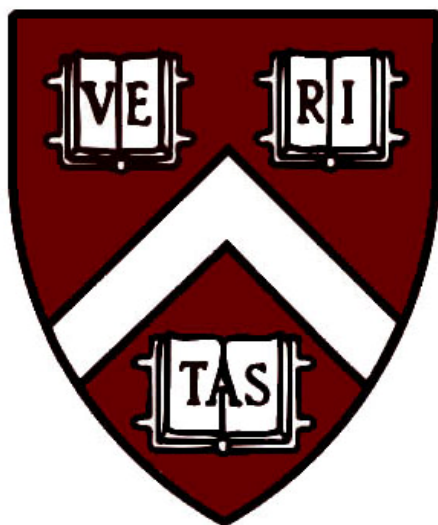


# Departmental Course Suggestions for Pre-Concentrators



2009-2010

*ADVISING PROGRAMS OFFICE*



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## **African and African American Studies**

The Department of African and African American Studies (AAAS) brings together scholars and scholarship from many disciplines to explore the histories, societies, and cultures of African and African-descended people. The field of African and African American Studies is not only interdisciplinary but also comparative and cross-cultural. Africans and people of African descent have developed cultural forms that have profoundly shaped the fine arts and popular culture in the Americas and all around the planet. Comparative and cross-cultural studies of Africa and its diaspora contribute enormously to our understanding of race and ethnicity, and ideas about race are among the central objects of study in the field of African and African American Studies. The department offers two distinct courses of study: the African track and the African American track. Please see the department website for more information (link below).

### Suggested Courses for Students Interested in African and African American Studies

- *African and African American Studies 10*, Introduction to African American Studies (fall) Note: Required of concentrators in the African American Studies track.
- *African and African American Studies 11*, Introduction to African Studies (spring) Note: Required of concentrators in African Studies track.
- *African and African American Studies 16*, Sociology of the Black Community (fall)
- *African and African American Studies 20*, Introduction to African Languages and Cultures (fall)

\* *The AAAS concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required for eligibility for High and Highest Honors.

**Contact:** Professor Glenda Carpio, Director of Undergraduate Studies  
Phone: 617.495.7868  
Email: [carpio@fas.harvard.edu](mailto:carpio@fas.harvard.edu)

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Phone: (617) 384-7767  
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Website: <http://aaas.fas.harvard.edu/>

## Anthropology

Anthropology brings global, comparative, and holistic views to the study of the human condition, exploring an enormous range of similarities and differences across time and space. It includes the study of how *Homo sapiens* evolved as well as the study of how language, culture, and society have shaped and continue to shape human experience. At Harvard, the Anthropology Department is divided into two wings: Archaeology, and Social Anthropology.

### Suggested Courses for Students Interested in Anthropology

For students considering a concentration in an **archaeology** focus:

**Fall 2009:**

*Anthropology 101*: The Fundamentals of Archaeological Methods and Reasoning  
*Anthropology 1130*: Archaeology of Harvard Yard  
*Anthropology 1177*: South American Archaeology  
*Societies /World 30*: Moctezuma's Mexico: Then and Now

**Spring 2010:**

*Freshman Sem. 44j*: The Aztecs and the Mayas  
*Cult. & Beliefs 21*: Pathways Through the Andes  
*Social Analysis 50*: Urban Revolutions: Archaeology and the Early States  
*Anthropology 1125*: The Moche of Ancient Peru: Politics, Economy, Religion and Art

For students considering a concentration in a **social anthropology** focus:

**Fall 2009:**

*Anthropology 1624*: Contemporary Themes in the Anthropology of Politics  
*Anthropology 1640*: Language and Culture  
*Anthropology 1710*: Memory Politics  
*Anthropology 1968*: Shop 'Til you Drop: Consumer Society and Culture  
*Foreign Cult 84*: Tokyo  
*Societies /World 25*: Health, Culture and Community: Case Studies in Global Health

*Anthropology 1600*: Watching Us, Seeing Them: A General Introduction to Social Anthropology  
*Anthropology 1790*: Violence in the Andes: Coca, Conflict, and Control  
*Anthropology 1795*: The Politics of Language and Identity in Latin America  
*Anthropology 1815*: Empire, Nation, Diaspora: Asians in the United States

**Spring 2010:**

\* *The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of all Honors candidates.

**Contact:** Professor Mary Steedly, Director of Undergraduate Studies  
Phone: 617-495-3730; E-mail: mstead@wjh.harvard.edu

Dr. Richard Meadow, Co-Director of Undergraduate Studies  
Phone: (617) 495-3354; Email: meadow@fas.harvard.edu

Elizabeth "Penny" Rew, Undergraduate Program Coordinator  
Phone: (617) 495-3814; Email: rew@wjh.harvard.edu

Website: <http://www.fas.harvard.edu/~anthro/>

## Applied Mathematics

Applied mathematics moves beyond theory, blending the study of mathematics with a wide array of applications in many fields: biology, genomics, chemistry, computer science, decision and control, economics, electrical engineering, geophysical sciences, mechanical engineering, scientific computing, physics, social and behavioral sciences, and statistics. Our goal is to create "renaissance engineers" or students who excel in applied science, but also have a broad knowledge of other disciplines.

We suggest prospective and current students considering Applied Mathematics at Harvard take a look at our undergraduate Applied Mathematics guide found on the department website. The sample schedules provide a snapshot of what to expect.

### Suggested Courses for Students Interested in Applied Mathematics

- Students interested in concentrating in Applied Mathematics should complete *Math 1a* and *Math 1b* by the end of the first year.
- *Applied Math 50*, Introduction to Applied Mathematics (spring) is a recommended introductory course to the concentration.
- Those with an advanced math background may wish to enroll in any of the following: *Applied Math 21a and 21b*, *Math 21a and 21b*, *Math 19a and 19b*, *Math 23a and 23b*, *Math 25a and 25b*, or *Math 55a and 55b*.
- Updated information can be found at <http://www.am.seas.harvard.edu>

*\* Prospective concentrators are encouraged to make early contact with concentration representatives. Students wishing to enter the concentration must obtain the Applied Mathematics Program of Study form and related Instructions from the SEAS website, or the Academic Office, Pierce Hall 110, and review these materials before meeting with the Director of Undergraduate Studies.*

**Senior Thesis:** There is no senior thesis required of Applied Mathematics concentrators.

**Contact:** Michael Brenner, Director of Undergraduate Studies, Professor  
Email: [brenner@seas.harvard.edu](mailto:brenner@seas.harvard.edu); Phone: 617-496-3336

Ellen Holloway, Academic Programs Administrator  
Email: [ehollowa@seas.harvard.edu](mailto:ehollowa@seas.harvard.edu); Phone: (617) 496-1524

Dean Marie Daleh, Assistant Dean for Academic Programs  
Email: [mdahleh@seas.harvard.edu](mailto:mdahleh@seas.harvard.edu); Phone: (617) 495-1485

Website: <http://am.seas.harvard.edu/>

### Astrophysics

The concentration in Astrophysics introduces students to a broad range of phenomena through a program of both observational and theoretical courses. This program builds from a foundation of modern physics to a general account of the known contents of the universe. The introductory and junior tutorials place students in close contact with the wide range of research activities at the Harvard-Smithsonian Center for Astrophysics. Undergraduates are strongly encouraged to pursue research projects (conducted under the supervision of members of the faculty), which culminate in their junior papers and senior theses. Since the emphasis of astronomy and astrophysics is on the explanation of phenomena in the universe in terms of physical theory, the initial stages of a concentration in Astronomy and Astrophysics closely resemble those of the Physics concentration, and the courses offered by the Department of Astronomy are readily accessible to any student with a good physics background. Our concentration offers avenues similar to Physics for future employment and research opportunities. The Astronomy and Astrophysics Concentration offers small class sizes and the highest faculty to student ratio of any of the physical science departments.

#### Suggested Courses for Students Interested in Astrophysics

- Students interested in Astrophysics should take either *Astronomy 16* or *Astronomy 17*, both of which are introductory courses for students interested in the concentration or secondary. These courses are not sequential, and can be taken in either order.
- Students must also fulfill a first course in Physics (Mechanics), which can be satisfied by *Physics 11a*, *Physics 15a* or *Physics 16*. Physics (Mechanics) is a co-requisite for Astronomy 16 and 17.

*\*The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** There is no senior thesis required of Astrophysics concentrators.

**Contact:** David Charbonneau, Director of Undergraduate Studies, Associate Professor  
Email: [dcharbonneau@cfa.harvard.edu](mailto:dcharbonneau@cfa.harvard.edu)  
Phone: (617) 496-6515  
Website: <http://www.cfa.harvard.edu/hco/astro>

## Chemical and Physical Biology

The Chemical and Physical Biology (CPB) concentration provides students with a broad foundation in the physical and life sciences. This concentration is designed for students interested in applying quantitative tools, physical concepts, and chemical principles to the study of biology. Students who are interested in understanding living systems in detail will require considerable proficiency in mathematics and physics as well as a broad background in both chemistry and biology. In its emphasis on quantitative, physical, and chemical tools, this concentration represents a significant departure from traditional undergraduate programs of study in the biological and life sciences. Our goal is to provide the next generation of life scientists with the background needed to make new advances in the quantitative understanding of living systems. The CPB concentration is intended primarily for students considering careers in research.

### Suggested Courses for Students Interested in Chemical and Physical Biology

- Freshmen should enroll in *Life Sciences 1a* or *LPSA* (fall semester, according to placement) and *Life Sciences 1b* (spring semester) as well as math (according to preparation and placement scores).
- Ordinarily, freshmen take *Physical Sciences 1* in the spring semester; however, students with an exceptionally strong chemistry background may instead begin with organic chemistry. Students considering beginning with organic chemistry are strongly encouraged to consult with the Co-Director of Undergraduate Studies in Chemistry, Dr. Gregg Tucci.
- In the third semester, students ordinarily enroll in *MCB 52* (molecular biology) and *Chem 17* (organic chemistry). Students who took *Chem 20* in the spring of their first year typically enroll in *MCB 52* and *Chem 30* in their third semester. Students considering the Human Developmental and Regenerative Biology concentration may wish to enroll in *SCRB-10* instead of *MCB 52* in the third semester. Those students would then enroll in *MCB 52* in the fifth semester.

\* *The CPB concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** A thesis based on independent laboratory research is required for honors eligibility.

**Contact:** Dr. Thomas Torello, Concentration Advisor  
Email: [cpb\\_conc@lsdiv.harvard.edu](mailto:cpb_conc@lsdiv.harvard.edu)  
Phone: (617) 495-4106  
Website: <http://lifesciences.fas.harvard.edu>

## Chemistry

The most important motivation for concentration in Chemistry is an intrinsic interest in the subject. Career opportunities in chemistry include the areas of basic research, applied research and development, biotechnology, chemical analysis, manufacturing, and marketing. In addition, a degree in chemistry can be an excellent background for careers in many related fields, including law, medicine, business, environmental science, and other areas of science. Because of the diversity of interests of prospective chemistry concentrators, the Department of Chemistry and Chemical Biology has designed a very flexible program of requirements which allows each student to select an area of emphasis. Courses in organic, physical, and inorganic chemistry and biochemistry are offered. A few of these courses include required laboratory work, and special laboratory courses are available to advanced students in each area. In addition, concentrators may elect to pursue an individual research project with one of the research groups of the department.

