This guide is not the College's advising resource of record. For the most accurate and up-to-date information on concentration and secondary field requirements, please consult the undergraduate *Handbook for Students.*
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Welcome to Harvard College!

Soon you will take your first steps on an intellectual journey that will span the next four years. One of the most important things you will do in college is find your intellectual home – the field of study (“concentration”) you’re most excited to delve into, and the community of like-minded faculty and students with and from whom you’re most excited to learn. We strongly encourage you to approach this objective with an open mind. There are many ways that you can continue cultivating long-standing interests of yours at Harvard, but be sure to take advantage of the opportunity to explore new disciplines as well.

Every field of study at Harvard is taught by members of the faculty who not only will share their knowledge with you but who also create new knowledge. Learning from teachers who are, themselves, at the cutting edge of their fields, is a completely different learning experience from the one you may have had in high school. Harvard concentrations that may seem familiar – e.g., Chemistry, Economics, or English – bear little resemblance to their high school counterparts. Be sure not to close doors to exploring on account of any presuppositions you bring with you to college.

The adventure ahead of you is a great and exciting one. Even if you think you know precisely where it will lead you, we encourage you to take risks and explore. Your intellectual home at Harvard may be someplace you least expect now, perhaps in a field of study you weren’t even aware existed. You’ll never know unless you study all your options from the outset; follow interesting leads; talk with lots of people (advisors, faculty, peers); and check out lots of classes. The more open you are to exploring, early on, and to taking chances, the likelier it is that you will find your passion and your intellectual home at Harvard.

The kind of exploring we’re describing should be fun, but it will also take some effort on your part. And it is important to bear in mind that the choices you make at every stage in college have opportunity costs. There are, after all, only so many courses (out of thousands to choose among) that you will be able to take in the course of your Harvard career; only one concentration you will be able to pursue. To make your own best choices, starting now, begins with learning about the countless options at your disposal: for example,

- knowing what the different fields of study are and the special opportunities they offer (e.g., study abroad, independent research, lab experiences);
- knowing what the requirements of each field of study are;
- understanding the differences between closely related fields (e.g., Integrative Biology versus Human Evolutionary Biology);
- knowing what the recommended gateway courses are for fields you’re interested in exploring;
- knowing which fields have specific course sequencing requirements;
- knowing which fields (typically in the sciences and engineering/applied sciences) recommend that you begin planning in freshman year.\(^1\)

How should you begin? By reading (or at least skimming) this book from cover to cover. Mark the pages, noting things that interest you, in particular, courses you may wish to check out. Bring your findings to meetings with your academic advisor, and carry your explorations forward by browsing department websites, speaking with departmental advisors, and attending the first lectures of gateway classes. Revisit this book and your notes in the months ahead. They will be an invaluable resource for you this year and even next year when you declare your concentration.

You should also use this book to prepare for two important advising opportunities this year: the academic fairs that will take place during Opening Days week and Advising Fortnight – a two week period of pre-concentration advising events (department open houses, faculty and alumni panels, concentration information sessions, and other events) – that will take place in late spring.

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\(^1\) Premedical studies also require early planning if you intend to finish premed requirements during college (premed requirements can also be completed, in part or in whole, after college as part of a post-baccalaureate program of study). Note: premed studies can be successfully combined with any Harvard concentration. Medical schools give no preference, in admissions, to certain fields of study versus others.
In this book, you will find:

• An overview of academic advising at Harvard University
• An overview of the Harvard curriculum
• Overviews of all Harvard concentrations and secondary fields, including:
  - a description of each concentration
  - an overview of its advising structure
  - advice on how to explore the concentration (suggested gateway courses, etc.)
  - information about that concentration's alumni
  - additional information departments would like you to know
  - a brief summary of the concentration's requirements and of special opportunities it may offer
  - contact information for concentration advisors
  - links to department websites
  - maps indicating the location of departments

Questions? Ask your advisor or email the Advising Programs Office (advising@fas.harvard.edu).

Good luck and happy reading!

Harvard College Advising

Many students come to Harvard with concrete ideas about what they should study and with preconceived notions about the goals of a Harvard education. Good advising programs challenge these ideas, daring students to imagine themselves as something different than they are or think they should be, and encouraging them to explore and expand their horizons at every stage of their undergraduate education.

Harvard College’s Advising Programs Office (APO) was created in the spring of 2006 to help coordinate and support academic advising programs for all undergraduates. The APO sees itself as a bridge designed to connect students with faculty, administrators, and peers throughout the Harvard community and to facilitate effective pre-concentration and concentration advising experiences for undergraduates.

