evelyne Ender (Hunter College and CUNY Graduate Center)]

Martin Gaspar (Spanish): La condición traductora. Sobre los nuevos protagonistas de la literatura latinoamericana. Advisor: Diana Sorensen, [Doris Sommer, Gonzalo Aguilar (Universidad de Buenos Aires)]

Christopher Lewis (Portuguese): When the Glass Slips: Building Bridges to Transmodern Identity in the Novels of Santiago Nazarín and Chico Buarque. Advisor: Nicolau Sevcenko [Joaquim-Francisco Coelho, Sergio Delgado]


Alexandra Vega-Merino (Spanish): Sura: chispazos reflexivos en la cinematografía de Tacabo Morales. Advisor: Doris Sommer [Tom Conley, José Rivera]

2010

Daniel Aguirre Oteiza (Spanish): Descripción de la mentira: contradicciones del testimonio en la poesía de Antonio Giménez. Advisor: Luis Fernández Cifuentes [Mary Gaylord, Christopher Maurer (Boston University)]


Caterina Mongiat Farina (Italian): La questione della lingua e i massimi sistemi della cultura. Advisor: Francesco Ersnapmer [Lino Pertile, Diego Zancani (Balliol College)].


Juan de Dios Vázquez (Spanish): “Between Sentences: A Cultural History of “El Palacio de Lecumberri” from Penitentiary to Mexico’s National Archive.” Advisor: Diana Sorensen [Doris Sommer, Hugo Hiriart].

2009

Bruno Carvalho (Portuguese): New City in a New World: Literary Spaces of an Afro-Jewish Brazilian Neighborhood. Advisor: Nicolau Severcenko [Joaquim-Francisco Coelho, Tom Conley]

Christian Claesson (Spanish): The Role of the Author in Juan Carlos Onetti and Juan José Saer. Advisor: Diana Sorensen [Brad Epps, Mariano Siskind, Julio Premat (Paris VIII)]

Sara Kippur (French): Life-Writing across Languages in the Works of Hector Bianciotti, Jorge Semprun and Raymond Federman. Advisor: Susan Suleiman [Diana Sorensen, Christie McDonald]

María Ospina (Spanish): Prácticas de memoria o cómo resistir el acabóse: Violencia y representación en la narrativa colombiana, 1985–2005. Advisor: Doris Sommer [Diana Sorensen, Francisco Ortega (Universidad Nacional de Colombia)]

Felisa Reynolds (French): “Almost the same, but not quite/Almost the same but not white”: The question of Literary Cannibalism. Advisor: Tom Conley [Abiola Irele, Odile Cazenave, Maryse Conde.]

Joaquín Terrones (Spanish): American Baroque: The ethics of excess in Jorge Luis Borges, Wallace Stevens, José Lezama Lima, José Gorostiza, and Carlos Drummond de Andrade (1935–1940.) Advisor: Doris Sommer [Luis Girón, Arnaldo Cruz Malave (Fordham U.)]


Julieta Victoria Muñoz (Spanish): La poética de la amistad en Los seis libros de la Galatea. Advisor: Mary Gaylord [Luis Girón-Negrón, Luce López-Baralt (University of Puerto Rico)].


Jerónimo Pizarro (Spanish): La mediación editorial Sobre la vida póstuma de lo escrito. Advisor: Diana Sorensen, [Doris Sommer, Onésimo Almeida (Brown University)]
Higher Degrees in Slavic Languages and Literatures

The Department of Slavic Languages and Literatures includes among its aims the training of graduate students in the linguistics and literature of the Slavic peoples. Doctoral candidates specialize either in linguistics or in literature, but are required to have some knowledge of both fields. The department offers courses in the various Slavic languages and literatures, including Old Church Slavonic, Russian, Ukrainian, Polish, Czech, and Serbo-Croatian.

Instruction in Russian, Polish, and Old Church Slavonic was introduced at Harvard in the academic year 1896–97 by Professor Leo Wiener, who later added a course in Bohemian, as Czech was then called. In 1930 the late Professor Samuel Hazzard Cross took over the teaching of courses in the Slavic languages and literatures; under him offerings were expanded to include a course in Serbo-Croatian.

The present Department of Slavic Languages and Literatures was established as a separate department of the University under the Division of Modern Languages and Literatures by a vote of the Faculty of Arts and Sciences on January 4, 1949. Professor Michael Karpovich was appointed chair of the department. In the same year, through the devotion and generosity of Professor Cross’s classmate, Mr. Curt Reisinger, the Samuel Hazzard Cross Professorship of Slavic Languages and Literatures was established, and Professor Roman Jakobson named to it. In 1954, the Curt Hugo Reisinger Professorship of Slavic Languages and Literatures was created, with Professor Michael Karpovich as first incumbent. The Alfred Jurzykowski Professorship of Polish Language and Literature was activated in 1971, and held first by Professor Witko Weintraub. Chairs in Ukrainian Philology and in Ukrainian Literature were endowed in 1973.

The department, although its specific concerns center on the fields of language and literature, maintains close working ties with other groups studying the Slavic world at Harvard; among these are the Regional Studies Program, the Davis Center for Russian and Eurasian Studies, and the Ukrainian Studies Program of the Harvard Ukrainian Research Institute.

The department has two fellowships, the Boris A. Bakhmeteff and the Michael Karpovich, specifically designated for students in Slavic Languages and Literatures. Candidates for degrees in this field are also eligible for regular Graduate School grants-in-aid. The department requires that doctoral candidates work as teaching fellows in its language and literature courses, regarding such experience as an integral part of doctoral training.

Admission

Applicants should show knowledge of Russian (or the language of the student’s major field) equivalent to Harvard’s Slavic 103 (third year). Formal training in literature or linguistics is highly desirable for admission to the program. In order to anticipate the language requirement, the candidate for admission should have a reading knowledge of French or German, although this is not a prerequisite.

All applicants to the department are required to submit General GRE scores, as well as an extensive writing sample in English. Any applicant whose native language is not English is required to take the TOEFL exam and achieve a minimum score of 80 on the Internet-based test (IBT), or to receive a degree from an institution where the language of instruction is English. Applications without GRE scores and TOEFL results (where applicable) will be considered incomplete.

The department ordinarily interviews finalists for admission by Skype in late January. Short-listed students are invited to campus for a one-day visit in mid-February to meet with faculty and graduate students and to find out more about programs of study available within the department. We strongly urge applicants who may be out of the country in February to so inform the department and try to visit Cambridge before their departure.

Financial Aid

Graduate students pay full tuition for two years, reduced tuition for two years, and a facilities fee or active file fee thereafter. A student must be in good standing and making satisfactory progress toward the degree to be eligible for financial support. To apply for financial aid, a student must complete a financial aid application each year.

Generally, incoming students, unless they are self-supporting, are offered a full financial aid package. Each package includes six years of tuition, plus a stipend in years one and two and guaranteed teaching in years three and four to cover cost-of-living expenses. In addition, incoming students receive four summer research grants, thus providing support over a twelve-month period for the first four years. The sixth tuition payment occurs in the final year and is funded by a guaranteed dissertation completion fellowship, which covers tuition and pays a full stipend.

After the first two years of graduate study students are eligible and expected to teach in the Slavic department, the General Education program, or in other related Harvard programs to help defray living expenses. In addition to such support, students are encouraged to apply for appropriate Harvard and outside fellowships, and departmental research assistantships.

Library Resources

The collections of Widener Library offer resources for the study and research of Slavic culture without parallel at any American university. The Kilgour collection in the Houghton Library is the finest holding of Russian first imprints in the Western world. The library of the Davis Center houses a separate specialized collection available to enrolled students.

Master of Arts (AM)

The department does not admit candidates for a terminal AM degree. PhD candidates may, however, apply for a master’s degree after having completed, with satisfactory grades, eight half-courses that satisfy department requirements. The degree may also be offered to students unable to complete the doctorate.

Doctor of Philosophy (PhD)

The requirements for this degree are:

Residence (Academic) – Minimum of two years (see the Graduate School of Arts and Sciences Handbook). In practice, most students should expect course work to extend into the third year.

Good Standing – The minimum standard set by the department for satisfactory work by graduate students is an A/B+ average (as many A’s as B’s). Students who fall below this level must, in the following term, demonstrate their ability to meet this minimum in courses taken within the department. Only students who remain in good standing are eligible to take the PhD general examinations.

Special Fields – Slavic literatures, Slavic linguistics.

Program of Study – Out of the sixteen half-courses required, at least two must be seminars or conference courses, which involve the writing of a substantial research paper. One-hundred-level courses in literature may be counted for graduate credit with permission of the chair and the professor involved, and on condition that a graduate-level paper be submitted as part of the course work.
There are two general programs of study, corresponding to the special fields listed above. All students are required to take the Proseminar and Old Church Slavonic, the former in the first term of the first year.

Plan A – Slavic languages and literatures with concentration on the study of literature. The candidate will choose one major Slavic language and literature and a minor field, which can be another Slavic language and literature, another European language and literature, Slavic linguistics and language pedagogy, Russian and East European history, or comparative literature (six courses in the major field and four in the minor field).