### Suggested Courses for Students Interested in Chemistry

#### First Year

Students should enroll in two of the following introductory Chemistry classes:

- *Life and Physical Sciences A*
- *Life Sciences 1a*
- *Physical Sciences 1*
- *Chemistry 20*

#### Third Semester

- *Chemistry 17* or *Chemistry 30* in the fall term
- Concentrators should take math through *Math 21a* level by the end of the fourth semester

*\* The Chemistry concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Optional but not required for Honors consideration.

**Contact:** Dr. Gregg Tucci, Co-Director of Undergraduate Studies in Chemistry  
Phone: 617-496-4668  
Email: [tucci@fas.harvard.edu](mailto:tucci@fas.harvard.edu)  
Website: <http://www.chem.harvard.edu/>

## Chemistry and Physics

This concentration has been established to serve those students desiring to develop a strong foundation in both physics and chemistry. Because of the need to cover a wide range of material in considerable depth, only an honors-eligible program is available in this concentration. The requirements of the Chemistry and Physics concentration are designed to provide a solid foundation for further study in either or both of these two closely related sciences. Concentrators have gone on to graduate work and careers in chemistry, physics, and other quantitative fields. The concentration is also often chosen by students whose career goals lie in medicine. In addition, the intellectual disciplines involved provide a suitable background for careers in many different professions.

The concentration is structured to assure that all concentrators are introduced to the core subjects of chemistry (organic, inorganic, and physical), of physics (mechanics, electromagnetism, and quantum theory), and of mathematics. Beyond this core, students take additional half-courses in chemistry, physics, or related sciences, according to their personal interests and objectives.

### Suggested Courses for Students Interested in Chemistry and Physics

#### Intro Physics

- *15a* or *16* (mechanics; concentrators roughly split between 15a and 16)
- *15b* or *153* (E&M)
- *15c* or rare sub (waves, optics)
- *143a* (quantum)

#### Mathematics

- *21a*
- *21b*

#### Advanced physics

- Any 100 level Common 100-level courses are *125*, *143b*, *153*, *181*. See Handbook for list.

For more information on introductory courses and sample study plans go to:  
<http://www.physics.harvard.edu/academics/undergrad/FAQsIntro.html>

*\* The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Optional.

**Contact:** Professor Howard Georgi, Head Tutor  
Email: [georgi@physics.harvard.edu](mailto:georgi@physics.harvard.edu); Phone: 617-496-8293

Professor David Morin, Assistant Director of Undergraduate Studies  
Email: [morin@physics.harvard.edu](mailto:morin@physics.harvard.edu); Phone: (617) 495-3257

Website: <http://www.physics.harvard.edu/academics/undergrad/advising.html>

## Classics

The Department of the Classics encourages its students to explore the whole range of Greco- Roman civilization from the Bronze Age through Byzantium and medieval Europe to Modern Greece. Its faculty provide instruction in all the major areas of classical studies, including language and linguistics, literature, archaeology, history, philosophy, and religion. Moreover, in conformity with its conviction that Classics lies at the root of many important academic fields, the Department welcomes joint concentrations.

Two concentration options are offered within the Department: (1) Classical Languages and Literatures, for students wishing to emphasize the study of Greek and Latin literature in the original languages, and (2) Classical Civilizations, for those primarily interested in exploring the connections between Greco-Roman culture and disciplines such as history, philosophy, archaeology, and linguistics. Concentrators in both tracks are required to acquire knowledge of Greek, Latin, or both, but neither track presumes any prior knowledge of these languages. Both may be pursued as joint concentrations with other departments. In recent years a Classics concentration has proved rewarding for students who go on to careers in law, medicine, divinity, journalism, business, or the arts, as well as those wishing to pursue further academic study.

### Suggested Courses for Students Interested in Classics

There are many courses for students considering Classics in their first year. All language offerings, from Greek, Latin, and Modern Greek, introductory up to 100-level courses (with the exception of the 112 courses and Latin K) are appropriate, depending on background and experience. We offer a Greek and Latin placement test, and will assist in placing students in the right course. All courses may be used for each of the two concentration tracks, or for the secondary field.

All courses in English (Classics and Classical Archaeology 100-level) are appropriate, and four faculty members are offering Freshman Seminars: *33g Eloquence Personified: How To Speak Like Cicero*; *33y Odysseys*; *33z Art, Object, and the Museum*; *36t Gods, Myths and Rituals: Polytheism in Ancient Greece*.

*\* The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of all Honors candidates.

**Contact:** Professor Richard Thomas, Director of Undergraduate Studies  
Email: [rthomas@fas.harvard.edu](mailto:rthomas@fas.harvard.edu); Phone: 617-496-6061

Teresa Wu, Department Administrator  
Email: [ttwu@fas.harvard.edu](mailto:ttwu@fas.harvard.edu); Phone: 617 495 4632

Website: <http://www.fas.harvard.edu/~classics/>

## Comparative Studies of Religion

The study of religion borrows social scientific and humanistic methods in order to interpret religious phenomena worldwide. Scholars of religion use a range of tools—historical methods to think about how religions change over time; comparative methods to analyze rituals or texts in different religions; anthropological methods to study how religion shapes human cultures and societies. The study of religion attracts creative, versatile students willing to learn different ways of thinking about and interpreting human life and culture. Concentrators pursue many careers after graduation including business, law, medicine, public service, teaching, and scholarship.

Suggested Courses for Students Interested in Comparative Studies of Religion

All Religion course listings 11-50	Literature and Arts A92, Love in a Dead Language: Classical India, Literature and its Theorists
Culture and Belief 12, For the Love of God and His Prophet: Religion, Literature and Art in Muslim Cultures	Literature and Arts C70, From the Hebrew Bible to Judaism, From the Old Testament to Christianity
Culture and Belief 25, Studying Buddhism, Across Time and Space	Culture and Belief 28, Hindu Worlds of Art and Culture
Foreign Cultures 94, Buddhism and Japanese Culture	Culture and Belief 32, Back Roads to Far Places: Literature of Journey and Quest
Moral Reasoning 76, Comparative Religious Ethics	Foreign Cultures 7, Understanding Islam and Contemporary Muslim Societies
Moral Reasoning 80, The Good Life in Classical India	

*\* The Study of Religion is open to all students and no longer requires an application for admission.*

**Senior Thesis:** A Senior Thesis is required of all Honors candidates. To be eligible to write an honors thesis, a student must maintain a minimum average of B+ in the concentration.

**Contact:** Dr. Tasmin Jones, Director of Undergraduate Studies  
Email: [tasmin\\_jones@harvard.edu](mailto:tasmin_jones@harvard.edu); Phone: 617-496-1018

Dr. Taylor Petrey, Assistant Director of Undergraduate Studies  
Email: [tpetrey@hds.harvard.edu](mailto:tpetrey@hds.harvard.edu); Phone: 617-496-1010

Website: <http://www.fas.harvard.edu/~csre>

## Computer Science

As part of Harvard's School for Engineering and Applied Science, the Computer Science concentration is part of a dynamic hub that links to fields such as electrical engineering, physics, chemistry, and biology, and to professions such as medicine and business. The concentration is designed to educate students from several perspectives. Computer scientists must know basic mathematics, the lingua franca of all the quantitative sciences; they must understand something about the abstract models that describe universal computational phenomena; and they must have some knowledge of how computers are currently designed, programmed, and used. Concentration requirements are intended to ensure balanced programs with emphasis on subjects that will endure through rapid technological change. At the same time, they permit students to choose courses in computer science and related fields that reflect individual interests and preferences.

### Suggested Courses for Students Interested in Computer Science

- Students interested in Computer Science should take *Computer Science 50* (fall) or *Computer Science 61* (fall) followed by *Computer Science 51* (spring).
- *Computer Science 121* and *Computer Science 141* are also available for those who have completed prerequisites in the first year or before entering college.
- For math preparation, students interested in Computer Science should be enrolled in *Mathematics 1a and 1b* or *Mathematics 21a and 21b* or equivalent. Equivalents include *Applied Mathematics 21a and 21b*; *Mathematics 23a and 23b*; *Mathematics 25a and 25b*; *Mathematics 55a and 55 b*. (*Mathematics 21b* is required for the concentration)

\* *The Computer Science concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Optional but encouraged. Ordinarily a recommendation for High Honors requires superior performance in an ambitious set of advanced courses or an excellent thesis, and a recommendation for Highest Honors requires an outstanding thesis. For more detailed information, see the concentration website.

**Contact:** Prof. Steven J. Gortler, Director of Undergrad Studies, Professor  
Email: [sjg@cs.harvard.edu](mailto:sjg@cs.harvard.edu); Phone: (617) 495-3751

Ellen Holloway, Academic Programs Administrator  
Email: [ehollowa@seas.harvard.edu](mailto:ehollowa@seas.harvard.edu); Phone: (617) 496-1524

Dean Marie Daleh, Assistant Dean for Academic Programs  
Email: [mdahleh@seas.harvard.edu](mailto:mdahleh@seas.harvard.edu); Phone: (617) 495-1485

Website: [www.seas.harvard.edu/academic/undergradstudy/computerscience](http://www.seas.harvard.edu/academic/undergradstudy/computerscience)

## Earth and Planetary Sciences

Harvard offers outstanding opportunities for students who wish to pursue studies in Earth and Planetary Sciences (EPS). The field encompasses a broad range of science disciplines, technology, and applications to environmental and economic endeavors. Because the Earth's natural systems (atmosphere, ocean, biosphere, solid earth) are interconnected, the training of Earth scientists broadly spans the boundaries between biology, chemistry, engineering, physics, mathematics and the Earth sciences themselves. The department trains students rigorously in the basic sciences, typically in the same foundational courses as students in Astronomy, Chemistry, Engineering, and Physics. These foundational courses are followed by upper-level courses that focus on disciplines within Earth and planetary sciences. Within the EPS Department, students may focus on geological science, environmental geoscience, solid earth geophysics, geochemistry, geobiology, atmospheric and ocean science, and planetary science.