Believing that advising relationships are most productive when they are built on mutual respect, receptivity, and initiative, the APO conceives of these relationships as partnerships in which both students and advisors take an active role. Over their four years here, students are encouraged to assume increasing responsibility for cultivating their own advising relationships. This includes expanding their network of advisors, proactively seeking out resources, taking stock of their needs and goals, and balancing multiple sources of advice.

Believing that effective advising programs are ones that provide students with numerous opportunities for advising encounters, the APO has built redundancy into each of its programs, thus ensuring that at every stage of their undergraduate careers students are able to call on multiple sources of advice and counsel. When students invest time and energy in developing meaningful advising relationships with faculty, administrators, and peers, they not only position themselves to be well supported in college, but they may also enjoy this support, and be enriched by these relationships, for many years to come.

Effective advising helps students achieve balance in their lives, both among their academic, extracurricular, and social endeavors, as well as between the specialized academic interests they develop and the broader intellectual opportunities that a liberal education affords them.
# Advising Relationship Expectations

During their time at Harvard, students enjoy advising relationships with their formal advisors as well as other members of the Harvard community they include in their ever-growing network of support. Both parties should take a role in establishing and fostering the relationship.

## Advisors are expected to:

1. **Provide Informed Support**
   Advisors should get to know students’ individual needs and act as a sounding board for their ideas. Advisors should also support students by suggesting pathways that fit with the particular goals of the advisee.

2. **Be Knowledgeable about the Curriculum and Resources**
   Advisors should have a basic knowledge of the College curriculum and the resources available to students on campus.

3. **Make Connections**
   Though advisors are not expected to know the answer to every question, they should be a source of referrals and link students to appropriate resources.

4. **Be Accessible, Responsive, and Proactive**
   Advisors should let their advisees know how to reach them easily, should be responsive to communications from advisees, and should be proactive in keeping up with their advisees throughout the term.

## Advisees are expected to:

1. **Be Responsive**
   Advisees should respond to advisors’ communications in a timely manner and be willing to meet in person.

2. **Take Initiative**
   Advisees should be proactive in seeking out the advising resources they need. This may include requesting additional advising meetings, seeking out multiple sources of advice, and continuing to expand both their formal and informal network of advisors.

3. **Be Prepared**
   Advisees should come to advising meetings prepared, considering in advance the choices, questions, and issues they hope to discuss with their advisor. Additionally, students should prepare by considering their own academic goals.

4. **Keep an Open Mind**
   While many students may have concrete ideas about potential paths, advisees should be open to new possibilities they may not have considered. Good advising conversations may raise more questions than they answer.
Building a Board of Advisors at Harvard College

Students build a “board of advisors” that they can draw on during their time at Harvard and beyond. Once the first connections are made with the freshman advising network, students are encouraged to continue, formally and informally, to augment their personal advising board so that they have a wealth of advising resources at their disposal at every turn. With the goal of advising being personal transformation through meaningful conversation, expanding such a network increases opportunities for productive moments in advising experiences.

In addition to the official advising resources listed below, students draw from the entirety of the Harvard community to add to their “board of advisors”.

Terms 1-2
- Proctor
- Freshman Advisor
- Peer Advising Fellow
- Resident Dean of Freshmen

Terms 3-4
- Sophomore Advisor
- Sophomore Advising Coordinator
- Resident Dean
- House Masters
- Concentration Advisors
- DUS/ADUS
- Proctor
- Freshman Advisor
- Peer Advising Fellow
- Resident Dean of Freshmen

Terms 4-8
- DUS/ADUS
- Concentration Advisors
- Thesis Advisor
- Residential Tutors
- Fellowships Advisors
- Resident Dean
- House Masters
- Sophomore Advisor
- Sophomore Advising Coordinator
- Proctor
- Freshman Advisor
- Peer Advising Fellow
- Resident Dean of Freshmen
First-Year Advising

The goals of first-year advising are to help students transition to college academics, to help them navigate and shape their educational experience, to encourage students to explore the opportunities and resources available at Harvard, and to prepare students to declare a concentration.

All incoming first-year students start out with a network of advisors: a Proctor, a freshman academic advisor, a Peer Advising Fellow, and a Resident Dean of Freshmen who serve as the student’s chief initial resources for academic and non-academic advice.