Plan B – Slavic languages and literatures with concentration on the study of Slavic linguistics. In this program the candidate will choose one Slavic language as the major (four courses), a second Slavic language as the first minor (two courses), and a related elective field as the second minor (two courses). Additionally, Introduction to Comparative Slavic Linguistics and Introduction to Linguistics are required.

Languages – Before the candidate is eligible for the general examinations, a reading knowledge of both French and German or French or German, plus one other language of demonstrable importance to the student’s research interests must be demonstrated, and departmental requirements in the major Slavic language and in the minor Slavic language or languages (one for candidates who have chosen a second Slavic field under Plan A, two for Plan B) must be satisfied. (See the Graduate Program Requirements document available in the department office for more specific details.)

Teaching – As part of their preparation candidates are expected to teach within their areas of specialization. Teaching is supervised by members of the department and includes a program of teacher training.

General Examinations – Before proceeding to write a dissertation, the candidate must pass the following examinations; they will be offered only during the fall and spring terms.

**Plan A: Literature**

**Part 1.** A minor field portfolio and collective presentation.

**Part 2a.** A four-hour written examination that will consist of eight textual excerpts from a range of periods and genres. The author, title, and year the work was written will be identified. The student will write on six of these excerpts, contextualizing each within literary history and the author’s creative biography, and also analyzing the work’s formal features.

**Part 2b.** A single take-home essay in which the student will be given 48 hours to complete the essay and an expected word count for the result. The written part of the exam is to be taken no more than one month before Part 3.

**Part 3.** Students will prepare a completed draft of the dissertation prospectus as the first step in Part 3 of the general examinations. In preparing the draft, students are invited to consult widely with faculty in the department. Students will also work closely with the faculty member whom the student has chosen as the dissertation advisor, and with others who seem possible members of the dissertation committee. The completed draft will be submitted to this committee by the last day of classes for the Fall semester of the student’s G4 year.

The planned dissertation committee and the student will meet for a one-hour prospectus conference during the Fall Reading Period. This is meant to be a conversation, with students getting feedback on all aspects of the proposed dissertation—its argument, aims, scope, and components, as well as the plan for research and writing. The prospectus conference will begin with the student offering a brief (ten minutes) presentation of the dissertation’s themes and goals, and questions and discussion will follow, with all committee members participating. Students should come away from this conference with a clear idea of any changes needed in the prospectus itself, and with a clear work plan for beginning dissertation research and writing. In response to the suggestions received at this prospectus conference and subsequently, the student will prepare the final version of the prospectus, to be submitted as soon as possible to the Department for formal approval but no later than Spring Break of the following Spring semester.

Students will share their prospectus and dissertation plans at a graduate student workshop in the spring semester of the G4 year, as the last step in the transition from exam to dissertation writing. The GSAS workshop for graduate students will be the venue for these conversations, and all faculty and graduate students will be invited to participate. These events are meant as much to help the dissertation-writing student, who will get feedback from peers and other faculty, as to engage the larger community in the dissertation projects from the very first. They will also give entering graduate students a sense of dissertation work from the very first, and allow students to learn across the generations and from each other.

**Plan B: Linguistics**

**Part 1.** A two-hour written examination, testing the candidate’s knowledge of Slavic linguistics from a comparative-historical or contrastive perspective.

**Part 2.** A three-hour written examination on the linguistics of the candidate’s major language in the context of the Slavic family; this is taken no more than one month before Part 3.

**Part 3.** A two-hour comprehensive oral examination centering on (although not limited to) five “fields”: the fields are to be chosen by the candidate in consultation with the director of graduate studies.

Dissertation – A dissertation prospectus must be submitted for review and approval by all members of the Department. Normally, this occurs in the spring of the fourth year of graduate study. The prospectus will be accompanied by a cover letter, stating the student’s plans for an advisor and dissertation committee. Typically, the Department will approve the committee as requested, and any anticipated adjustments will be discussed in advance through the Director of Graduate Studies. At least two members of the committee must be from the Faculty of Arts and Sciences and at least one member from the Slavic Department.

The dissertation must give evidence of original research or of original treatment of the subject and must be in good literary form. It should be completed within three years after the general examinations. The PhD candidate is then asked to give a defense before the members of the Department.

Dissertations are submitted electronically through ProQuest to the registrar of the Faculty of Arts and Sciences by the deadline established for each degree conferral date. The final manuscript should conform to the requirements described in The Form of the PhD Dissertation. The Department requires that a bound hard copy also be submitted to the Slavic Department, to be maintained in the Graduate Student Reading Room.

Please also see recent selected dissertation titles below.

Further information regarding courses and programs of study in Slavic Languages and Literatures may be obtained by writing to: Chair, Department of Slavic Languages and Literatures, Barker Center 374, 12 Quincy Street, Cambridge, MA 02138, or by viewing the website at www.slavic.fas.harvard.edu/.

Information on admission, tuition and registration policies, and grants may be obtained by writing to the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138.

We encourage online submission of the application. See www.gas.harvard.edu.
Selected Recent Dissertation Titles


Rebecca Reich, “Thinking Differently: Psychiatry, Literature and Dissent in the Late Soviet Period.”


Alex Spektor, “Narrative Ethics in the First-Person Prose of fyodor Dostoevsky and Witold Gombrowicz.”

Emily Van Buskirk, “Reality in Search of Literature: Lydia Ginzburg’s In-Between Prose.”

Hakyung Jung, “The Grammar of Have in Havel’s Language: Possession, Perfect, and Ergativity in North Russia.”


Inna Galperin, “Gogol’s Play with Multiple Addressers: Society Vaudeville and Satirical Comedy In The Inspector General”

Anna Gessen, “Four Strangers, Life on the Margins”

Benjamin Barnaby Poloff, “Intermediacy: A Poetics of Unfreedom in Interwar Russian, Polish, and Czech Literatures”

Jacob Emery, “Stock Exchanges: Heredity, Identity, and Metaphor in Modernist Slavic Literature Modernist Slavic Literature”

Séamas Stiofan O’Driscoll, “Invisible Forces: Capitalism and the Russian Literary Imagination (1855–1881)”


Rachel Slayman Platonov, “Marginal Notes: ‘Autor’skaia Pesnia’ on the Boundaries of Culture and Genre”

Julia Bekman Chadaga, “The Language of Glass and the Transformation of Vision in Modern Russia”


Edyta Bojanowska, “Nikolai Gogol: Between Ukrainian and Russian Nationalism”


Justyna Beinek, “The Album in the Age of Russian and Polish Romanticism: Memory, Nation, Authorship”

Timothy C. Harte, “Russian Motion: Kinetic Dynamism and Speed in Russian Avant-Garde Poetry, Painting, and Film”

Faculty List


Buckler, Julie A., Professor of Slavic Languages and Literatures and Comparative Literature. BA 1980, Yale; PhD 1996, Harvard. Interests: Russian literature, 19th-century and pre-revolutionary prose, 18th-century literature, West European and American literature, cultural studies and semiotics, performing arts (opera, ballet, drama, music) and performance studies, urban studies, imperialism, monuments and commemorations, the presence of the past, the art of interpretation, literary canon and popular culture. Selected Works: Mapping St. Petersburg: Imperial Text and Cityshape (2005); The Literary Longette: Attending Opera in Imperial Russia (2000); “Beyond Preservation: Post-Soviet Reconstructions of Strelna and Tsarskoye” (2011); “Taking and Re-taking the Field: Borodina as a Site of Collective Memory” (2010); “Better Together: Tolstoysky and Cultural Mythologies of the Great Author” (2010); Victorian Literature and Russia (2010); “What Comes After Post-Soviet in Russian Studies!” (2009); “The City’s Memory: Texts of Preservation and Loss in Imperial St. Petersburg” (2007); “Eccentricity and Cultural Semi-


Grabowicz, George G., Dmytro Cyzevs’kyj Professor of Ukrainian Literature. BA 1965, Yale; AM 1970, PhD 1975, Harvard. Interests: Ukrainian literature, Russian-Ukrainian and Polish-Ukrainian literary relations, literary theory (especially reception theory), Romanticism, the Baroque. Selected Works: Toward a History of Ukrainian Literature (1981); The Poet as Mythmaker (1982); In Search of a Great Literature (in Ukrainian, 1993); Do istorii ukrainskoi literatury (1997); Poet jak mifotvorec’ (1998). Work in Progress: The Reception of Sˇevcˇenko; Ethnicity and Populism in Modern Ukrainian Literature; Russian-Ukrainian Literary Relations in the 19th Century.

Malmstad, John, Samuel Hazard Cross Professor of Slavic Languages and Literatures. BA 1963, Northwestern; MA, PhD 1969, Princeton. Interests: Russian poetry of the 19th and 20th centuries; the culture of the “Silver Age”; the Russian avant-garde. Selected Works: Mikhail Kuzmin: A Life in Art (with Nikolay Bogomolov) (1998); Andrey Bely: Spirit of Symbolism (1987); transl. (with Robert Maguire) of Bely’s Petersburg (1978); editions of the works of Bely, Kuzmin, and Khodasevich; articles on modern Russian poetry and Russian avant-garde. Work in Progress: A biography of Andrey Bely; the correspondence of Bely and E.K. Metner.