### Suggested Courses for Students Interested in Earth and Planetary Sciences

Students should plan to complete at least two of the three introductory courses before the end of their first year in the concentration (usually the sophomore year). These courses include:

- *EPS 5*: Introduction to Environmental Science: Atmosphere, Ocean, and Biosphere
- *EPS 7*: Introduction of Geological Sciences; and
- *EPS 8*: History of the Earth

Other courses include:

- *EPS 131*: Introduction to Physical Oceanography and Climate;
- *EPS 132*: Introduction to Meteorology and Climate
- *EPS 133*: Atmospheric Chemistry (may substitute for *EPS 5*)

Selected Science courses in the Core/Gen Ed may substitute for one of the required introductory courses (*EPS 5, 7, and 8*), if the Core/Gen Ed class is taken before any other EPS course:

- *A-43*: Environmental Risks and Disasters may substitute for *EPS 7*
- *B-35*: How to Build a Habitable Planet may substitute for *EPS 8*
- Note that only one substitution is permitted.

*\* The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of all Honors candidates.

**Contact:** Professor Steven Wofsy, Co-Head Tutor  
Phone: (617) 495-4566; Email: [steven\\_wofsy@harvard.edu](mailto:steven_wofsy@harvard.edu)

Professor Andrew Knoll, Co-Head Tutor  
Phone: 617 495 9306; Email: [aknoll@oeb.harvard.edu](mailto:aknoll@oeb.harvard.edu)

Chenoweth Moffat, Academic Programs Administrator  
Phone: (617) 384-9760 Email: [moffatt@eps.harvard.edu](mailto:moffatt@eps.harvard.edu)

Webmail: <http://www-eps.harvard.edu/>

## East Asian Studies

The concentration in East Asian Studies seeks to develop a critical understanding of the human experience in East Asia. A concentrator develops skills in a language, participates in the tutorial program, and selects from a rich offering of lecture courses and seminars. Each student is trained in the study of East Asia as a whole and pursues specialized study of one East Asian society: China, Japan, Korea, or Vietnam. The program provides preparation for a variety of fields of work and advanced study after graduation. Study abroad is encouraged.

The concentration offers both a social sciences track, stressing approaches to modern East Asia drawn from the social science disciplines, and a humanities track, in which the history, literature, religion, and philosophy of modern and pre-modern times are studied. At the end of the sophomore year, each concentrator must focus their study on China, Japan, Korea, or Vietnam, entering either the humanities track or the social sciences track.

### Suggested Courses for Students Interested in East Asian Studies

- Students interested in a concentration in East Asian Studies should begin language study (Chinese, Japanese, Korean, or Vietnamese) in the first semester of their freshman year.
- Depending on their primary area of interest, freshman should take one of the following survey courses: *Historical Study A-13* (China), *Historical Study A-14* (Japan), *Historical Study A-75* or *Korean 111* (Korea), or *Historical Study B-68* (Vietnam).
- Students who are already strongly committed to East Asian Studies as a Concentration or Secondary Field do not have to wait for their Sophomore year to take *EAS 97a* and they may take this class in the Freshman year

*\* The East Asian Studies concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** A Senior Thesis is required of all Honors candidates

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Website: [www.fas.harvard.edu/~eas/](http://www.fas.harvard.edu/~eas/)

## Economics

Economics is a social science that is at once broad in its subject matter and unified in its approach to understanding the social world. An economic analysis begins from the premise that individuals have goals and that they pursue those goals as best they can. Economics studies the behavior of social systems—such as markets, corporations, legislatures, and families—as the outcome of interactions through institutions between goal-directed individuals. Ultimately, economists make policy recommendations that they believe will make people better off.

Traditionally, economics has focused on understanding prices, competitive markets, and the interactions between markets. Important topics such as monopolies and antitrust, income inequality, economic growth, and the business cycle continue to be central areas of inquiry in economics. Recently, the subject matter of economics has broadened so that economists today address a remarkable variety of social science questions.

### Suggested Courses for Students Interested in Economics

- Students concentrating in economics should take *Ec10*, the full-year introductory course in economics, in their freshmen year. Students can still concentrate in economics if they postpone *Ec10* until sophomore year, but scheduling courses in the ideal sequence becomes more difficult.
- Students who have not taken calculus should enroll in *Math 1a* or the precursor indicated by their placement tests.
- Many students find it convenient to take an introductory statistics course in their freshmen year. *Stat 104* is preferred, but *100*, *110*, *AM 101* or *Math 154* are also acceptable.
- Concentrators ordinarily take four or five half-courses related to Economics in their sophomore year. Two half-courses consist of the intermediate theory sequence: *1010a* or *1011a*, *Microeconomic Theory*, and *1010b* or *1011b*, *Macroeconomic Theory*. Many sophomores also take *Ec 1123*, *Econometrics*, if possible. The fourth half-course taken in the sophomore year is *Economics 970*.

\* *The Economics concentration is open to all students and does not require an application for admission. Joint concentrations are not allowed.*

**Senior Thesis:** Optional. A thesis is required for eligibility for High Honors or Highest Honors in Economics. Concentrators may earn Honors in Economics without a thesis by participating in the concentration's advanced course track.

**Contact:** Dr. Jeff Miron, Director of Undergraduate Studies  
Email: [miron@fas.harvard.edu](mailto:miron@fas.harvard.edu); Phone: 617-495-4129

Emily Neill, Undergraduate Program Administrator  
Email: [eneill@fas.harvard.edu](mailto:eneill@fas.harvard.edu); Phone: 617-495-3247

Website: <http://www.economics.harvard.edu/undergrad>

## Engineering Sciences

The concentration in Engineering Sciences is flexibly structured for a diversity of educational and professional objectives. For students who are planning to work as practicing engineers or who may be preparing for careers in business, education, government, law, or medicine, and for those whose career objectives may be less specific, the concentration provides an ideal framework for a well-rounded technical and scientific education. Two different Engineering Science degrees are offered at Harvard College: the Bachelor of Arts (AB) and the Bachelor of Science (SB). These programs allow each student to specialize in one of five areas within the engineering sciences: biomedical sciences and engineering; electrical and computer engineering; engineering physics; environmental sciences and engineering; or mechanical and materials science and engineering.

### Suggested Courses for Students Interested in Engineering Sciences

Potential concentrators should complete the following math, physics, chemistry and computer science preparation before the end of the sophomore year:

- Math through *Mathematics 21a* and *21b* (or *Applied Math 21a* and *21b*)
- *Physics 11a* and *11b* or higher
- *Life Sciences 1a* and *Physical Sciences 1*
- *Computer Science 50* (fall)

The following courses help introduce students to the different areas in engineering sciences:

- *Engineering Sciences 1: Introduction to Engineering Sciences* (spring)
- *Engineering Sciences 6: Environmental Science and Technology* (spring)
- *Engineering Sciences 50: Introduction to Electrical Engineering* (spring)
- *Engineering Sciences 53: Quantitative Physiology as a Basis for*
- *Bioengineering* (spring)

\* *Concentrators are required to file an approved departmental Plan of Study at the end of their freshman year and to keep their plan up-to-date in subsequent years.*

**Senior Thesis:** Required: An individual engineering design project is an essential element of every SB program and is undertaken, ordinarily, during the senior year as part of *Engineering Sciences 100hf*.

**Contact:** Dr. Marie Dahleh, Assistant Director of Undergraduate Studies,  
Email: [mdahleh@seas.harvard.edu](mailto:mdahleh@seas.harvard.edu).  
Phone: 617-495-1485

Ellen Holloway, Academic Programs Administrator  
Email: [ehollowa@seas.harvard.edu](mailto:ehollowa@seas.harvard.edu); Phone: 617-496-1524

Website: [www.seas.harvard.edu/academic/undergradstudy/engineeringsciences](http://www.seas.harvard.edu/academic/undergradstudy/engineeringsciences)

## English

The undergraduate program introduces students to the full breadth of imaginative literature written in the English language from the eighth century to its more recent dispersal around the globe. Whether engaged with literary giants such as Chaucer, Shakespeare, Milton, Dickinson, Keats, Woolf or in exploration of less famous authors, students in the English program have a rare opportunity to combine aesthetic pleasure, intellectual stimulation, and ethical deliberation in their plan of study. In their first two terms concentrators take four common ground courses that integrate genre and modes, historical periods, and geographic dispersal in a way that lends coherence to an otherwise vast field. Because of their relatively small size, these courses offer students the mentoring they need to cultivate a vocabulary and a set of analytical tools essential for discussing literature and writing critical essays. Moving out from this foundation in the discipline, students explore English literature and language through electives, guided in their choices by a designated faculty adviser. The program also offers a wide array of creative writing classes in poetry, fiction, non-fiction, screenplays, and play-writing. Although students are admitted by application only, the classes are open to all undergraduates, including non-concentrators.

A degree in English prepares students for any field in which careful reading, clear thinking, and persuasive writing are valued. Concentrators regularly go on to graduate school and to successful careers in business, law, education, and other fields too numerous to list. Sharpening one's powers of discernment as well as widening one's intellectual horizons is at the heart of a liberal education. Such an education, to which literature is central, prepares the student for life as an engaged, intelligently caring citizen of the world.

### Suggested Courses for Students Interested in English

Students who wish to explore English may want to try a **100-level English course**, particularly those which are organized around a theme instead of a single-author or survey course. Students who want to get started on completing requirements can take **Common Ground** courses, most of which are reserved for English concentrators only.

- *English 40-49: Arrivals*
- *English 50-59: Poets*
- *English 60-69: Diffusions*
- *English 70-79: Shakespeares*

**Honors and Elective Programs:** Concentrators may choose between a thesis or non-thesis honors track or pursue a non-honors program.

**Contact:** Professor Daniel Donoghue, Director of Undergraduate Studies

Phone: (617) 495-2505; Email: [dgd@wjh.harvard.edu](mailto:dgd@wjh.harvard.edu)

Jeff Berg, Undergraduate Program Administrator

Phone: (617) 495-4252; Email: [jmberg@fas.harvard.edu](mailto:jmberg@fas.harvard.edu)

Website: <http://www.fas.harvard.edu/~english/>

## **Environmental Science and Public Policy**

The concentration in Environmental Science and Public Policy (ESPP) is designed to provide a multi-disciplinary introduction to current problems of the environment. It is founded on the premise that the ability to form rational judgments concerning many of the complex environmental challenges which confront society today requires both an understanding of the underlying scientific and technical issues and an appreciation for the relevant economic, political, legal, historical and ethical dimensions.

While all students in the ESPP concentration take courses in biology, chemistry, earth and environmental sciences, economics, government, and mathematics, the concentration offers students an opportunity to specialize in a specific area of either natural or social science relating to the environment. The knowledge from these courses is applied during the junior year in seminars envisaged as a central integrating component of the concentration. Students wishing to graduate with honors are expected to write a thesis applying skills and knowledge gained from their course experience in the pursuit of research on a specific environmental issue.

### Suggested Courses for Students Interested in Environmental Science and Public Policy

- We recommend that freshmen take chemistry and math in their first year. Students may also choose to take *Environmental Science for Public Policy 10*, which provides a good introduction to ESPP.