Board of Freshman Advisors (BFA)

Freshman Advisors are faculty members, administrators and/or Proctors at the University who together form the Board of Freshman Advisors. Freshman Advisors help first-year students select courses and explore a wide range of questions on the curriculum, academic requirements, educational goals, summer opportunities, career aspirations, and extracurricular interests. Freshman Advisors work with an average of three to six first-year students and act as both a sounding board for students’ ideas and a link between students and further resources. As helpful as these advisors are, we emphasize to all first-year students that no advisor has all of the answers, and that they should be proactive in making use of other resources as well.

Peer Advising Fellow (PAF)

The Peer Advising Fellow is a sophomore, junior, or senior at the College who has been appointed by the Advising Programs Office to offer advice and assistance to first-year students. Fellows are assigned by entryway and, together with the entryway Proctors, are responsible for programming within the entryway.

Fellows are matched with approximately nine freshmen in the entryway and bring a student’s perspective to the first-year advising network.

Proctor

The Proctor is an administrator or graduate student who lives in the dorm and advises on personal, residential, social, and academic matters. For some freshmen, the Proctor is also the academic advisor. Proctors oversee an entryway of approximately 25 to 30 students, and along with the Peer Advising Fellows, they are also responsible for fostering entryway community.

Resident Dean of Freshmen (RDF)

The Freshman Dean’s Office (FDO) is responsible for the overall wellbeing of first-year students at Harvard. The Resident Deans of Freshmen each serve students residing in a particular cluster of dorms. Resident Deans work closely with faculty and Proctors and are responsible for the academic and personal welfare of their students. Resident Deans serve on the College’s Administrative Board.

Questions You Might Explore with Members of Your Advising Network

- What has been your most rewarding academic experience to date?
- Are your thoughts about future employment playing a role in your academic choices, and if so, how?
- What have been some of your greatest challenges?
- What do you most want to learn?
- Have your interests changed since you arrived on campus?
- What do you think the purpose of a concentration is?
- What is something you would like to explore?
- What concentrations interest you and why?
- What was your most enjoyable academic experience last year?
- What are your extracurricular activities, and what role do they play in your life here?
- What have you deferred doing?
- Are you interested in doing research?
- Are you considering study abroad?
- What goals will you set for yourself this year?
- Have you thought about a variety of postgraduate plans?
- How is your transition to Harvard?
- Are you making time for sleep, meals, and exercise?
- How are you balancing extracurricular opportunities with academic priorities?
Sophomore Advising

Sophomores, like freshmen, begin the year with a network of advisors: a Sophomore Advisor, a Sophomore Advising Coordinator, and a Resident Dean. The goals of the sophomore advising program are to support sophomores as they transition into their Houses and to assist them in engaging in more focused academic exploration, including choosing their concentration.

Sophomore Advisors help students select courses and connect with faculty advisors in the concentrations. They also provide generalist advising guidance on such academic opportunities as study abroad, research, and secondary fields, referring students, as appropriate, to specialist advisors on campus.

When students choose a concentration, a concentration advisor or team of advisors joins their advising networks. Though concentration advisors serve as students’ primary academic advisors in their fourth term, Sophomore Advisors continue to provide them with supplemental advising support.

**Sophomore Advisor (SA)**

Sophomore Advisors help students select courses, choose their concentration, and connect with faculty advisors in the departments. They provide students with holistic guidance, helping them reflect on their goals and choices, as well as advising them on such opportunities as study abroad, fellowships, and summer internships.

**Concentration Advisors (CA)**

Concentration Advisors become students’ advisors of record once they declare their concentration (toward the end of the third term). CAs work with students on developing their plan of study and ensuring that they meet their concentration requirements. (They also advise pre-concentrators.) A few concentrations have advisors who either reside in (Tutors) or are affiliated with the Houses.

**Sophomore Advising Coordinator (SAC)**

Sophomore Advising Coordinators work with House Masters and Resident Deans to administer each House’s sophomore advising program. SACs coordinate advising events for, and provide generalist academic advising to, sophomores in their residence.

**House Tutors**

House Tutors are generalist sources of support and advising for students in residence. They advise on academic matters as well as personal matters pertaining to students’ non-academic lives at Harvard and beyond. Certain Tutors also serve as Specialty Tutors (e.g., premed Tutors) for the entire House. All Tutors serve as Sophomore Advisors.

**Resident Dean (RD)**

Each House has an Allston Burr Resident Dean who serves as a key resource for all students on academic and personal matters. The RD is also the chief academic officer in the House and serves on the College’s Administrative Board.