Sandler, Stephanie, Ernest E. Monrad Professor of Slavic Languages and Literatures. BA 1975, Princeton; PhD 1982, Yale. Interests: Contemporary Russian poetry; modern Russian poetry and theory; translation; feminist approaches to Russian literature; Pushkin and myths of Pushkin in Russia; cinema; psychoanalysis; literature and religion. Selected Works: Distant Pleasures: Alexander Pushkin and the Writing of Exile (1989, Russian translation 1998); Sexuality and the Body in Russian Culture (co-edited collection, 1993); Rereading Russian Poetry (edited collection, 1999), Self and Story in Russian History (co-edited collection, 2000); Commemorating Pushkin: Russia’s Myth of a National Poet (2004); Elena Faniulova, The Russian Version, translated with Oleg Sedakova, Alexandra Petrova, Elena Shvarts, and others.


PhD Programs in Social Policy

This program awards a PhD degree in either Government and Social Policy or Sociology and Social Policy. Both of these programs are joint degrees that provide students a thorough grounding in one of these two traditional disciplines and then move them into a series of interdisciplinary seminars on social policy based at the Kennedy School of Government (KSG). Students submit applications for admission to the Committee on Higher Degrees in Social Policy, which must be accepted as well by the admissions committee of either the Department of Government or the Department of Sociology. From the very beginning of their graduate careers, then, students are taught and supervised by faculty from government, sociology and the Malcolm Wiener Center for Social Policy in the Kennedy School.

This degree is intended for students who have central interests in problems of economic inequality, segregation, poverty, changing family structure, immigration, race and labor market segmentation, educational inequality, and historical and comparative studies of inequality in the United States and abroad (especially Western Europe). It will be of particular interest to students who wish to combine solid training in the fundamental theoretical perspectives and methodological traditions of either government or sociology with advanced study of policy responses to these social problems. Students who would like the flexibility to pursue research careers in departments of political science or sociology and schools of public policy or other research fields may find these joint degrees especially suitable.

Course of Study

Students are expected to complete all of the required courses and examinations in government or sociology (outlined in the table), which ensures that joint degree candidates will be thoroughly grounded in the theory, methods, and a key substantive area of the traditional discipline. Applicants are urged to consult the government or sociology department listings for more information regarding the degree requirements in those departments. The government department requires that the general, oral examination be taken at the end of the second year. The sociology department requires that a written examination be taken in September preceding the second year.

Students then embark on a complementary program of study in social policy. Starting in their second year, students move into a three-term Proseminar based at the Kennedy School which focuses on the study of social policy, with

<table>
<thead>
<tr>
<th>Degree Requirements in Each Social Policy PhD Program</th>
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<tbody>
<tr>
<td><strong>Sociology and Social Policy PhD</strong></td>
</tr>
<tr>
<td>- Two-term sequence in classical and contemporary theory.</td>
</tr>
<tr>
<td>- Two-term sequence in quantitative and qualitative methods, and one advanced course in quantitative methods.</td>
</tr>
<tr>
<td><strong>Sociology General Examination</strong></td>
</tr>
<tr>
<td>Qualifying examination taken in September following Year 1, to cover theory, methods, organizations, and political sociology, plus an elective area.</td>
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<tr>
<td><strong>Post-General Examination Program</strong></td>
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<tr>
<td>Beginning in the first year and continuing thereafter, all students must complete 14 term courses at the 200 level with an average of B or better. Five of these courses must be the theory and methods courses listed above.</td>
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<tr>
<td>- Research apprenticeship, one term</td>
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<tr>
<td>- Completion of Sociology 305, the Teaching Practicum</td>
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<tr>
<td>- Service as teaching fellow in one sociology course</td>
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<tr>
<td>- Completion of three terms of Social Policy Proseminar</td>
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<tr>
<td>- Completion of research paper in topical area with major literatures in sociology and social policy. This paper should emanate from the Social Policy Proseminar and may be used as the basis for the qualifying paper.</td>
</tr>
<tr>
<td>- Completion of an oral examination in the student’s area of special interest, which is expected to be the area in which the dissertation will fall.</td>
</tr>
<tr>
<td><strong>Government and Social Policy PhD</strong></td>
</tr>
<tr>
<td>- Twelve half-courses, of which eight must be in government. At least ten of these 12 half-courses and seven of the eight half-courses in government must be 1000- or 2000-level courses. Students must complete six half-courses by the end of their second term in residence and nine by the end of their third. One of the government department half-courses, ordinarily at the 2000 level, must be taken in the student’s minor field, which is either of the remaining two fields not assessed in the General Examination.</td>
</tr>
<tr>
<td>- Completion of two of the three terms of the Proseminar in Social Policy.</td>
</tr>
<tr>
<td>- Students must complete three seminar style research papers, one of which should fulfill the social policy program’s requirement to complete a research paper in a topical area with major literatures in government and social policy. This latter paper should emanate from the Social Policy Proseminar and may serve as the basis for the qualifying paper in social policy discussed below.</td>
</tr>
<tr>
<td>- Competency in one language other than English. Must be demonstrated via language examinations.</td>
</tr>
<tr>
<td>- Completion of one course in quantitative methods (with a grade of B or better), or, with the approval of the Director of Graduate Studies, an equivalent course.</td>
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<tr>
<td><strong>Government General Examination</strong></td>
</tr>
<tr>
<td>General examination taken at the end of year two, to cover political theory, a major field (American government, comparative politics, international relations, political theory), and a focus field in social policy.</td>
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<tr>
<td><strong>Post-General Examination Program</strong></td>
</tr>
<tr>
<td>Completion of third term in Social Policy Proseminar.</td>
</tr>
<tr>
<td><strong>Advanced Studies in Social Policy: Required for All Students</strong></td>
</tr>
<tr>
<td>- Field Specialization:</td>
</tr>
<tr>
<td>- One course for field specialization within social policy. Students will choose a field specialization from among the following six topical areas: (1) work, wages, and the marketplace; (2) neighborhoods and spatial segregation; (3) family structures and parental roles; (4) immigration, race, and labor market segregation; (5) education; and (6) historical and comparative social policy. Students may also satisfy this requirement by taking tutorials/independent study under the guidance of a member of the social policy faculty in KSG.</td>
</tr>
<tr>
<td>- Qualifying paper in the specialized field. Supervised by committee drawn from participants in the joint degree program (normally including member of the student’s Faculty of Arts and Sciences (FAS) department). May be based upon paper completed for the Social Policy Proseminar.</td>
</tr>
<tr>
<td>- Advanced Seminar in Social Policy. Required of all students in the program; designed to assist them in preparation of the dissertation prospectus.</td>
</tr>
<tr>
<td>- Completion of dissertation prospectus (including oral defense).</td>
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<tr>
<td>- Teaching fellowship. Students are encouraged to serve as teaching fellows in government, sociology, or Kennedy School social policy courses.</td>
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<tr>
<td>- Completion of dissertation.</td>
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</table>
an emphasis on the manifestations of inequality (residential racial segregation, educational attainment, differential political participation, immigration, race and gender segregation in the labor market, etc.). In the course of this seminar, students prepare original research papers that serve as qualifying papers (in sociology) or research papers (in government). Students in Government and Social Policy must elect social policy as their “focus field” in satisfying their government requirements.

Participants in both degree programs are expected to select a field specialization within social policy. Six topical areas are available: (1) work, wages, and the marketplace; (2) neighborhoods and spatial segregation; (3) family structures and parental roles; (4) immigration, race, and labor market segregation; (5) education and inequality; and (6) historical and comparative social policy.

Students must take one course in the field they select. A list of suitable courses is available from the program office. This requirement can also be satisfied as a tutorial or independent study from a member of the social policy faculty in the Kennedy School.

All students in the joint programs are required to enroll in the advanced seminar in social policy that will assist them in designing their dissertation prospectus. Students must complete a prospectus for the doctoral dissertation for a three-person committee composed of faculty from Government or Sociology and Social Policy. Ordinarily the prospectus is completed by the end of the third year in residence.

The final draft of a student’s dissertation is evaluated during a public oral defense before the dissertation committee. The outcomes of this hearing are pass, pass conditional on minor revisions, or fail. The final manuscript must conform to the requirements described in The Form of the PhD Dissertation.

Financial Aid
Harvard intends that all graduate students should have support adequate to enable them to complete their studies. The University’s financial aid continues for the five-year period of study, though the amount varies as the individual’s needs change and the form of aid changes from year to year. In general, students are provided tuition and stipends during their first two years and the final dissertation year, and receive tuition support and teaching or research assistantships during their third and fourth years. Students are admitted only when the University has arranged to offer them the needed financial assistance, or if they have demonstrated the capacity to finance their studies without University help.

All students in the Graduate School of Arts and Sciences must continue to make satisfactory progress in order to be eligible for any type of financial aid. The joint doctoral programs in Government and Social Policy and Sociology and Social Policy observe the general guidelines outlined in The Graduate School of Arts and Sciences Handbook.

Residence
For the degree of doctor of philosophy, a minimum of two years (four terms) of full-time graduate study in residence in the Graduate School of Arts and Sciences is required. It is expected that students generally complete all the requirements for the PhD degree within six years after admission.

Academic Review
The Committee on Higher Degrees in Social Policy is charged with monitoring the progress of students in both joint programs. Together with academic advisors and the director of graduate studies in the respective departments, the committee is responsible for ensuring that students are progressing through the degree requirements in government or sociology and in social policy.