*\* Students applying for the concentration are required to submit a short essay indicating why this concentration suits their interests and career plans. The application can be found on the concentration website (below).*

**Senior Thesis:** Required of all Honors candidates.

**Contact:** Lorraine Maffeo, Undergraduate Coordinator  
Phone: 617-496-6995  
Email: maffeo@fas.harvard.edu  
Website: <http://www.espp.fas.harvard.edu/>

## **Folklore and Mythology**

This concentration is a liberal education in itself. It encourages the study of any given society through its language and culture, offering a wide set of choices in applying the various disciplines in the humanities and social sciences. To focus on the folklore and mythology of a society (on sub-national as well as national levels) is to understand the traditional self-definition of that society, through such media as epics, ballad and other forms of music, folktales, legends, dramas, dance, rituals, “beliefs,” proverbs, customs, law codes, festival celebrations, “wisdom literature,” and many other such institutions. To study the folklore and mythology of a group is to discover how that group identifies itself in relation to other groups, even to the rest of humanity. Concentrators learn to conduct independent research on the oral or written media of folklore and mythology in a variety of cultures including African, American, Celtic, Chinese, English, German, Greek, Indian, Japanese, Scandinavian, and Slavic.

### Suggested Courses for Students Interested in Folklore and Mythology

- Students interested in the concentration should take *Culture and Belief 16* (formerly Folklore and Mythology 100) during freshman fall or the third term.
- There are also often Freshman Seminars and Core classes which can introduce students in the first year to the study of Folklore and Mythology (consult the departmental website for a full listing of these courses).

*\* The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** A senior thesis is required of all concentrators.

**Contact:** Dr. Deborah Foster, Head Tutor  
Phone: (617) 495-8056  
Email: [dfoster@fas.harvard.edu](mailto:dfoster@fas.harvard.edu)  
Website: [http://web.me.com/folkmyth/Folk\\_%26\\_Myth/Welcome.html](http://web.me.com/folkmyth/Folk_%26_Myth/Welcome.html)

## Germanic Languages and Literatures

The Department of Germanic Languages and Literatures offers a rich and diverse program of literary and cultural studies. The major aim of the concentration program is to provide students with the enriching experience of studying a language, literature, and culture markedly different from their own, thus enabling them to gain new perspectives on their native heritages. By acquiring proficiency in reading, speaking, and writing German or a Scandinavian language, students will gain a lasting skill useful in many fields of endeavor. The program is designed not only for students who wish to pursue graduate studies in Germanic studies, but also for students who elect to follow careers in medicine, law, government, business, and other areas.

A distinguishing feature of the concentration program is the availability of several options, including German Cultural Studies, which introduce students to German literature in the larger context of German cultural history. A special attraction of the department itself is the highly favorable ratio of full-time faculty to concentrators, which enables the faculty to provide students with individual guidance and support. Much of the tutorial work is done by full-time faculty, and all seniors writing a thesis have the opportunity to work individually with a professor. The department actively supports both work and study abroad, and all concentration options are designed to accommodate them.

### Suggested Courses for Students Interested in Germanic Languages and Literatures

There are no prerequisites for the concentration; however, students should spend the first year and third term developing their **language skills**. Ideally, they should take at least one course on the 60 level in order to prepare them to take *German 72* in the spring term of their sophomore year. *German 71* and *72* count as the sophomore tutorial in German; in some cases, students are permitted to postpone this sequence until their junior year.

*\* The concentration does not require an application for admission.*

**Senior Thesis:** Concentrators desiring to be considered for honors write a thesis of 40 to 50 pages. The thesis is designed to demonstrate that a candidate can read and interpret a literary text with authority, insight, and originality (or, in the case of German Cultural Studies, analyze a complex cultural or social phenomenon with equal skill), and that he or she is familiar with the major critical writings on the subject.

**Contact:** Professor Markus Wilczek, Director of Undergraduate Studies (German)  
Phone: (617) 496-4923; Email: [mwilczek@fas.harvard.edu](mailto:mwilczek@fas.harvard.edu)  
Professor Stephen Mitchell, Director of Undergraduate Studies (Scandinavian)  
Phone: (617) 495-3513; Email: [samitch@fas.harvard.edu](mailto:samitch@fas.harvard.edu)  
Mellissa Carden, Department Administrator  
Phone: (617) 495-2347; Email: [carden@fas.harvard.edu](mailto:carden@fas.harvard.edu)  
Website: <http://isites.harvard.edu/icb/icb.do?keyword=k4326>

## Government

Political science covers many different subjects, uses several diverse methods, and appeals to a variety of students. The department is divided into four subfields: Political Theory, American Politics, Comparative Government, and International Relations. These fields cover “area studies” of the former Soviet Union and China, political development, voting behavior in American elections, forms of regimes, urban politics, strategy, and the presidency, among many other subjects. The methods used are borrowed from history, sociology, philosophy, economics, and psychology—and then refashioned and put to work in a discipline that includes them all.

Students come to political science because they are interested in politics: some of them with an eye to a political career, some with a scholarly intent, and many wishing to know more about this central, inescapable human concern. The Government Department aims to make all students aware and critical of their first opinions (since human beings are at their most opinionated in politics), to open up the possibilities of politics, to reveal permanent political problems, to impart a discipline, and to supply a guide for choice.

### Suggested Courses for Students Interested in Government, 2009-10

#### Introductory Courses

- *Gov 20*: Foundations of Comparative Politics
- *Gov 30*: American Government: A New Perspective
- *Gov 40*: International Conflict and Cooperation in the Modern World
- *Gov 50*: Introduction to Political Science Research Methods

#### Core Courses/Gen Ed Courses

- *Historical Study B-64*: The Cuban Revolution
- *Foreign Cultures 48*: The Cultural Revolution
- *Social Analysis 46*: Thinking About Politics
- *Societies of the World 32*: The Political Development of Western Europe

#### Lecture Courses

- *Gov 1060*: Ancient and Medieval Political Philosophy
- *Gov 1061*: The History of Modern Political Philosophy
- *Gov 1255*: The Politics of India
- *Gov 1295*: Comparative Politics in Latin America
- *Gov 1310*: Introduction to Congress
- *Gov 1510*: American Constitutional Law
- *Gov 1540*: The American Presidency
- *Gov 1730*: War and Politics
- *Gov 1740*: International Law

\* *The Government concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of all Honors candidates.

**Contact:** Professor Cheryl Welch, Director of Undergraduate Studies  
Phone: (617) 495-5855; Email: [cwelch@gov.harvard.edu](mailto:cwelch@gov.harvard.edu)

Karen Kaletka, Undergraduate Program Coordinator  
Phone: (617) 495-3249; Email: [kbkaletka@gov.harvard.edu](mailto:kbkaletka@gov.harvard.edu)

Website: <http://www.gov.harvard.edu/undergraduate-program>

## History

History is the study of the past. It encompasses every dimension of human interaction-social life, the economy, culture, thought, and politics. Students of history study individuals, groups, communities, and nations and they study them from every imaginable perspective using all the techniques of the humanities and social sciences to raise questions and probe for answers. There is no concentration more diverse than History. One can choose to study any part of the world in any epoch. History is as long as the most ancient civilizations or as current as yesterday's newspaper. Every moment but the present moment is part of the past and each can be the object of historical study.

With its emphasis upon critical reading skills, the evaluation of evidence, and writing, History's program offers an ideal preparation for professional, business, and scholarly careers. Historians gather and analyze large quantities of information, searching for patterns that allow them to answer important questions about the past – a set of skills at the core of many professions.

### Suggested Courses for Students Interested in History

Freshman interested in exploring History as a concentration should take one or more of the following in the pre-concentration period:

- A Freshmen Seminar with a member of Department
- Any lecture course designated as a broad survey in the Department
- A reading seminar in the fall of the sophomore year

*\* The History concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of all concentrators.

**Contact:** Professor Daniel Smail, Director of Undergraduate Studies  
Phone: (617) 496-0149; Email: [smail@fas.harvard.edu](mailto:smail@fas.harvard.edu)

Dr. Trygve Throntveit, Assistant Director of Undergraduate Studies  
Phone: (617) 495-9147; Email: [throntv@fas.harvard.edu](mailto:throntv@fas.harvard.edu)

Janet Hatch, Department Administrator  
Phone: (617) 496-4057; Email: [jhatch@fas.harvard.edu](mailto:jhatch@fas.harvard.edu)

Website: <http://www.history.fas.harvard.edu>

## History of Art and Architecture

The History of Arts and Architecture concentration offers training in the historical interpretation and critical analysis of the visual arts and architecture. It develops the skills of visual discrimination and verbal expression fundamental to art historical analysis.

Encompassing material from the widest range of geographic and historical origins, art history is itself a multifaceted discipline embracing many different methods, perspectives and interests. Sometimes it deduces from works of art the time and place of their making, or the identity of their makers, Sometimes it examines how concepts, ideals, and sensibilities of people of the past are expressed in their art, and further, how that art influenced wider aspects of their culture. Training in the critical analysis of art seeks to clarify the perception – and understanding – of how artworks relate to the techniques and materials used in their making, and to the environment in which they are seen. Instruction in critical analysis is aided by the History of Art and Architecture Department's partnership with one of the world's greatest teaching museums, comprising the Fogg, Busch-Reisinger, and Sackler Museums.

### Suggested Courses for Students Interested in the History of Art and Architecture

Students interested in History of Art and Architecture should take some introductory art history courses in order to be ready to benefit fully from *HAA 97*, the sophomore tutorial. Students may wish to take:

- Any course in the History of Art and Architecture department *1-89*.
- Freshman seminars on the history of art and architecture.
- Core courses in the areas of the Core: *Lit A, B, or C*, or Gen Ed courses offered by the History of Art and Architecture faculty.

*\* The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of all Honors candidates.

**Contact:** Professor Jennifer Roberts, Interim Director of Undergraduate Studies  
Email: roberts6@fas.harvard.edu; Phone: (617) 495-2310

Thomas Batchelder, Undergraduate Coordinator  
Email: tbatchel@fas.harvard.edu; Phone: (617) 495-2310

Website: <http://haa.fas.harvard.edu>

## History and Literature

History and Literature is one of Harvard's most individual and challenging concentrations. It is also the oldest. Founded in 1906 as an alternative to President Eliot's pleasantly anarchic "free elective system," it predated by thirteen years the establishment of a College-wide concentration system. Each year the concentration sends graduates to careers in media, law, business, banking, consulting, medicine, government, public policy, the arts, and academia. History and Literature teaches skills invaluable to any profession: the craft of writing and the art of close and critical reading.

### Suggested Courses for Students Interested in History and Literature

#### First Year

- Students should explore sections of *History and Literature 90*, small group seminars. These courses will allow prospective students to explore topics and methods of interdisciplinary study in the concentration.
- Students should begin or continue to acquire foreign language skills as needed for their field of interest.

#### Third Term

- Potential concentrators are strongly encouraged to enroll in sections of *History and Literature 90* in their fields of interest.
- Students should continue to explore courses in history and literature and to acquire foreign language skills in their fields of interest.
- Students should plan to enroll in *History and Literature 97*, the sophomore tutorial, for the spring term.