**House Masters**

House Masters set the tone for each House, promoting its function as a close-knit residential community within the broader college and university. They do this in many ways, including hosting events that bring faculty into the House.
Concentration Advising

When you declare a concentration, your department assumes primary responsibility for providing you with academic advising, which falls to a concentration advisor or advising team. Each concentration has its own advising structure and procedures. The Advising Programs Office (APO) encourages all pre-concentrators to seek out specialist advising in the concentrations starting in the first year to prepare for this essential step on their academic path.

The APO supports academic departments and programs as they guide students in three phases: into an appropriate set of introductory courses in a particular field of study, to advanced work in that field and, when applicable, through a final project or thesis in the senior year. The APO works closely with all concentrations and assists students in connecting with concentration advisors.

Most concentrations take a team approach to advising; students are able to seek advice from a variety of sources, such as the Director of Undergraduate Studies or Head Tutor, the Assistant Director of Undergraduate Studies or Assistant Head Tutor, and the Undergraduate Coordinator.

Updated contact information for concentration advisors can be found on the concentration pages in this book and on the 48 Website at concentrations.fas.harvard.edu.
### Additional Advising Resources

#### Accessible Education Office
The AEO supports the needs and rights of members of the Harvard community—students, faculty, and staff—with disabilities.
See [aeo.fas.harvard.edu](http://aeo.fas.harvard.edu).

#### Bureau of Study Counsel
The BSC provides peer tutoring, group and individual counseling, reading courses, and a number of additional advising supports for students.
See [bsc.harvard.edu](http://bsc.harvard.edu).

#### Freshman Dean’s Office
The FDO is responsible for the well-being of students in their first year at the College. The FDO oversees pre-orientation programs and, together with the Advising Programs Office (APO), Opening Days for first-year students.
See [fdo.fas.harvard.edu](http://fdo.fas.harvard.edu).

#### General Education
The Program in General Education comprises the largest set of degree requirements outside of the concentration. Students must take one Gen Ed course in each of eight categories in order to graduate. The Gen Ed Office advises on this requirement, e.g., as it relates to study abroad and advanced standing.
See [generaleducation.fas.harvard.edu](http://generaleducation.fas.harvard.edu).

#### Harvard Chaplains
Harvard Chaplains is the umbrella organization of chaplains, representing over 25 of the world’s religious traditions, who serve Harvard’s diverse student communities.
See [chaplains.harvard.edu](http://chaplains.harvard.edu).

#### Harvard College Women’s Center
The HCWC sponsors a variety of programs addressing women’s and gender issues. It provides information and centralized resources. And it helps connect and support students, faculty, and alumnae.
See [hcwc.fas.harvard.edu](http://hcwc.fas.harvard.edu).

#### Office of Career Services
The OCS offers information and assistance on everything from jobs and internships to planning for careers or graduate school. Sign up for OCS listservs to receive information about upcoming events.
See [ocs.fas.harvard.edu](http://ocs.fas.harvard.edu).

#### Office of International Education
The OIE advises on term-time and summer study abroad opportunities.
See [oie.fas.harvard.edu](http://oie.fas.harvard.edu).

#### Office of Student Life
The OSL integrates the academic, residential, and co-curricular spheres of students’ lives, linking their out-of-class experience to the academic mission of the College and their intellectual, public service, and leadership interests to their future aspirations.
See [osl.fas.harvard.edu](http://osl.fas.harvard.edu).

#### Office of Undergraduate Research and Fellowships
URAF serves Harvard students, faculty, and staff as the primary source of information about undergraduate research and about prestigious scholarships at Harvard and beyond.
See [uraf.harvard.edu](http://uraf.harvard.edu).

#### Harvard College Writing Center
The Writing Center is a place for Harvard undergraduates to get help with any aspect of their writing, from specific assignments to general writing skills.
See [writingcenter.fas.harvard.edu](http://writingcenter.fas.harvard.edu).
A Liberal Education

Starting with the class of 1914, Harvard has required that all students receive an education that balances both breadth and depth. Breadth exposes you to a wide array of disciplines and approaches to learning and may push you outside your comfort zone. Depth allows you to develop more expert knowledge of a particular field of study and acquire techniques of analysis and criticism that are specific to that field.