Admissions
Applications for admission and financial aid are available from the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138. We encourage online submission of the application: www.gas.harvard.edu.

Further information about the joint degree programs may be obtained from the program website (www.ksg.harvard.edu/socialpol/). Questions or requests for additional printed materials should be directed to the office of the director, Pamela Metz, via e-mail (social_policy@harvard.edu) or correspondence addressed to her attention at the Kennedy School of Government, 79 John F. Kennedy Street, Cambridge, MA 02138.

Faculty List
** indicates members of the Committee on Higher Degrees in Social Policy

Mary Jo Bane, Thornton Bradshaw Professor of Public Policy and Management, Kennedy School. Education. Public management, poverty, welfare, child support, family, and social policy.


Mary C. Brinton, Reischauer Institute Professor of Sociology. Sociologist. Gender stratification, labor market organization, education, economic sociology, and Japanese society.

Amitabh Chandra, Assistant Professor of Public Policy, Kennedy School. Economist. Racial disparities in healthcare, medical malpractice and defensive medicine, and technology and productivity in healthcare.

Pepper Culpepper, Associate Professor of Public Policy, Kennedy School. Comparative capitalism, strategies of economic reform, and politics of the European Union. Role of employers and politics, and on determinants of supply-side economic policies in Europe.

Susan Dynarski, Associate Professor of Public Policy, Kennedy School. Applied microeconomics to analyze impact of government policy on individual behavior. Distributional impact of tax incentives for education saving.

Kathryn Edin, Professor of Public Policy and Management, Kennedy School. Sociologist. Urban poverty and family life, social welfare, public housing, child support, non-marital childbearing.

**David T. Ellwood, Scott M. Black Professor of Political Economy, Dean, Kennedy School. Economist. Welfare, teenage unemployment, poverty, wage disparities, causes of rapidly changing family structures and their impacts on inequality.

Margarita Estevez-Abe, Paul Sack Associate Professor of Political Economy. Comparative social policy, Japanese politics and economy, varieties of capitalism, and gender inequality.


Peter A. Hall, Knapp Foundation Professor of European Studies. Varieties of capitalism, European politics, policymaking, and comparative political economy. Contribution of institutional analysis to the study of political economy, and the political responses to international integration in post-war Europe.

**Jennifer L. Hochschild, Henry LaBarre Jayne Professor of Government and Professor of African and African American Studies, Harvard College Professor. Political scientist. Political philosophy, American political thought, public opinion, race in America, identity politics, desegregation.
Torben Iversen, Harold Hitchings Burbank Professor of Political Economy. Political scientist. Comparative political economy, electoral politics, and applied formal theory, European voting and party behavior, impact of deindustrialization and partisan politics on public spending policies.

Brian Jacob, Assistant Professor of Public Policy, Kennedy School. Economist. Labor economics, program evaluation, and the economics of education.

**Christopher Jencks, Malcolm Wiener Professor of Social Policy, Kennedy School. Sociologist. Material standard of living over the past generation, homelessness, the effects on children of growing up in poor neighborhoods, welfare reform, and poverty measurement.

Alexander Keyssar, Matthew W. Stirling Jr., Professor of History and Social Policy, Kennedy School. Election reform, the history of democracies, and the history of poverty.

Michèle Lamont, Robert I. Goldman Professor of European Studies, Professor of Sociology and of African and African American Studies. Cultural sociology, inequality, race and immigration, comparative sociology, the sociology of knowledge, and contemporary sociological theory.


Erzo F. P. Luttmer, Associate Professor of Public Policy, Kennedy School. Economist. Public economics, labor economics, and applied econometrics.


Orlando Patterson, John Cowles Professor of Sociology. Sociologist. Race, immigration, and multiculturalism, trust among Afro-Americans, the history of freedom.

Paul E. Peterson, Henry Lee Shattuck Professor of Government. Political scientist. Federalism, educational policy, and welfare policy.

Robert D. Putnam, Peter and Isabel Malkin Professor of Public Policy, Kennedy School. Political scientist. Democratic theory, social capital, comparative analysis of elites, civic engagement.

Monica Singhal, Assistant Professor of Public Policy, Kennedy School. Economist. Public finance and labor economics.


Theda Skocpol, Victor S. Thomas Professor of Government and Sociology. Political scientist. Comparative politics, American politics, and political sociology, history of social policy, civic engagement.

**Mary C. Waters, M.E. Zukerman Professor of Sociology. Sociologist. Race and ethnic identity, immigrant assimilation, labor markets.

Martin Whyte, Professor of Sociology. Comparative sociology, sociology of the family, sociology of development, the sociological study of contemporary China, and the study of post-Communist transitions.

Kim M. Williams, Associate Professor of Public Policy, Kennedy School. American racial politics, social movements, and immigration policy.

Julie Boartright Wilson, Harry S. Kahn Senior Lecturer in Social Policy, Director of the Malcolm Wiener Center for Social Policy, Kennedy School. Sociologist. Urban, family, and welfare policy; poverty; and survey research methodology.

William Julius Wilson, Lewis P. and Linda L. Geyser University Professor. Sociologist. Poverty and joblessness, inequality, race relations, welfare, social policy.

**Christopher Winship, Diker-Tishman Professor of Sociology. Sociologist. Social/economic status of African Americans, transitions to adulthood, differential patterns of educational attainment, family formation process.

Faculty Affiliates in Other Departments

Richard B. Freeman, Herbert Ascheren Professor of Economics. Economist. Supply and demand for skilled workers, discrimination, the welfare state, comparative analysis of labor market institutions, trade unionism and workplace representation, the youth labor market, and wage inequality.

Roland G. Fryer, Professor of Economics. Applied theory, applied microeconomics, and labor economics. Application of tools of economic analysis to issues of race and inequality. Affirmative action, discrimination, and social economics.

Edward L. Glaeser, Fred and Eleanor Glimp Professor of Economics. Economist. Political economy, urban economics, labor turnover.

Claudia Goldin, Henry Lee Professor of Economics. Economist. American economic history, including slavery, emancipation, the post-bellum South, the family, women in the economy, the economic impact of war, immigration, New Deal policies, inequality, and education.

Thomas J. Kane, Professor of Education. Issues of higher education, including labor market payoff to community college, impact of tuition and financial aid policy on college enrollment rates, and impact of affirmative action in college admissions.

Lawrence F. Katz, Elisabeth Allison Professor of Economics. Economist. Labor economics, the economics of social problems including wage and income inequality, unemployment, the impact of immigration and international trade on the labor market, neighborhood effects and the problems of disadvantaged youth.

Martha Minow, Jeremiah Smith Jr. Professor of Law. Law and social change, international human rights, religion and pluralism.

Richard Murnane, Juliana W. and William Foss Thompson Professor of Education and Society. Economist. Education and the economy, teacher labor markets, skills and training, the determinants of children’s achievement, strategies for effective schools.
Higher Degrees in Sociology

The aim of the Graduate Program in Sociology is to prepare students for scholarly and applied research and for teaching in sociology.

Prerequisites
For admission to candidacy for the PhD degree in the Department of Sociology, the applicant must have a bachelor’s degree, or its equivalent, based upon a distinguished record of college work. Applicants who wish to pursue only the master’s degree are not accepted in the graduate program of the department. Undergraduate work in the social sciences, the humanities, the natural sciences, and mathematics are all considered an appropriate background.

Applicants must take the general test portion of the Graduate Record Examination in time for the results to reach the Admissions Office of the Graduate School of Arts and Sciences by December 15. Information about taking the GRE may be obtained from the Educational Testing Service, Princeton, NJ 08540, www.gre.org.

Financial Aid
Harvard intends that all graduate students should have support adequate to enable them to complete their studies while enrolled full-time. Prospective students apply for financial aid at the same time that they apply for admission, and are also required to submit a Statement of Financial Resources. The financial aid package for sociology students typically includes tuition and fees plus a stipend for the first two years; tuition and fees plus a combination of teaching fellowships and research assistantships in the third and fourth years; and tuition and fees for the fifth year. Students who have met eligibility requirements may apply for the Graduate Society Dissertation Completion Fellowship to provide financial support for their final year of graduate study; this fellowship includes tuition and fees plus a stipend.

All students in the Graduate School of Arts and Sciences must be making satisfactory progress in order to be eligible for any type of financial aid. The Department of Sociology observes the general guidelines outlined in The Graduate School of Arts and Sciences Handbook.

Academic Residence
For the degree of doctor of philosophy, a minimum of two years (four terms) of full-time graduate study in residence in the Graduate School of Arts and Sciences is required. Students must complete all the requirements for the PhD degree within eight academic years after admission.

Academic Review
The Committee on Higher Degrees in Sociology is charged with monitoring the progress of students in the program. For University rules, students should consult appropriate sections of the Graduate School of Arts and Sciences Handbook. Details on departmental practices and procedures are provided in the Committee on Higher Degrees Handbook, posted on the department website at http://sociology fas.harvard.edu/pages/graduate/.