\* *The History and Literature concentration requires an application for admission. The application form and details can be found on the concentration website:*  
<http://www.fas.harvard.edu/~histlit/forms/application.pdf>.

*In addition, each prospective concentrator must submit a writing sample and complete a brief interview with concentration tutors.*

**Senior Thesis:** Required of all concentrators.

**Contact:** Dr. Jeanne Follansbee Quinn, Director of Undergraduate Studies  
Email: [jfquinn@fas.harvard.edu](mailto:jfquinn@fas.harvard.edu); Phone: (617) 495-2728

Dr. Andrew Romig, Assistant Director of Undergraduate Studies  
Email: [ajromig@fas.harvard.edu](mailto:ajromig@fas.harvard.edu); Phone: (617) 495-4913

Website: <http://www.fas.harvard.edu/~histlit/index.html>

## History of Science

History of Science is an interdisciplinary concentration that aims to expand understanding of the scientific endeavor, to explore in detail how science has developed over time, how past contexts have shaped science and how science, in turn, has shaped other human activities. The concentration has two tracks, providing students with great flexibility. The **Science and Society** track is designed for students who have an interest in doing significant course work in an area of science but who also want to study how science develops and affects the world, how it relates to industry, policy, politics, religion, and the broader culture. This track is attractive for students considering careers in public health, medicine, or science policy. The **History of Science** track offers students the possibility of studying the history and social relations of science more broadly and intensively, but it does not require students to take additional science courses. This track may interest students wanting to study science as a historically situated and thoroughly human endeavor.

### Suggested Courses for Students Interested in History of Science

#### First Year

- *History of Science 100*, Knowing the World: Introduction to the History of Science
- *Historical Study A-87*, Madness and Medicine: Themes in the History of Psychiatry
- *Culture and Belief 11*, Medicine and the Body in East Asia and in Europe
- *Freshman Seminar 241*, Imagining the Future: Biotechnology, Ethics and the Transformation of the Human in the 20th Century
- *Freshman Seminar 25i*, On the Witness Stand: Scientific Evidence in the American Courts
- *Freshman Seminar 44t*, The Atomic Bomb in History and Culture

#### Third Term

- First semester sophomores considering the concentration are encouraged to take *History of Science 100* (required), if they have not already done so.

**Concentration Application:** Both tracks of the History of Science concentration are open to all students and do not require an application.

**Senior Thesis:** Optional, though required of all Honors candidates.

**Contact:** Allie Belser, Manager of Student Programs  
Email: [ajbelser@fas.harvard.edu](mailto:ajbelser@fas.harvard.edu)  
Phone: (617) 495-3742  
Website: <http://www.fas.harvard.edu/~hsdept/>

Professor Steven Shapin, Director of Undergraduate Studies  
Email: [shapin@fas.harvard.edu](mailto:shapin@fas.harvard.edu)  
Phone: (617) 384-7997

Website: <http://www.fas.harvard.edu/~hsdept/>

## Human Developmental and Regenerative Biology

Human Developmental and Regenerative Biology (HDRB) is a life science concentration that educates students on how human beings develop from a fertilized egg, are maintained and repaired throughout adulthood, and age till life's end. Students will be given a broad education in modern life sciences by studying important biological principles within the specific rubric of the developing and regenerating body. By adding an explicit and heavy emphasis on hands-on research opportunities in all four undergraduate years, HDRB will engage students with an interest in research and take advantage of Harvard's special strengths as a teaching college and research university.

### Suggested Courses for Students Interested in Human Evolutionary Biology

- Freshman should enroll in *Life Sciences 1a* or *Life and Physical Sciences A* (fall according to placement) and *Life Sciences 1b* (spring), as well as Math (according to preparation and placement scores).
- Students with an exceptionally strong chemistry background may instead begin with organic chemistry, and may take either the *Chem 17/27* sequence or the *Chem 20/30* sequence.
- In the third semester, students ordinarily enroll in human developmental and regenerative biology (*SCRB 10*) and organic chemistry (*Chem 17*). Students with an exceptionally strong chemistry background who took *Chem 20* in the spring of their first year typically enroll in *SCRB 10* and *Chem 30* in their third semester.

**Senior Thesis:** Not required, but Honors candidates may choose a thesis track

**Contact:** Dr. Bill Anderson, Undergraduate Curriculum Dev. Manager / Concentration Advisor  
Email: [wanders@fas.harvard.edu](mailto:wanders@fas.harvard.edu); Phone: 617-495-0950

Professor Kevin Eggan, Co-Head Tutor  
Email: [hdrb\\_conc@lsdiv.harvard.edu](mailto:hdrb_conc@lsdiv.harvard.edu); Phone: 617-496-5611

Professor Doug Melton, Co-Head Tutor  
Email: [hdrb\\_conc@lsdiv.harvard.edu](mailto:hdrb_conc@lsdiv.harvard.edu); Phone: 617-495-1812

Website: <http://www.lifescience.fas.harvard.edu/icb/icb.do>

## Human Evolutionary Biology

Human Evolutionary Biology (HEB) provides a general foundation in human and organismic biology as part of the Life Sciences cluster of concentrations. HEB also has links to the social sciences, and complements the pre-existing track in Biological Anthropology within the Anthropology concentration. We encourage our students to get involved in research in HEB. Research opportunities vary from primarily lab-based research—such as in behavioral endocrinology, evolutionary genetics, anatomy, or nutrition—to field-based work—such as researching the behavior of chimpanzees in Uganda or Orangutans in Indonesia, or working with hunter-gatherers in Tanzania. HEB offers a rigorous background in human evolutionary biology while encouraging interdisciplinary work. We offer students three options: the basic non-honors degree, thesis honors, and non-thesis honors. All students take Life Sciences 1a, Life Sciences 1b, a sophomore tutorial, and a junior research seminar.

### Suggested Courses for Students Interested in Human Evolutionary Biology

HEB concentrators are required to take the *Life Sciences 1a* and *1b* sequence, usually by the end of the third semester. BA concentrators are required to take *Life Sciences 1b*, usually by the end of the third semester. *Life Sciences 1a*, which provides an integrated introduction to chemistry and molecular and cellular biology, is offered in the Fall semester. *Life Sciences 1b*, which covers genetics, genomics, and evolution, is offered in the Spring semester. A combination of the two courses is designed to give students a solid foundation in the life sciences that also underscores the critical connections between fields. There are no prerequisites for either class.

A number of introductory-level courses in Human Evolutionary Biology are appropriate for freshmen in both HEB and BA, that will introduce you to the field and help you focus your interests. These portal courses include: *FS 43g* (Freshman Seminar—Human Nature and the past, Present and Future of War), *LS 2* (Evolutionary Human Physiology and Anatomy), *Science B-27* (Human Evolution), and *Science B-29* (Evolution of Human Nature).

\* *The HEB concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Not required, but Honors candidates may choose a thesis track.

**Contact:** Dr. Carole Hooven, HEB Concentration Advisor  
Email: [hooven@fas.harvard.edu](mailto:hooven@fas.harvard.edu)  
Phone: (617) 496-3809  
Website: <http://www.lifescience.fas.harvard.edu>

## Linguistics

Linguistics, the scientific study of language, is perhaps the ultimate interdisciplinary enterprise, cutting across the humanities, social sciences, cognitive sciences, physical sciences, and biological sciences. Since it is not taught in high school, most undergraduates, including many future Linguistics concentrators, only “discover” linguistics after they come to college. Some are intrigued by the prospect of discovering formal rules to model a complex form of behavior like language; others are interested in the relationship of natural languages to other symbolic systems; still others are curious about similarities and differences they have noticed among individual languages. In exploring these and similar topics, students of linguistics not only learn a great deal about a fascinating field; they also master a variety of conceptual and empirical techniques that stand them in good stead after graduation.

The Department of Linguistics is home to one of the oldest and most distinguished linguistics programs in the United States. Many avenues of linguistic research are pursued at Harvard, all against the backdrop of a firm commitment to modern linguistic theory. The Department emphasizes the inseparability of theoretical and empirical work, and the interrelatedness of diachronic and synchronic approaches to the study of language. Much of the strength of Linguistics at Harvard derives from the unique range and depth of the University's offerings in related disciplines, especially ancient and modern languages and the growing Mind, Brain, and Behavior Program.

### Suggested Courses for Students Interested in Linguistics

Concentrators in Linguistics can choose between three tracks: Linguistics, Linguistics with a Related Field, and the Linguistics with Mind, Brain and Behavior. The following courses provide a broad introduction to the concentration:

- *Linguistics 83: Language, Cognition and Culture*
- *Linguistics 110: Introduction to Linguistics*
- *Social Analysis 34: Knowledge of Language*

*\* The Linguistics concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of Honors candidates only. During the fall term of the senior year, Honors candidates must produce a thesis prospectus for approval by the Head Tutor.

**Contact:** Professor Maria Polinsky, Head Tutor  
Phone: (617) 495-9339; Email: polinsky@fas.harvard.edu

Alexander Nikolaev, Assistant Head Tutor  
Email: nikolaev@fas.harvard.edu

Website: <http://www.fas.harvard.edu/~lingdept/>

## Literature

Literature, the undergraduate wing of the Department of Literature and Comparative Literature, is designed to meet the needs of students interested in the study of literature, literary and cultural theory, and other forms of representation in more than one culture or language. The concentration offers these students an individually tailored but carefully structured program, centered around a core of special courses and tutorials. The concentration provides students with the opportunity to explore a number of fundamental questions. What is literature? How has it been defined, analyzed, and valued? Are literary studies restricted to written texts? What is the role of translation in the study of literature? What tools and methods are used to study related forms like oral culture, film, mass cultural media, and visual and performance art? How do the definitions and functions of these literary and cultural forms change with differing languages, contexts, and purposes? The concentration proposes less to answer these questions than to investigate them.

### Suggested Courses for Students Interested in Literature

Concentrators can take courses in a variety of departments within the Humanities to fulfill concentration requirements, e.g., Literature and Comparative Literature; English; all non-English literature departments; Philosophy; Women, Gender, and Sexuality; and certain Social Science departments, upon petition to the Director of Studies.

#### First Year

- Students might consider enrolling in a **literature course from any of the subjects listed above**. *Literature 12* provides an excellent introduction to many of the different methodologies and approaches students undertake in Literature. *Literature 10* and *Literature 11* introduce students to the study of world literature and are also important gateways to the department.
- Students should consider a course in a **non-English literature** or a **language course** in the foreign language the student wishes to study.

#### Second Year

- Students who declare literature as their concentration must enroll in *Literature 97*.

*\* The concentration requires an application for admission. The application form and details can be found on the concentration website*

**Senior Thesis:** A senior thesis of 11,250-17,500 words is required of all concentrators in the senior year.

**Contact:** Dr. Sandra Naddaff, Director of Undergraduate Studies  
Email: [snaddaff@fas.harvard.edu](mailto:snaddaff@fas.harvard.edu)  
Phone: 617-495-4186  
Website: [www.literature.fas.harvard.edu](http://www.literature.fas.harvard.edu)

## Mathematics

The concentration in Mathematics is designed to acquaint the student with the most important general concepts underlying the three branches of modern mathematics. Concentration in mathematics will provide an adequate basis for further study in either pure or applied mathematics. Because so many disciplines now rely on the mathematical sciences, a concentration in mathematics provides a valuable background for many different careers. Concentrators who do not choose to continue in mathematics have often gone on to graduate work in other academic subjects or to professional training in law, business, or medicine.

### Suggested Courses for Students Interested in Mathematics

#### First Year

Potential concentrators should enroll in a math course at the appropriate level:

- *Mathematics 21a and 21b*
  - *Mathematics 23a and 23b*
  - *Mathematics 25a and 25b*
  - *Mathematics 55a and 55 b*
- Those who need some extra preparation before entering the math courses listed above should enroll in *Math 1a* and *1b* during the first year.

#### Third Term

Potential concentrators who have completed *Math 23a* and *23b* or higher in the first year should enroll in *Math 122*, Abstract Algebra. Other suitable courses include:

- *Math 131*, Topology
- *Math 114*, Measure and Integration

Potential concentrators who have completed *Math 21a* and *21b* in the first year should consider the following courses to gain a background in proof-based mathematics:

- *Math 101*, Sets, Groups and Topology
- *Math 121*, Linear Algebra and Applications
- *Math 112*, Real Analysis
- *Math 102*, Discrete Mathematics
- *Math 106*, Ordinary Differential Equations
- *Math 130*, Classical Geometry
- *Math 154*, Probability Theory

\* *The concentration does not require an application for admission.*

**Senior Thesis:** A senior thesis is required of all Honors candidates.

**Contact:** Professor Peter Kronheimer, Director of Undergraduate Studies  
Phone: 617-495-5745; Email: kronheim@math.harvard.edu  
Svetlana Alpert, Undergraduate Coordinator  
Phone: (617) 495-9116; Email: Svetlana@math.harvard.edu  
Website: <http://www.stat.harvard.edu/>

## Molecular and Cellular Biology

The Molecular and Cellular Biology (MCB) concentration is primarily concerned with the understanding of biological processes based on the study of molecules and their interactions in the context of cells and tissues. It integrates many different methodologies ranging from chemistry and genetics to computer science and engineering. The concentration requirements establish a solid foundation in basic biology, chemistry, mathematics and physics, which is followed by more advanced course work designed to expose students to major avenues of inquiry in molecular and cellular biology. Questions that can now be studied directly include many of the central issues in biology: How is genetic information transformed into the structure of an organism? How does one cell divide accurately into two? How do individual cells coordinate with their neighbors in the context of a multicellular organism?

### Suggested Courses for Students Interested in Molecular and Cellular Biology

- Freshmen should enroll in *Life Sciences 1a* or *LPSA* (fall semester, according to placement) and *Life Sciences 1b* (spring semester) as well as math (according to preparation and placement scores).
  - Ordinarily, freshmen take *Physical Sciences 1* in the spring semester; however, students with an exceptionally strong chemistry background may instead begin with organic chemistry.
- In the third semester, students ordinarily enroll in molecular biology (*MCB 52*) and organic chemistry (*Chem 17*). Students who took *Chem 20* in the spring of their first year typically enroll in *MCB 52* and *Chem 30* in their third semester. Students considering the Human Developmental and Regenerative Biology concentration may wish to enroll in *SCRB-10* instead of *MCB 52* in the third semester. Those students would then enroll in *MCB 52* in the fifth semester.
- MCB concentrators must complete 1 half course in math at the level of *Math 19a* or *21a*. *Math 1b* (Calculus) or the equivalent is required for each of these courses.

\* *The MCB concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Most MCB Honors candidates write a thesis. The non-thesis option is ordinarily not a default path to honors, and students considering non-thesis honors should consult with the department.

**Contact:** Dr. Richard Losick, Head Tutor  
Phone: (617) 495-4106; Email: [mcb\\_conc@lsdiv.harvard.edu](mailto:mcb_conc@lsdiv.harvard.edu)  
Dr. Thomas Torello, Concentration Adviser  
Phone: (617) 495-4106; Email: [mcb\\_conc@lsdiv.harvard.edu](mailto:mcb_conc@lsdiv.harvard.edu)  
Website: <http://www.lifesciences.fas.harvard.edu>

## Music

The concentration in Music emphasizes the acquisition of a solid foundation in the theory, analysis, history, and literature of music. It thereby provides an understanding of music in cultural and historical contexts as well as an introduction to composition, analysis, and criticism. The Department of Music also strongly encourages performance on the part of its students. The program is not directed primarily toward students planning careers in performance fields, but serves such students by deepening their intellectual involvement with the music they are to play.

The department welcomes joint concentrations with other departments that allow them. For students who wish to pursue a program with more emphasis on performance, the department offers the Five-Year Program. Students approved by the department and the Administrative Board for this program take the normal number of courses in their freshman year, but then work at the three-course rate for the four years following. This permits more intensive work in performance. These students are expected to give a senior recital. Students who have taken college courses in music at other institutions may receive concentration credit for work done elsewhere. This ordinarily involves a written petition to the faculty and may require taking an examination in the materials of the course for which credit is requested.

### Suggested Courses for Students Interested in Music

Students begin the concentration in Music with two foundational pillars: *Music 97a, 97b, and 97c* provide extensive knowledge of the history and literature of Western music as well as the principles of ethnomusicology and world music repertoires; *Music 51a, 51b, 150a, and 150b* teach skills important in musicianship, theory and analysis. Students who enter with a significant background in theory may bypass portions of the theory sequence through the placement exam at the beginning of the semester. While it is possible to complete the concentration requirements within five semesters, we encourage potential concentrators to enroll in *Music 51* as early as possible to allow for the greatest possible flexibility in the path through the concentration.

*\* The concentration does not require an application for admission.*

**Senior Thesis:** A senior thesis is required of all Honors candidates in the senior year. It may be an original composition, a senior recital, or a verbal thesis. Students not producing a senior thesis will undertake a senior project.

**Contact:** Mary Gerbi, Assistant to the Chair/Undergraduate Coordinator  
Email: [gerbi@fas.harvard.edu](mailto:gerbi@fas.harvard.edu)  
Phone: 617-495-9854  
Website: <http://www.music.fas.harvard.edu/>

## Near Eastern Languages and Civilizations

The Department of Near Eastern Languages and Civilizations (NELC) introduces students to the peoples, languages, cultures, and societies of the Near and Middle East. Beyond the development of skills in one (or more) of the languages of the region and participation in the Department's one-term sophomore tutorial, a wide variety of directions of study is available to concentrators. The concentration is intended to provide a solid grounding in the student's area of focus and to offer an in-depth look at the ways in which modern scholars seek to understand the languages and cultures that have come from this region and that have been so influential throughout the world. The Near Eastern Languages and Civilizations concentration will be of interest to students who are considering careers in government and foreign service, law, journalism, education, business, and divinity, among others, as well as those who anticipate graduate study in Near Eastern or related fields.

### Suggested Courses for Students Interested in Near Eastern Languages and Civilizations

#### First Year

Students should begin the study of a Near Eastern language of their choice:

- Armenian
  - Arabic
  - Iranian
  - Persian
  - Turkish
  - Yiddish
  - Hebrew
  - Akkadian
  - Sumerian
- Students should also explore a course that involves the study of Near/Middle Eastern history, literature, religion, archaeology, or politics.

#### Third Term

- Potential concentrators should continue the study of a Near/Middle Eastern language.
- Potential concentrators should take at least one course that involves the study of Near/Middle Eastern history, literature, religion, archaeology, or politics.

*\* The NELC concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of all Honors candidates

**Contact:** Professor Peter Machinis, Director of Undergraduate Studies  
Email: machinis@fas.harvard.edu  
Phone: 617-495-0333  
Website: <http://www.fas.harvard.edu/~nelc>

## Neurobiology

Neurobiology is the science of how the nervous system organizes behavior. It investigates phenomena on vastly different scales – from molecules to societies – by studying individual nerve cells, connections and circuitry among neurons, and brain function. The only prerequisite for students entering this concentration is an intense curiosity about how the brain works.

The neurobiology concentration has its natural hub in the life sciences but emphasizes a solid grounding in other relevant fields. Foundation coursework in the life sciences coupled with introductory and advanced Neurobiology courses provides a broad preparation for advanced studies in any of the life sciences, medicine, and beyond.

### Suggested Courses for Students Interested in Neurobiology

#### First Year

- *Life Sciences 1a* (fall)
- *Life Sciences 1b and Physical Sciences 1* (spring)
  - If there is a scheduling conflict, the department recommends enrolling in Physical Sciences 1 and delaying Life Sciences 1b until sophomore year.
- *Math 1b* and/or *Math 19/21*

#### Third Term

- *Chemistry 17 or PS2*
- *Molecular and Cellular Biology 80*

*\* The Neurobiology concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Thesis is required for Highest Honors in Field. One semester of research is required for award of Honors or High Honors in Field. The thesis is based on original research in neurobiology and is ordinarily conducted in the laboratory.

**Contact:** Dr. Family Weissman  
Email: [family@mcb.harvard.edu](mailto:family@mcb.harvard.edu)  
Phone: 617-496-9908  
Website: <http://www.lifescience.fas.harvard.edu>

## Organismic and Evolutionary Biology

Organismic and Evolutionary Biology (OEB) is concerned with the study of biological systems at all levels from molecules to ecosystems, united by a shared foundation in evolutionary biology. This concentration offers courses in a broad range of topics, including (in alphabetical order): anatomy, biomechanics, botany, genetics, genomics, behavior, development, ecology, entomology, evolution, forestry, marine biology, microbiology, mycology, oceanography, paleontology, physiology, systematics, and zoology. OEB asks questions about the function, evolution, and interaction of organisms, both now and in the past. What kinds of organisms are there and how are they related? How is an organism's functional design and behavior related to its environment? What are the genetic and morphological mechanisms underlying an organism's development, and how is evolution influenced by development? The study of organismic and evolutionary biology can be approached in many ways, reflecting primary interest in a specific lineage (e.g., plants, animals, micro-organisms), level of organization (e.g., ecological systems, evolutionary genetics), approach (e.g., biomechanics, developmental biology), or even a desire to sample broadly across these themes. OEB is, therefore, inherently an interdisciplinary field, ranging over different levels of biological organization, evolutionary process, biological taxa, and physiological systems.

### Suggested Courses for Students Interested in Organismic and Evolutionary Biology

#### First Year

- *Life Sciences 1a* or *Life and Physical Sciences A* (fall)
- *Life Sciences 1b* (spring)
- Pre-professional (especially pre-med) students should take *Physical Sciences 1* (spring) unless they have otherwise fulfilled the prerequisites for the Organic Chemistry sequence (*Chemistry 17-27*) they will be taking as Sophomores.