Course Requirements
Each student is expected to take and complete at least 14 half-courses in sociology at Harvard University. These may be 100-level conference courses, 200-level courses, and two workshops. Teaching Practicum (Soc 305) is also a course requirement and should be completed in the third year (prior to or concurrent with a student’s first assignment as a Teaching Fellow). Sociological Research Design (Soc 205) is a one-semester course that is required of first-year graduate students. Sociology Qualifying Paper (Soc 310) is a one-semester course that third-year students take in the fall term while writing their qualifying papers. The Graduate School requires a minimum of a B average each term. Students are encouraged to take courses beyond these minimum requirements, including offerings outside the Department of Sociology.

First- and Second-Year Requirements
All graduate students must take and pass within the first two years two half-courses on theoretical approaches to sociology (Soc 204 and Soc 209) and three half-courses on methods of research (Soc 202, 203a, and Soc 209). If a student does not have the needed background, he or she will be required to take an appropriate course during the first term to remove the deficiency.

In unusual cases, an individual may be excused from one or more required courses by the Committee on Higher Degrees in Sociology.

Qualifying Requirement: Written Examination
The department expects that each student will take a written examination in the broad field of sociology. Students must take this examination prior to the third term in residence. The examinations are graded by a faculty committee appointed each year by the department chair. The outcomes are: pass, conditional pass, fail, or honors pass. If a student fails, the examination must be retaken within a year. Students will not ordinarily be permitted to retake the examination more than once.

Qualifying Requirement: Research Paper
Each student must submit one research paper of article length to a committee of three members of the faculty no later than by the end of the sixth term in residence in order to demonstrate the quality of his or her ability to deal systematically with empirical evidence. The faculty committee is approved by the Committee on Higher Degrees in Sociology.

Qualifying Requirement: Special Area Examination
The final qualifying requirement is an oral examination in the student’s area of special interest. The field must be approved by the Committee on Higher Degrees in Sociology, which will then approve a committee of at least three members of the faculty to conduct the examination. Ordinarily, the special area examination must be taken no later than the end of the eighth term. The outcomes are: Pass and Fail.

Doctoral Dissertation: Prospectus
The candidate is required by the end of the tenth term in residence to submit to the Committee on Higher Degrees in Sociology a dissertation prospectus stating a plan or design for the research on which the doctoral dissertation will be written. The prospectus must be approved by a three-person dissertation reading committee approved by the Committee on Higher Degrees in Sociology. The dissertation reading committee should have at least two members from the Department of Sociology, including the chair of the committee. If the prospectus is not accepted by the committee when first submitted, the student ordinarily is allowed one further opportunity to submit a new or revised prospectus.

Doctoral Dissertation: Completion
After consultation with the dissertation reading committee and with its consent, the student submits the final draft of the dissertation for a public oral defense before the committee. The outcomes of this hearing are: pass, pass conditional
on minor revisions, or fail. If the dissertation is passed conditional on minor revisions, the dissertation reading committee can ordinarily approve the final draft without an additional hearing. The final manuscript must conform to the requirements described in The Form of the PhD Dissertation.

Requirements for the Master’s Degree

The department will not accept for admission to graduate study a student who is a candidate for the master’s degree only. But candidates for the degree of doctor of philosophy are allowed to take a master’s degree in the course of their work toward the doctorate degree.

A candidate has met the requirements for the AM degree when he or she has taken at least eight half-courses (maintaining a minimum of a B average), of which five must be the department’s required courses (and may not include Soc 305 or workshops); has passed the written examination; and has passed the research paper requirement. Ordinarily, all of these courses will be 200-level seminars in sociology.

Teaching Fellowships

Teaching fellowships are available to students who have had at least two terms of residence at the University. Each student is required to be a teaching fellow for at least one term course.

Admissions

For applications for admission and grants, write to the Admissions Office, Harvard Graduate School of Arts and Sciences, Holsyoke Center, 3rd floor, 1350 Massachusetts Avenue, Cambridge, MA 02138. We accept online applications only; see www.gas.harvard.edu.

Further information about the program of study offered by the Department of Sociology may be obtained from the department website at http://sociology.fas.harvard.edu/pages/graduate-degrees-awarded or via e-mail at sociology@wjh.harvard.edu.

Recent Dissertation Titles

For a complete list of dissertation titles, please visit http://sociology.fas.harvard.edu/pages/graduate-degrees-awarded.

Dissertations submitted in 2012–2013:

"Dying of Encouragement: From Pitch to Production in Hollywood"

"Intentional Ambiguity"

"Managing in the Face of Ambiguity and Uncertainty: The Problems of Interpretation and Coordination in Juvenile Justice Organizations"

"Motherhood on the Outside: Reintegration and Moral Meaning-making among Ex-Offender Mothers"

"Race, Social Context, and Consumption: How Race Structures the Consumption Preferences and Practices of Middle and Working-Class Blacks"

"Shareholder Value and Workforce Downsizing, 1981–2006"

"Teaching Transformations: History Education and Race Relations in Post-Apartheid South Africa"

"The Achievement Gap Revisited: An Empirical Assessment of What We Can Learn from East Asian Education"

"Unequal Playing Fields, Same Game: The College Application Process for Students at Diverse High Schools"

Faculty List

Beckfield, Jason, Professor of Sociology and Director of Graduate Studies. Stratification, health and social policy in the context of economic and political globalization.

Bobo, Lawrence D., W. E. B. Du Bois Professor of the Social Sciences. Race; ethnicity; politics; social inequality.

Bonikowski, Bart, Assistant Professor of Sociology. Political sociology; cultural sociology; stratification/mobility.

Brinton, Mary C., Reischauer Institute Professor of Sociology. Gender stratification; labor market organization, education, economic sociology, Japanese society.

Chang, Paul, Assistant Professor of Sociology. Comparative sociology; political and historical sociology; social movements.

Desmond, Matthew, Assistant Professor of Sociology and of Social Studies. Urban sociology; racial and ethnic relations; ethnography; poverty; housing; organizations and work.

Dobbin, Frank, Professor of Sociology and Acting Director of Graduate Studies (Fall 2013). Comparative/historical sociology; organizational theory; economic sociology; public policy; stratification.

Edin, Kathryn, Professor of Public Policy and Management (Harvard Kennedy School). Poverty/social inequality; urban and community sociology; family/gender; public policy; qualitative methods.

Garip, Filiz, Associate Professor of Sociology. Migration; economic sociology; statistical methodology; social networks; development inequality.

Good, Mary-Jo Delvecchio, Professor of Social Medicine (Harvard Medical School). Medical sociology; health policy; comparative studies: Indonesia, Middle East.


Kay, Tamara, Associate Professor of Sociology. Political sociology, particularly law and social movements; globalization and regional economic integration, transnationalism and global governance; economic development; international human and labor rights.

Killewald, Alexandra, Assistant Professor of Sociology. Family; social demography; quantitative methods; mobility and inequality; science.

Lamont, Michèle, Robert I. Goldman Professor of European Studies and Professor of Sociology and African and African American Studies. Cultural sociology; inequality; race and immigration; comparative sociology; sociology of knowledge; contemporary sociological theory.

Marsden, Peter V., Edith and Benjamin Geisinger Professor of Sociology, Dean of Social Science, and Harvard College Professor. Social networks; formal organizations; social stratification; methods.

Pagar, Devah, Professor of Sociology. Institutions affecting racial stratification, education, labor markets, and the criminal justice system.

Patterson, Orlando, John Cowles Professor of Sociology. Sociology of economic development with special reference to the Caribbean; historical sociology of slavery and freedom; sociology of slavery; Caribbean and Afro-American culture.
and social structure; ethnicity from a critical and social philosophical perspective.

Sampson, Robert J., Henry Ford II Professor of the Social Sciences. Crime, law, and deviance; neighborhood effects; community and urban sociology; sociology of the city; the life course.

Skocpol, Theda R., Victor S. Thomas Professor of Government and Sociology. American politics; political sociology; social revolutions; modern welfare states; comparative historical sociology.

Viterna, Jocelyn, Associate Professor of Sociology. Social movements; civil society; democratization; revolution; comparative politics; gender; qualitative methods.

Waters, Mary C., M.E. Zukerman Professor of Sociology and Department Chair. Social demography; race and ethnic relations; social stratification.

Western, Bruce, Professor of Sociology. Political and comparative sociology; stratification and inequality; methodology.

Whyte, Martin K., John Zwaanstra Professor of International Studies and of Sociology. Comparative sociology; comparative family systems and family change; the American family; gender roles in comparative context; inequality and stratification; bureaucracy; sociology of China; development.

Wilson, William Julius, Lewis P. and Linda L. Geyser University Professor (Harvard Kennedy School). Race/ethnic/minority relations; urban sociology; social policy.

Winship, Christopher, Diker-Tishman Professor of Sociology. Analysis of quantitative data; family formation process; transition to adulthood; changes in social and economic status of African Americans.
The Department of South Asian Studies builds upon more than a century of distinguished scholarship in the study of South Asia, most recently under the auspices of the Department of Sanskrit and Indian Studies. On July 1, 2011, a broader Department of South Asian Studies was launched, drawing faculty from Sanskrit and Indian Studies as well as faculty from across the humanities and interpretive social sciences. The new department strengthens and broadens the intellectual profile of its predecessor, preserving its longstanding strengths while expanding its resources for the study and teaching of South Asia, broadly conceived.

Programs of Study

The Department of South Asian Studies offers programs of study leading to the doctor of philosophy (PhD) degree. While graduate work is tailored to individual intellectual interests, it is our expectation that all doctoral students will ground their work in primary language materials and participate in broadly interdisciplinary studies of South Asian languages, histories, and cultures.

The department has historic and well-defined courses of graduate study in Sanskrit and Indian Studies and Tibetan and Himalayan Studies, and these courses of study will continue. It is our expectation that some candidates for doctoral study will propose other programs in South Asian Studies. These programs of study may have a regional emphasis, a disciplinary or social sciences.

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Programs Leading to Higher Degrees in South Asian Studies

Admission Requirements

Admission to the PhD program is offered on the basis of an outstanding academic record, letters of recommendation, a writing sample, and, ordinarily, GRE scores. Applicants should contact the Department well before the admissions deadline, preferably visit the department, or make arrangements for a telephone interview.

For the PhD program a strong background in one or more areas of South Asian Studies is required. For admission to the Sanskrit and Indian Studies program, prerequisites include two years of Sanskrit, and for the Tibetan and Himalayan Studies program, two years of classical Tibetan. These language requirements correspond to the first and second years of Sanskrit or Tibetan taught at Harvard. For the South Asian Studies program, candidates should have at least two years of study in a South Asian language. The student’s command of the relevant languages will be evaluated during the first term.

Structure of the Program

Coursework

General requirements. For the PhD: Sixteen half-courses and a minimum of two years in residence are required. For the AM: Eight half-courses and at least one year in residence are required.

Core requirements for the PhD:
1. A minimum of four half-courses in Classical Sanskrit, Tamil, Tibetan, Urdu/Hindi, or another South Asian language at the advanced level.
2. Two half-courses in a second South Asian language
3. Eight half-courses in the student’s special field, including related courses in other departments.
4. Reading knowledge of two modern research languages, generally French and German. A language exam must be passed with an honors grade by the end of the second year of residence. Another modern language relevant to the student’s special field, but not the student’s native language, may be substituted for one, but not both of the required languages.

Core requirements for the AM: Two half-courses of seminars, two half-courses in Classical Sanskrit, Tamil, Tibetan, or Urdu/Hindi literature at the advanced level, and four half-courses in the student’s special field, including related courses in other departments. An AM thesis is also required.

Advising

Incoming students will have an advisor in the field of study closest to their own interests. The advisor is responsible for developing a plan of study and signing the study card at the outset of each semester. The department’s Director of Graduate Studies functions as a more general advisor to all graduate students in relation to the department and GSAS policies and procedures.

When a student submits his or her prospectus to the department, he or she also suggests an advisor to direct the dissertation. The progress of every student will be reviewed each year by the department.

Teaching

After the first two years of doctoral study most students work as teaching fellows in one of the courses taught within the department, in other departments, or in the undergraduate General Education curriculum. The opportunity to develop teaching skills is an important part of graduate studies, especially for those preparing for a future in academia.

General Examinations

PhD Examinations. Students are expected to take their general examinations no later than the middle of their third year in the program. There
are usually four written examinations that ordinarily take the following form:
1) A language translation examination, without dictionary, from a text of average difficulty.
2) A translation examination, with dictionary, of texts in the student’s special field, with a discussion of textual problems or thematic issues.
3) A broad examination in South Asian Studies based on reading lists put together by the student in consultation with the advisor.
4) An examination in the student’s special field. Students may also choose to take an optional fifth exam in a secondary field or discipline, often involving a faculty member from another department.

AM Examinations. Students are expected to take two written examinations the subjects of which will be determined in conjunction with the advisor and an oral exam in the student’s special field.

Prospectus
Upon passing the general examinations students will be expected to complete a dissertation prospectus within a year’s time and no later than the fall term of their fourth year. The prospectus should be in the range of 15 to 20 pages and include: 1) a clear statement of the dissertation project, its central problems and methodology; 2) its place in the context of related scholarship; 3) its importance to the field. The prospectus should also include a chapter outline and extensive bibliography.

The dissertation committee normally consists of three members, including the dissertation advisor. Two members of the committee must be members of the Faculty of Arts and Sciences. Frequently, the committee will include at least one member from outside the department, and occasionally one from outside the University. The proposed committee should be approved by the advisor, the Director of Graduate Studies, and the department. The proposed committee should review the prospectus at the time it is submitted.

Traveling Fellowships and Study Abroad
Many students apply for travel fellowships in their fourth year and spend all or part of their fifth year in South Asia. The advisor and Director of Graduate Studies can direct doctoral students to the many resources available for work in South Asia.

Thesis
PhD Dissertation: The dissertation should not exceed 75,000 words or 300 pages in length. It must be a substantial and original piece of work that demonstrates mastery of the field and the student’s chosen topic.

Students are expected to complete two chapters of their dissertation by the spring term of their fifth year. After this they are expected to produce at least one acceptable chapter of the dissertation each semester.

The format of the dissertation must conform to the requirements described in The Form of the PhD Dissertation.

After it is completed, the dissertation must be submitted to the dissertation committee (at least two months before the official deadline) and be publicly defended in a roundtable discussion that includes members of the dissertation committee and other faculty and students in the department.

AM Thesis: The AM thesis will be a substantial paper demonstrating the student’s knowledge of the scholarly literature and methodologies appropriate to the topic of the student’s choice. The topic will be determined by the student in consultation with his or her advisor. A typical AM thesis is expected to be approximately 75 pages in length.

To Apply
Application forms for admission and financial aid may be obtained from the Admissions Office, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138, or at www.gsas.harvard.edu.

The department can be reached by phone at (617) 495-3295 or by e-mail at southasianstudies@fas.harvard.edu. Please visit our website: http://sas.fas.harvard.edu.

Faculty of the Department of South Asian Studies
Parimal G. Patil, Professor of Religion and Indian Philosophy (Chair)
Ali S. Asani, Professor of Indo-Muslim and Islamic Religion and Cultures
Homi Bhabha, Anne F. Rothenberg Professor of the Humanities
Sugata Bose, Gardner Professor of Oceanic History and Affairs
Richard S. Delacy, Preceptor in Hindi and Urdu
Diana L. Eck, Fredric Wertham Professor of Law and Psychiatry in Society
Jay H. Jasanoff, Diebold Professor of Indo-European Linguistics and Philology
Shenghai Li, ACLS New Faculty Fellow

Richard H. Meadow, Senior Lecturer in Anthropology
Jonathan Ripley, Preceptor in Tamil
Amartya Sen, Thomas W. Lamont University Professor
Harpreet Singh, College Fellow in the Department of South Asian Studies
Ajantha Subramanian, Professor of Anthropology
Leonard W.J. van der Kuijp, Professor of Tibetan and Himalayan Studies
Alex Watson, Preceptor in Sanskrit
Michael Wittel, Wales Professor of Sanskrit
Richard K. Wolf, Professor of Music

Other faculty offering instruction in the Department of South Asian Studies
Francis X. Clooney, Parkman Professor of Divinity and Professor of Comparative Theology (Divinity School)
Janet Gyatso, Hershey Professor of Buddhist Studies (Divinity School)
Anne E. Monius, Professor of South Asian Religions (Divinity School)

Affiliates of the Department of South Asian Studies
Asad Ahmed, Associate Professor of Anthropology
Prerna Singh, Assistant Professor of Government
Special Programs

Higher Studies in Byzantine Studies

The program is based on the philosophy that a Byzantinist should be fully conversant with the history, literature, and art of the Empire, and be able to do research in all three areas. Its aim, therefore, is to offer students the opportunity to pursue a course of studies that will give them competence in all three fields. It is an interdisciplinary program drawing on the human resources of Harvard University and Dumbarton Oaks. It is supplementary to, and does not pre-empt, the departmental programs, through which a student whose primary interest is in the Byzantine field may receive a PhD degree in history, classics, or art history.

Admission — Students are required to seek admission into one of the existing departments and, if admitted, to work for one year in the regular program of the department of admission. After one year, students must petition the dean for admission into the program, after having first secured the agreement of the members of the Committee on Byzantine Studies. The student then moves outside the departmental framework. It is wise, however, for students to keep in touch with the department originally entered, as a source of recommendations for fellowships and, later, for teaching positions. Upon the successful conclusion of his or her studies, a student will receive a degree in Byzantine studies, or Byzantine history, literature, and art.

Admissions Requirements — 1) Good standing in the department of admission; 2) Languages: Greek and Latin. Candidates must demonstrate a reading knowledge of two of the following languages: French, German, Italian, Russian. Examinations in the modern languages will normally be completed by the end of the first year.

Course of Study — Students will take at least one full-year course (or the equivalent in half-courses) in each of the three Byzantine fields, one of the courses to be taken in the first year. Students will also take at least one seminar (of one term) in each of the three fields. Two of the seminars will be taken in the second year. The rest of the student’s program will be determined in accord with his or her interests, and after consultation with the departmental advisor in the first year and with the chair of the committee thereafter. Students will also be expected to acquire familiarity with one auxiliary discipline, such as Greek paleography, codicology, epigraphy, numismatics or sigillography, and archaeology.