#### Third Term

- *OEB 10* (fall), the survey course required of concentrators (this course serves as a prerequisite for the department's more advanced courses).
- Those who are pre-professional (particularly pre-med) are advised to fulfill their Organic Chemistry requirements during both terms of the sophomore year.

\* *The OEB concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required for Highest Honors in Field.

**Contact:** Dr. Andrew Berry, Concentration Adviser  
Phone: 617-495-0684  
Email: [berry@oeb.harvard.edu](mailto:berry@oeb.harvard.edu)  
Website: <http://www.lifescience.fas.harvard.edu>

## Philosophy

The Philosophy concentration 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, metaphysics, philosophy of logic, philosophy of language, philosophy of science (especially: physics and biology), the history of analytic philosophy, ancient philosophy, Kant, and Wittgenstein.

Philosophy has been included in Harvard's curriculum from the time of its founding in 1636. The Department has had a long and fruitful involvement in the practice of philosophy in the United States and beyond, especially from the "Golden Age" of the late nineteenth century down to the present day. In addition to the traditional track, students interested in studying philosophical questions that arise in connection with the sciences of mind, brain, and behavior may pursue a program of study affiliated with the University-wide Mind/Brain/Behavior (MBB) Initiative.

### Suggested Courses for Students Interested in Philosophy

#### First Term

- *Philosophy 3*: Introduction to the Problems of Philosophy
- *Philosophy 8*: Introduction to Early Modern Philosophy
- *Ethical Reasoning 11*: Human Rights: A Philosophical Introduction
- *Moral Reasoning 33*: Issues in Ethics
- *Quantitative Reasoning 22*: Deductive Logic

#### Second Term

- *Culture and Belief 31* (formerly *Philosophy 19*): Saints, Heretics, and Atheists: An Historical Introduction to the Philosophy of Religion
- *Moral Reasoning 66*: Moral Reasoning about Social Protest
- *Philosophy 144*: Logic and Philosophy

\* *The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** A senior thesis is required of all Honors candidates.

**Contact:** Professor Ned Hall, Head Tutor  
Phone: 617-495-2486  
Email: [ehall@fas.harvard.edu](mailto:ehall@fas.harvard.edu)  
Website: <http://www.fas.harvard.edu/~phildept/index.html>

## Physics

The concentration in Physics, administered by the Department of Physics, serves a variety of goals and interests. Many concentrators seek and understanding of the subtle, profound, and fundamental laws – relativity, quantum mechanics, and the basic force laws – that govern the behavior of all matter.

A concentration in Physics provides a foundation for subsequent professional work in physics, and also for work in astronomy, biophysics, chemical physics, engineering and applied physics, earth and planetary sciences, geology, astrophysics, and the history and philosophy of science. Less obviously perhaps, the intellectual attitudes in physics – blending imagination, prediction, observation, and dedication – provide an excellent base for subsequent graduate work in professional schools of medicine, education, law, business and public administration.

### Suggested Courses for Students Interested in Physics

#### Intro Physics

- 15a or 16 (mechanics; concentrators roughly split between 15a and 16)
- 15b or 153 (E&M)
- 15c or rare sub (waves, optics)
- 143a (quantum)

#### Mathematics

- 21a
- 21b

#### Advanced physics

- Any 100 level Common 100-level courses are 125, 143b, 153, 181. See Handbook for list.

For more information on introductory courses and sample study plans go to:  
<http://www.physics.harvard.edu/academics/undergrad/FAQsIntro.html>

*\* The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Optional.

**Contact:** Professor Howard Georgi, Head Tutor  
Email: [georgi@physics.harvard.edu](mailto:georgi@physics.harvard.edu); Phone: 617-496-8293

Professor David Morin, Assistant Head Tutor  
Email: [morin@physics.harvard.edu](mailto:morin@physics.harvard.edu); Phone: (617) 495-3257  
Website: <http://www.physics.harvard.edu/academics/undergrad/>

## Psychology

Most of the research conducted in Harvard's Department of Psychology concerns basic psychological processes such as perception, memory, social influence, motivation, social support, nonverbal communication, and decision making. Many members of the department have interests in behavioral neuroscience while others use psychology to understand other disciplines, such as law, medicine, and business. Finally, some members of the department conduct research on the etiology, development, and treatment of psychopathology. All members of the department share the common goal of understanding behavior through empirical investigation, and their teaching and research reflect this goal. In addition to the general psychology track, students may choose the Mind Brain and Behavior track in Cognitive Science or the Life Sciences track in Social and Cognitive Neuroscience.

### Suggested Courses for Students Interested in Psychology

The Psychology department has a structured curriculum. Students start with an introductory Tier 1 course, followed by two Tier 2 courses in sub-areas of psychology and eventually Tier 3 specialized electives. At a minimum, all students should take the Tier 1 course: *Science of Living Systems 20 (SLS 20)* as early as possible. Students planning to complete the Life Sciences track should also take one of *Life and Physical Sciences A*, *Life Sciences 1a*, or *Life Sciences 1b* in their first year. Suggested coursework beyond *SLS 20* for the first two years includes (all tracks):

- Tier 2 courses (select 2 - *MCB 80* required for MBB and Life Science tracks)
  - *PSY 13*: Cognitive Psychology
  - *PSY 15*: Social Psychology
  - *PSY 16*: Developmental Psychology
  - *PSY 18*: Abnormal Psychology
  - *MCB 80*: Neurobiology of Behavior
- Sophomore Tutorial (*PSY 971* for General and MBB tracks; *PSY 975* for Life Science track), required by the end of sophomore year.
- Basic Methods (*Psy 1900* or *Stat 101*) required by the end of sophomore year.
- The majority of upper-level (Tier 3) courses in psychology require *SLS 20* and at least one Tier 2 course as a prerequisite. The following courses do not require a prerequisite and can count for psychology elective credit: *SCI B-29*, *SCI B-60*, *HIST-STD A-87*, *SOC-ANAL 43*, *MBB 91-MBB 96*.

\* *The concentration is open to all students and does not require an application for admission. The thesis track requires an application junior year.*

**Senior Thesis:** Honors candidates may choose either a thesis track or a non-thesis track.

**Contact:** Psychology Undergraduate Office  
William James Hall 218; open Mon-Fri 9am-noon, 1-5pm  
Website: <http://www.wjh.harvard.edu/psych/ug/>  
Advising Info: <http://www.wjh.harvard.edu/psych/ug/advising/PreConc.html>  
Phone: (617) 495-3712; Email: [psychology@wjh.harvard.edu](mailto:psychology@wjh.harvard.edu)

## Romance Languages and Literatures

The Department of Romance Languages and Literatures (RLL) at Harvard offers undergraduate and graduate courses in the French and Francophone, Italian, Portuguese and Luso-Brazilian, Spanish and Latin American literary traditions. We offer language courses in French, Italian, Portuguese, and Spanish at the elementary, intermediate, and advanced levels, as well as beginning Catalan. In the four major areas, our courses explore all aspects of culture, including literature, providing students with an intellectual experience while they are learning the language. Recognizing that people study the Romance languages for a variety of reasons, our program allows students to take courses which correspond to their particular interests.

Our faculty is committed to interdisciplinary studies and encourages students to situate literature in the broad context of cultural productions, ranging from the canonical to alternative modes. The literature programs enable students to examine a wide range of periods, genres, and approaches, and to tailor their plans of study according to their specific interest.

### Suggested Courses for Students Interested in Romance Languages and Literatures

There are six tracks offered in RLL:

- French and Francophone Studies
  - Hispanic Studies
  - Italian Studies
  - Latin American Studies
  - Portuguese and Brazilian Studies
  - Romance Studies
- Freshmen should begin to take language classes at the appropriate level as determined by the Harvard placement tests.
  - By spring of the sophomore year, students should be enrolled in language classes at the 40, 50, or 60 levels, or have scored a 750 or higher on the Harvard placement test.
  - Students at an advanced language level may want to begin taking the 70-level courses. These courses are a good introduction to more advanced courses in literature and are required in almost all the Romance Language tracks.

*\* The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of all Honors candidates.

**Contact:** Walter Hryshko, Undergraduate Program Coordinator  
Phone: 617-495-1860  
Email: [hryshko@fas.harvard.edu](mailto:hryshko@fas.harvard.edu)  
Website: <http://www.fas.harvard.edu/~rll/>

## Sanskrit and Indian Studies

The Department of Sanskrit and Indian Studies provides students with an opportunity to study the civilizations of South Asia and of related cultures by developing competence in Sanskrit or another South Asian language, and by examining the literature, the religious and philosophical traditions, the aesthetic and artistic traditions, and the moral and social traditions of that civilization.

### Suggested Courses for Students Interested in Sanskrit and Indian Studies

#### First Term

Students interested in exploring Sanskrit & Indian Studies should begin with the study of one of the languages:

- *Urdu 101*, Introductory Urdu-Hindi
- *Sanskrit 101a*, Elementary Sanskrit

Students may also take a broad-band course on Indian Civilization:

- *Literature and Arts A-92*, Love in a Dead Language: Classical Indian
- Literature and Its Theorists
- *Historical Study A-16*, Modern South Asian Global History

#### Second Term

Students should take a broad-band course on Indian Civilization:

- *Literature & Arts C-18*, Hindu Myth, Image, and Pilgrimage
- *Moral Reasoning 80*, The Good Life in India
- *Sanskrit 101b*, Elementary Sanskrit (continuation of 101a)

#### Third Term

- Students who did not take introductory Urdu-Hindi or Sanskrit should begin that sequence (must be completed by the end of sophomore year)
- Students who have completed the introductory language sequence should continue on with either *Urdu 102* (Intermediate Urdu-Hindi) or *Sanskrit 102a* (Intermediate Sanskrit I)

\* *The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Optional for Honors candidates.

**Contact:** Leonard W J van der Kuijp, Director of Undergraduate Studies

Phone: 617-496-6871

Email: vanderk@fas.harvard.edu

Website: <http://www.fas.harvard.edu/~sanskrit/index.html>

## Slavic Literatures and Cultures

The concentration in Slavic Literatures and Cultures offers students an opportunity to study the cultural traditions, past and present, in Russia and other Slavic countries. Students gain a deep understanding of the history, culture, popular imagination, and modes of self-representation for one or more Slavic countries. Concentrators develop proficiency in Russian or other Slavic languages such as Czech, Polish, and Ukrainian, and they use this knowledge of the language to better understand the important role these cultures have played in the modern world.

In addition to learning about the turbulent history, rich literature, and culture of Russia and other Slavic countries, students gain in tutorials a rigorous introduction to contemporary methodologies of reading texts and studying foreign cultures. All tutorials in the Slavic Department are taught exclusively by full-time faculty. Although the undergraduate concentration will prepare students for graduate study in Slavic, comparative literature, and other programs, the majority of our students follow careers in other areas, including medicine, law, business, and government; they find that the experience of learning a language well and getting to know a foreign culture greatly expands their opportunities for work and travel. Above all, the concentration seeks to provide intellectual stimulation along with linguistic and analytic skills that will serve students well in their future careers.