Students will normally take their examinations at the end of their third year of study. After successful completion of the examinations, and provided that the student is in good standing, he or she will be supported at Dumbarton Oaks for the fourth year. It is expected that, at the end of the fourth year, students will return to Harvard and become teaching fellows, normally in the department of admission.

Examinations — Students will be examined in the three Byzantine fields plus one field among those offered by the department of admission.

A. By May of the second year, students will take a three-hour written examination, consisting of:
1. translation of a Byzantine author
2. a special subject within Byzantine art history
3. a special subject within Byzantine history

B. By the end of the third year, students will take a two-hour oral examination in the following fields:
1. Byzantine history
2. Byzantine literature and philology
3. Byzantine art history
4. A related field chosen from those offered by the department of admission

Dissertation — By the end of the term following the oral examination, students will present a dissertation prospectus to a committee composed of three Byzantinists and one other faculty member.

The dissertation must be completed by the end of the sixth year. It will then be read and judged by the student’s dissertation committee.

Committee Research Interests

John Duffy, Dumbarton Oaks Professor of Byzantine Philology and Literature. John Duffy teaches a variety of courses that cover several genres of Byzantine literature and different aspects of medieval Greek culture. His research has centered on the transmission and editing of texts in philosophy, medicine and theology, and he has special interests in issues of aesthetics and literary style, the medieval book as a cultural object, and the intellectual tradition of the Cappadocian Fathers.

Ioli Kalavrezou, Dumbarton Oaks Professor of Byzantine Art. Ioli Kalavrezou’s teaching covers a wide range of topics in art and architecture from the early fourth century to the fall of the Byzantine Empire in 1453.

Fields of interest and publications range from monumental wall paintings and mosaics to objects carved in ivory and steatite, icons, and manuscripts. Of special interest are topics in political history: the representation of the relationship of church and state, images relating to the Schism, and imperial art. Recent research has focused on the Byzantine body language.

Michael McCormick, Francis Goelet Professor of Medieval History. McCormick’s Byzantine research interests concern the social, political and cultural history of the late antique and middle Byzantine periods, particularly imperial rule, the transition from ancient to medieval civilization, hagiography, and the interrelations of social and economic structures with patterns of communication between Byzantium and the West in the early Middle Ages.
Higher Studies in Medieval Studies

For over a century, medieval studies have played an important part in the curriculum at Harvard. This tradition is reflected in the splendid holdings of books on medieval subjects in the various Harvard libraries. For many topics the Widener Library shelf list is a standard bibliography. In recent years the field has expanded rapidly, and almost all the departments of the humanities, and several of the departments of social sciences, as well as the Divinity and Law Schools, now offer work on medieval subjects. A Standing Committee on Medieval Studies was therefore established in the spring of 1969 in order to promote and coordinate work in this area, to publicize it within and outside the University, and to sponsor occasional events and activities of interest to medievalists.

The Medieval Studies Committee works in cooperation with the Seminar on Medieval Literature and Culture at the Center for Literary and Cultural Studies, which includes both faculty and students interested in all aspects of medieval studies. Lectures are offered under the auspices of the committee, and in past years it has sponsored conferences on medieval historiography, medieval poetics, 12th-century renaissance, medieval drama, Islamic studies, power and society in the 12th-century, and medieval social control and aristocratic creation. It was empowered by vote of the faculty in 1973 to offer courses in medieval studies.

The Medieval Studies Committee organizes special seminars designed to introduce students from around the Yard to important disciplines and source materials that bridge departmental boundaries. The first was held by Philip Grierson in 1969. The Medieval Studies Committee sponsors a special exchange fellowship program with Dumbarton Oaks, which allows advanced medievalist graduate students and professors to spend a week of research and discussion at each other's institutions.

No degree specifically in medieval studies is offered on either the undergraduate or graduate level, although it is possible to develop within many departmental programs an individual program emphasizing the medieval aspects of the field. A graduate student who is interested in following medieval studies exclusively, however, is required to enter and to work for at least one year in one of the regular departmental programs for the PhD.

After a year, he or she may request the dean of the Graduate School of Arts and Sciences to appoint a special committee to administer an interdepartmental program involving work in medieval studies from more than one discipline. Such a committee is made up of members of the Faculty of Arts and Sciences and other faculties within the University who teach medieval sub-
Higher Degrees in Statistics

Statistical modeling and analysis, including the collection and interpretation of data, form an essential part of the scientific method in diverse fields, including social, biological, and physical sciences. Statistical theory is primarily based on the mathematical theory of probability, and covers a wide range of topics, from highly abstract areas to topics directly relevant for applications. Research in statistics covers many issues, some closely tied to theoretical principles of statistical inference, and others more concerned with developing and extending techniques for descriptive and exploratory analysis of data. The theory and practice of designing the efficient collection of data through experiments, surveys, and observational studies constitute important areas of statistics. Since computers play a major and often crucial role in statistical research through simulation techniques, and in statistical applications through the analysis of data, statistical computation is another major subfield.

Statisticians are frequently concerned with modeling complex phenomena, especially by developing and applying appropriate probability models to empirical data, and often these efforts are intimately connected to policy-relevant decision-making in business and government. We seek to train statisticians who will contribute to theory, develop innovative and useful statistical models and methods, and conduct serious applied statistical scientific investigations. Individual statisticians will vary in their emphasis, but the field includes all of these aspects.

Statisticians with advanced training are in substantial demand for positions in academic teaching and research, in research laboratories and organizations, in government agencies, and in business. As society, science, and the technology of data handling grow in complexity, the need for highly qualified statisticians is expected to grow steadily.

The Department of Statistics offers courses of study leading to both the PhD and the AM degrees. The department encourages applications from students with strong mathematical backgrounds who plan to concentrate on theoretical statistics, students with training in substantive fields whose primary interest is in applied statistics, and students whose backgrounds and interests lie between these two extremes. In addition to formal course work and dissertation research, students are encouraged to work closely with faculty and to attend seminars concerning current problems in empirical research and thereby to gain experience with interdisciplinary statistical research and consulting. All PhD candidates are expected to engage in some teaching during their period of training.

Preparation in Mathematics, Statistics, and Computation

The minimum mathematical preparation for admission to graduate study in statistics is linear algebra and advanced calculus. Ideally, each student's preparation should include at least one term each of mathematical probability and mathematical statistics. Additional study in statistics and related mathematical areas, such as analysis and measure theory, is helpful. In the initial stages of graduate study, students should give high priority to acquiring the mathematical level required to satisfy their objectives. Before registering for their full term classes, all incoming students will be required to take a diagnostic test in mathematics. Performance on this test will assist the department in determining whether students need additional mathematics preparation.

Successful applicants demonstrate that they understand what the discipline of statistics entails, and show evidence of involvement in applications or a strong theoretical interest. They are able to articulate a strong motivation for studying statistics.

As statistics is so intimately connected with computation, computation is an important part of almost all courses and research projects in the department. Ideally, students should have programming experience in, or exposure to, some high-level computer language, such as SAS, S+, Fortran, and C.

Doctor of Philosophy (PhD)

The formal residence requirement for the PhD is 16 half-courses devoted to advanced study. Other formal requirements are the passing of a qualifying exam, the completion of a qualifying paper, and the completion of a PhD dissertation. Details are provided below.

Program of Study. Students should plan their course program with three objectives in view: (i) acquiring basic knowledge in preparation for the qualifying examination; (ii) investigating a range of advanced topics; and (iii) exploring in some depth a field outside of statistics. To satisfy (i) and (ii), students will normally take a minimum of nine half-year courses offered by the Department of Statistics, including at least four on advanced topics.

Qualifying Examination. The student must pass a written qualifying examination in statistics, which is given once each year. The examination is normally taken by students in their second year. It is given in January, with two parts, the first on theoretical statistics including probability and mathematical statistics, and the second on applied statistics including statistical design and data analysis.

Research Presentations. At the end of each term, all students who have passed the qualifying exam present to department faculty and to fellow students brief summaries of their research in progress.

Qualifying Paper. The objective of the qualifying paper is to provide the student with an opportunity to explore a serious topic in statistics and to express the findings coherently in a written document. Although the work need not be original, it should demonstrate understanding of the topic, knowledge of the tools of research, and clarity of exposition. The effort involved is expected to require no more than the equivalent of one term at one-third time. This paper should be submitted and accepted by the department as early as possible, and preferably during the year following the qualifying exam. Delays in submission require permission of the department.

Dissertation. Each student is expected to exercise initiative in seeking out both a dissertation topic and a faculty advisor who will take primary responsibility for supervising the student's work. The PhD dissertation is expected to be a research contribution of high quality adding to our knowledge of either the theory or practice of statistics. A PhD dissertation may also consist primarily of an innovative analysis of a specific, complex body of data in some substantive field. Generally, the material in a PhD dissertation should be publishable in a refereed journal.

One copy of the completed dissertation must be submitted for consideration in the department office two weeks prior to a department colloquium on the substance of the dissertation. The faculty will consider the submitted dissertation and make recommendations, which generally lead to revisions. Next, the faculty, with the explicit advice of three faculty readers nominated by the department, vote on the completed dissertation as submitted in finished form, which must conform to the requirements described in The Form of the PhD Dissertation, available online. The time from the colloquium to the final vote is ordinarily about one month.

Recent dissertation topics have included:

“Statistical Missing Data and Computation Problems: Theories and Applications in Astrophysics, Finance and Economics” (Zhan Li)

“Efficient Monte-Carlo Methods and Asymptotic Analysis for Stochastic Systems” (Kwai Hung Henry Lam)
“Two Tales of Frequentist Properties of Bayesianly Motivated Methods: Multiple Imputation and Shrinkage Estimation” (Xianchao Xie)

“Rerandomization to Improve Covariate Balance in Randomized Experiments” (Kari Lock)

“Efficient Monte Carlo Methods for Sampling and Inference: Networks, Brains and Proteins” (Kevin C. Bartz)

“Topics and Applications in Missing Data and Causality” (Roe Gutman)

“Stochastic Modeling and Bayesian Inference with Applications in Biophysics” (Chao Du)

“Three Essays on Credit Risk Models and Their Bayesian Estimation” (Tae Yeon Kwon)

“Statistical Missing Data and Computation Problems: Theories and Applications in Astrophysics, Finance and Economics” (Zhan Li)

“Topics and Applications in Synthetic Data” (Bronwyn Loong)

“The Method of Batch Inference for Multivariate Diffusions” (Martin Lysy)

“Respondent-Driven Sampling and Homophily in Network Data” (Serigly Nesterko)

“Distributed and Multiphase Inference in Theory and Practice: Principles, Modeling, and Computation for High-Throughput Science” (Alexander Blocker)

“Partition Models for Variable Selection and Interaction Detection” (Bo Jiang)

“Sensitivity Analyses in Empirical Studies Plagued with Missing Data” (Viktoria Liublinska)

“Advances in Empirical Bayes Modeling and Bayesian Computation” (Nathan Stein)

“Statistical Learning of Some Complex Systems: From Dynamic Systems to Market Microstructure” (Xiao Tong)


“Statistical Computation for Problems in Dynamic Systems and Protein Folding” (Samuel Wong)

“Methods in Hypothesis Testing, Markov Chain Monte Carlo and Neuroimaging Data Analysis” (Xiaojin Xu)

Limitation of Time to Degree. The department policy is that, except in unusual circumstances, students cannot register for the PhD program or be paid research assistant or teaching assistant salaries after their sixth year. A student who has completed the sixth year in the department and satisfied all requirements except the PhD dissertation may take a leave of absence, and the department will ordinarily consider a dissertation submitted before or during the ninth year. After the ninth year, the student is required to petition the faculty to have a dissertation considered, and will ordinarily be required to retake and pass the qualifying exam.

Master of Arts (AM)

The Department of Statistics awards terminal AM degrees, as well as AM degrees to students who are continuing in the PhD program. The department will consider for the AM degree PhD candidates in other fields at Harvard for whom a statistics minor is appropriate, well-prepared undergraduates eligible for the AB/AM program, and candidates with appropriate mathematics backgrounds (linear algebra and multivariate calculus) who can demonstrate motivation for pursuing a terminal AM degree. As the Department of Statistics cannot provide tuition fellowships for terminal AM candidates, candidates seeking only the AM degree must be financially self-supporting. Teaching fellowships may be available for partial financial support.

The AM degree requires the satisfactory completion of eight half-courses taken within the Department of Statistics and approved by the student’s department advisor, at the level of Statistics 110 and above, with at least one course at the 200-299 level. The actual course of study will vary according to the student’s interest and preparation and will be determined in consultation with the student’s advisor. Statistics 110 or 210 and Statistics 111 or 211 or equivalent are required. With the approval of the advisor and the Director of Graduate Studies, one 300-level (SAT/UNSAT graded) course may be allowed to count toward the degree as one of the non-200-level courses. The eight statistics courses must include at least three courses at the interface of theory and application. Examples of such courses are Statistics 139, 140, 149, 160, 220, 244 and 245. AM students must earn a B average in Statistics courses and no more than one C in all courses.

Admissions and Financial Aid

Students are admitted for the fall term only; applications must be received by December 2, 2013, for admission for the 2014-15 academic year. We require online submission of the application. Please visit www.gsa.harvard.edu for more information about the application process and a link to the application. GRE General scores are required. Subject scores, particularly in mathematics, are recommended but not required. GREs should be taken by October so that examination score reports arrive in time for admission decisions.

The statistics department usually provides adequate financial support, which includes tuition, health fees, and living expenses, to PhD students in good standing. In the first year of graduate study, this support typically involves a grant-in-aid to cover tuition, fees, and living expenses. In the second year, support is typically a grant-in-aid to cover tuition and fees, and teaching/research fellowships to cover living expenses. In the third through sixth years, when tuition is considerably reduced, the department usually can provide a teaching and research fellowship sufficient to cover tuition and living expenses. The department cannot provide financial aid beyond the sixth year.

Teaching and research fellowships are normally limited to 40 percent of full-time in the first two years and to 60 percent of full-time in the third through sixth years.

The statistics department is able to support a very limited number of qualified applicants each year. Applicants are therefore expected to apply for all non-Harvard and competitive Harvard scholarships for which they are eligible. For example, US citizens should investigate fellowships offered by the National Science Foundation and many other public and private sources.

Students with an interest in biostatistics should explore the PhD program in biostatistics at the School of Public Health. For more information, see http://www.hsph.harvard.edu/departments/biostatistics/.

Research Interests of the Faculty Currently Teaching in the Department

For more information on research in the Department of Statistics, see www.stat.harvard.edu.

Eduardo M. Aiolfi, Associate Professor of Statistics. PhD, Computer Science, Carnegie Mellon University. Statistical theory and methodology for analyzing complex networks. Applications to cellular and molecular biology, with focus on quantitative modeling and discovery of regulatory elements driving metabolism and cellular proliferation in bacteria, yeast, mammalian and cancer systems.

Joseph Blitzstein, Professor of the Practice of Statistics. PhD in Mathematics, Stanford University. Statistical inference and models for networks and graphs in the social and health sciences, Monte Carlo algorithms, probability and combinatorics.

Luke Bornn, Assistant Professor of Statistics. PhD in Statistics, University of British Columbia. Bayesian modelling of large-scale dynamic...
systems, spatial processes and environmetrics, Monte Carlo methods.

Tirthankar Dasgupta, Associate Professor of Statistics. PhD in Industrial Engineering, Georgia Institute of Technology. Design of experiments, modeling and optimization of experimental data, process control and quality engineering. Areas of application include large-scale, reproducible, high-yield manufacture of nanostructures, the design of robust control systems, measurement systems, six sigma quality and supply chain management.

S.C. Samuel Kou, Professor of Statistics. PhD, Statistics, Stanford University. Stochastic modeling in natural sciences (such as nano-biophysics, chemistry and biology) and in economics and finance; inference about stochastic models (processes); statistical analysis of single-molecule experiments; non-parametric methods; model selection; Bayesian and empirical Bayesian methodology; Monte Carlo methods.

Jun S. Liu, Professor of Statistics. PhD, Statistics, University of Chicago. Bayesian methodology: modeling, testing, and nonparametrics. Monte Carlo methodology: Gibbs sampling and MCMC methods; MC methods in physics, material science, chemistry, and structural biology; rate of convergence. Dynamic systems: nonlinear state-space models; target tracking; digital signal processing; financial data modeling. Bioinformatics and computational biology; gene regulation; sequence alignment; protein structure prediction; gene clustering and classification; genomics. Statistical missing data problems.

Xiao-Li Meng, Dean of the Graduate School of Arts and Sciences, Whipple V.N. Jones Professor of Statistics. PhD, Statistics, Harvard University. Statistical inference under complex settings, such as partially observed data, pre-processed data, and simulated data. Quantifying statistical information and efficiency in scientific studies. Statistical principles and foundational issues, especially regarding model uncongeniality, self-efficiency, and quantifying ignorance. Bayesian wavelet and multi-resolution methods, especially with missing data. Bayesian ranking and mapping. Stochastic and deterministic iterative algorithms, especially perfect sampling. Applications of the above research to astrophysics, genetic and environmental studies, demosaicing and image reconstruction, mental health surveys, and survival analysis.

Luke Miratrix, Assistant Professor of Statistics. PhD, Statistics, University of California, Berkeley. Applications in the social sciences with particular emphasis on political science, text data, and education; causal effect analysis and graphical models; high-dimensional and sparse-regression methods; non-parametric analysis of randomized experiments; random effect models.

Carl N. Morris, Professor of Statistics, Professor of Health Care Policy. PhD, Statistics, Stanford University. Hierarchical modeling, Bayesian and likelihood theory, exponential families, and statistical applications, especially in mental health and health policy research, and also in other scientific areas, including sports and competition.

Michael Parzen, Senior Lecturer on Statistics. DSc, Biostatistics, Harvard School of Public Health. Statistical methods for missing data, non-standard regression, computational statistics and statistical education. Also developing and applying statistical models to data from business and biostatistical problems.


Donald B. Rubin, John L. Loeb Professor of Statistics. PhD, Statistics, Harvard University. Causal inference in experiments and observational studies, including complex situations with noncompliance and dropout; computation and inference in sample surveys with nonresponse and in missing data problems, including EM-type algorithms; application of Bayesian and empirical Bayesian techniques; and developing and applying statistical models to data in a variety of scientific and policy relevant disciplines.