### Suggested Courses for Students Interested in Slavic Literatures and Cultures

Like other concentrations requiring a significant investment in language courses, we encourage students interested in Slavic to begin studying language as soon as possible. The concentration requirements are five half-courses in Russian or another Slavic language, three half-courses of tutorial, one survey course, two electives, and a senior project in the final year. (Native speakers and students with advanced language preparation may substitute additional literature courses for a substantial part of the language requirement.) Study abroad, whether a summer or a semester, is strongly encouraged and easily accommodated within the concentration.

*\* The concentration does not require an application for admission.*

**Senior Thesis:** A senior thesis is required of all Honors candidates in the senior year.

**Contact:** Professor Joanna Nizynska, Director of Undergraduate Studies  
Phone: 617 495 5808  
Email: [nizynska@fas.harvard.edu](mailto:nizynska@fas.harvard.edu)  
Website: <http://www.slavic.fas.harvard.edu/>

## Social Studies

Social Studies is an interdisciplinary concentration in the social sciences at Harvard College. For nearly five decades it has brought together outstanding teachers and intellectually engaged students who share not only a fascination with social science research and theory but also concerns about pressing social, political, and economic problems facing contemporary societies. Members of the Committee are united in their belief that rigorous social science inquiry must cross disciplinary boundaries and that it should be based on an understanding of classic and contemporary social theory and on an intimate knowledge of the history and culture of the places we study.

Students in Social Studies start by taking Social Studies 10, a year-long course in social theory that serves as our sophomore tutorial. Students are also required to develop background in economics, statistics, and the philosophy and methods of the social sciences. Working with their academic adviser, students then create an individualized focus field addressing a topic of interest (“inequality in the United States;” “development in Africa;” “modern social theory”), drawing on courses in the social sciences, history, and continental philosophy. A student's focus field work culminates in a senior thesis.

### Suggested Courses for Students Interested in Social Studies

#### First Year

- Students considering Social Studies may want to take *Social Analysis 10*
- Students may want to take a Moral Reasoning or Philosophy course to determine whether they enjoy theory.
- Those students who have not had Advanced Placement level European history are encouraged (though not required) to enroll in a European history course.
- Students should enroll in social science courses in areas of that interest them (e.g. students interested in East Asia should enroll in a course on that region).

#### Third Term

- Potential concentrators **must** enroll in *Social Studies 10* which is a prerequisite for applying to the concentration.

\* *Social Studies is an application-only concentration. All sophomores considering concentrating in Social Studies must take Social Studies 10a: Introduction to Social Studies in the fall term. This course is a prerequisite for applying to Social Studies. The application deadline for sophomores (class of 2012) is October 23<sup>rd</sup>.*

**Senior Thesis:** A senior thesis is required of all concentrators.

**Contact:** Dr. Thomas Ponniah, Assistant Director of Undergraduate Studies  
Email: [tponniah@fas.harvard.edu](mailto:tponniah@fas.harvard.edu)  
Phone: (617) 495-5907  
Website: <http://www.socialstudies.fas.harvard.edu>

## **Sociology**

Sociology is the study of society, of the social frameworks within which we live our lives. It is a study of social life at every level, from two-person relationships to the rise and fall of nations and civilizations. More than any other discipline it is a meeting place of the social sciences, combining its own ideas and methods with insights from history, anthropology, economics, political science, and psychology in an extended examination of the ways societies work—or fail to work.

The Department of Sociology at Harvard has a diverse and distinguished faculty. It has particular strengths in race and ethnic relations, social stratification, sociology of culture, organizational behavior, comparative and historical sociology, the analysis of collective action, and sociological theory. The concentration is a small one, which allows for personal attention to students. It also affords substantial access to faculty and administrators and flexibility in meeting individual intellectual agendas. Course emphases range widely from the theoretical to the applied and incorporate an array of approaches, including computer-based analysis, historical and comparative studies, field-based sociology, quantitative analysis, and theoretical explorations.

### Suggested Courses for Students Interested in Sociology

Students interested in Sociology should consider taking one or more of the introductory classes listed below:

- *Sociology 10*: Introduction to Sociology (fall)
- *Sociology 25*: Introduction to the Sociology of Organizations (spring)
- *Sociology 43*: Social Interaction (spring)
- *Foreign Cultures 46*: Caribbean Societies (fall)
- *United States and the World 24*: Reinventing Boston (fall)

*\* The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** Required of all Honors candidates.

**Contact:** Kate Drizos, Undergraduate Administrator  
Phone: 617-495-3713  
Email: [kdrizos@wjh.harvard.edu](mailto:kdrizos@wjh.harvard.edu)  
Website: <http://www.wjh.harvard.edu/soc/>

## Statistics

Statistics is a relatively young discipline organized around the rapidly growing body of knowledge about quantitative methods for the analysis of data, the making of rational decisions under uncertainty, the design of experiments, and the modeling of randomness in the social and natural sciences. Statistics has a theoretical core surrounded by a large number of domains of application in fields such as economics, psychology, biology and medicine, sociology, population sciences, government, anthropology, history, astronomy, physics, and computer science. A concentration in Statistics prepares a student for careers in industry and government, for graduate study in a very broad collection of social and natural sciences, and for professional study in law, medicine, business, or public administration. The demand for people with statistical training is rising in most areas.

In 2007-08 the Department of Statistics introduced the Quantitative Finance Track, designed as a specialization for concentrators in Statistics with special interest in quantitative issues that arise in financial and insurance modeling. The focus is on the stochastic analysis that is relevant in these fields. The specific topics addressed include statistical inference of stochastic models that arise in financial/insurance modeling as well as computational techniques that have become standard in pricing, hedging and risk assessment of complex financial/insurance instruments.

### Suggested Courses for Students Interested in Statistics

Introductory Statistics courses for pre-concentrators include:

- *Statistics 100*
- *Statistics 104*
- *Empirical and Mathematical Reasoning 16: Real-Life Statistics: Your Chance for Happiness (or Misery)*
- *Statistics 110* and *Statistics 111*
  - Designed for students who have taken *Math 19a* or above and are interested in a more theoretical foundation in statistics.

\* *The concentration is open to all students and does not require an application for admission.*

**Senior Thesis:** A senior thesis is required of all Honors candidates.

**Contact:** Professor Joseph Blitzstein, Co-Director of Undergraduate Studies  
Phone: 617-496-2985  
Email: [blitzstein@stat.harvard.edu](mailto:blitzstein@stat.harvard.edu)

Professor David Harrington, Co-Director of Undergraduate Studies  
Phone: 617-495-8710  
Email: [dph@hsph.harvard.edu](mailto:dph@hsph.harvard.edu),  
Website: <http://www.stat.harvard.edu/>

## Visual and Environmental Studies

Visual and Environmental Studies (VES) is the curricular home of studio arts, photography, filmmaking, film studies, environmental studies, video art and performance, and critical theory. The department is unique in the way it fosters dialogue among makers, critics, and theorists. Its faculty comprises individuals working and teaching in all of these modes. Working closely with our faculty—predominantly in small studios and seminars—VES concentrators gain an understanding of art and expression through both study and practice. The curriculum engages both practical and theoretical aspects of digital media, drawing, film, painting, performance, photography, printmaking, sculpture, sound, video, and writing. The modes of teaching combine the intensity of conservatory programs with the broad intellectual aims of a liberal arts college. Upon graduation, concentrators in VES enter a wide variety of fields. Some pursue careers as artists or filmmakers while others go into publishing and communications. Among the graduate schools to which VES concentrators are admitted are schools of architecture, art, film, and photography, as well as programs in liberal arts, medicine, and business.

### Suggested Courses for Students Interested in Visual and Environmental Studies

- Students interested in the studio area should take an introductory studio art course in advance of their application. These courses are generally numbered *VES 10-69*.
- Students who want to focus on film, video or animation should take a beginning course in one of these areas (including photography) in advance of their application. These courses are generally numbered *VES 40-69*. *VES 50*, the year long introductory film course, is usually taken by students in their sophomore year.
- Students interested in the area of film studies should take an introductory class in the history and theory of cinema. Appropriate introductory courses include: *VES 70* (The Art of Film, formerly *Literature and Arts B-11*), *VES 71* (Silent Cinema), *VES 72* (Sound Cinema).

*\* Admission into the department of Visual and Environmental Studies is by application. Students are required take at least one introductory course in advance of their application.*

**Senior Thesis:** Not required.

**Contact:** Professor Ruth Lingford, Director of Undergraduate Studies  
Email: [Lingford@fas.harvard.edu](mailto:Lingford@fas.harvard.edu); Phone: 617-495-9683  
Paula Soares, Academic Services Coordinator/Adviser  
Email: [Soares@fas.harvard.edu](mailto:Soares@fas.harvard.edu); Phone: (617) 496-4469  
Website: <http://www.ves.fas.harvard.edu/>

## Women, Gender and Sexuality Studies

The concentration in Women, Gender, and Sexuality Studies (WGS) brings together a wide range of academic fields (history, sociology, literature, philosophy, religion, and psychology, to name just a few) united by a common interest in the ways in which various cultures express ideas about gender, race, class, and sexuality. As a discipline, WGS pays close attention to how social norms have changed over time, and how the “nature versus nurture” debate has shaped public policy, civil rights, health care, and education, as well as the depiction of women and men in art, literature, and the popular media. The WGS program prides itself on the intense intellectual engagement of its students. Students have conducted research on a variety of topics, from women’s political campaigns, to public financing for safe sex education, to the representation of lesbians and gay men in traditional literature. Many of the courses in WGS seek to bridge the gap between academia and “the real world” by investigating the relationship between theory and practice — a subject that has long motivated WGS scholarship. Whatever the subject, WGS courses are characterized by a strong commitment to rigorous analysis and critical thinking, as well as a spirit of open and sustained intellectual inquiry.

### Suggested Courses for Students Interested in Women, Gender, and Sexuality Studies

- *WGS 1200*, Historical Perspectives in WGS (fall)
- Any topical course in WGS listed as 1100 or 1200 level
- General Education Courses offered by WGS faculty (visit WGS website for updated list)
- Freshman Seminars offered by WGS faculty (visit WGS website for updated list)

Beginning in fall 2009, WGS will offer a new Capstone Track. Capstone concentrators take a total of 12 half-courses (instead of the 13 required for the Thesis Track) and participate in a one-semester Senior Capstone course (instead of the year-long Senior Thesis). Interested students should consult the WGS website.

*\* The WGS Capstone Track is open to all students and does not require an application for admission. Students interested in pursuing the WGS Thesis (Honors) Track must apply to do so; please consult the WGS website for more information.*

**Senior Thesis:** Required of concentrators enrolled in the WGS Thesis (Honors) Track.

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