No matter which concentration you elect to pursue, Harvard will challenge you to think critically, to make reasoned inferences and to support your theories, to listen to opposing points of view and learn from them, to argue your own views and support them with evidence, to draw meaningful connections across multiple disciplinary areas, to test hypotheses and to modify them in the face of new evidence. These are skills that will serve you well in any career you go on to pursue. Your goal in pursuing a liberal education is not simply to learn the right answers but to learn how to ask the right questions.

Requirements for the Degree

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 Courses</td>
<td>4 per term</td>
</tr>
<tr>
<td>Program in General Education</td>
<td>8 courses</td>
</tr>
<tr>
<td>Expository Writing</td>
<td>1-2 courses</td>
</tr>
<tr>
<td>Language Requirement</td>
<td>0-2 courses</td>
</tr>
<tr>
<td>Concentration</td>
<td>10-16 courses*</td>
</tr>
<tr>
<td>Electives</td>
<td>2-13 courses</td>
</tr>
</tbody>
</table>

*Note that the S.B. degrees in Engineering and Applied Sciences require 21 courses.

"...the values of diligence, high aspiration, mutual concern, and personal integrity...are the foundation of what we as an academic community exist to do and to be."

President Drew Faust
2/5/13

Breadth
- Program in General Education
- Expository Writing
- Language Requirement
- Electives

Depth
- Concentration
- Electives

Electives
- Freshman seminars
- Secondary fields
- Study abroad
- Foreign language citation
- Intellectual curiosity...
The Program in General Education

“General education is the public face of liberal education.”

-Report of the Task Force on General Education

The Program in General Education is not a distribution requirement. General Education (or Gen Ed) seeks explicitly to "connect a student’s liberal education – that is, an education conducted in a spirit of free inquiry, rewarding in its own right – to life beyond college.” Complementing the rest of the curriculum, every Gen Ed class is meant to connect to your life outside the classroom, and after Harvard, in one or more of the following ways:

- Helping to make you a better citizen
- Deepening your awareness of the role of cultural traditions in your life and in your communities
- Preparing you to deal with a rapidly changing world in a constructive way
- Enabling you to think more clearly about right and wrong

Students must complete one letter-graded course in each of the eight categories in Gen Ed. One of these eight courses must also engage substantially with the study of the past (these courses are identified in the “Note” field of each course’s entry in the Courses of Instruction).

<table>
<thead>
<tr>
<th>AI</th>
<th>Aesthetic &amp; Interpretive Understanding</th>
<th>SLS</th>
<th>Science of Living Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB</td>
<td>Culture &amp; Belief</td>
<td>SPU</td>
<td>Science of the Physical Universe</td>
</tr>
<tr>
<td>EMR</td>
<td>Empirical &amp; Mathematical Reasoning</td>
<td>SW</td>
<td>Societies of the World</td>
</tr>
<tr>
<td>ER</td>
<td>Ethical Reasoning</td>
<td>US/W</td>
<td>United States in the World</td>
</tr>
</tbody>
</table>

You are required to take courses in each of these categories because Harvard believes you are going to encounter the problems, the issues, and the challenges that are associated with each of them, every day of your life, whether, for instance, you are seeking to understand the rise of television as a medium for critically acclaimed dramatic art; learn about the new Harvard University Art Museum and the role of museums in society; learn about the impact of climate change, natural disasters and man-made disasters on human and natural systems; understand the importance of recent supreme court decisions to do with Obamacare and insurance coverage for contraceptives; understand the implications of violence in Syria; or understand the implications of income disparity and unemployment.

Gen Ed Helpful Hints

- You should consider taking one Gen Ed course per term. However, the only timing requirement is that you complete all of them by graduation.
- First-year students often find Gen Ed courses to be useful means of exploring potential concentrations and of connecting with faculty across the university.
- Only Gen Ed courses taken for a letter grade may satisfy Gen Ed requirements.
- Many concentration courses also fulfill Gen Ed requirements, and many Gen Ed courses double count for concentration credit (see the list at the end of this book).
- Check out Gen Ed course trailers at vimeo.com/harvardgened

For more information on the Program in General Education, visit generaleducation.fas.harvard.edu.
The Expository Writing Requirement

Since 1872, a course in expository writing is the one academic experience that has been required of every Harvard student. In Expos courses, you will learn the fundamentals of writing academic arguments of the types that you will encounter in courses across a range of disciplines, from literature and anthropology to government and the life sciences.

The Expos philosophy is that writing and thinking are inseparably related and that good thinking requires good writing. Although your Expos instructor will critique the style of your papers, you will spend most of your time in class on strategies of argument – discovering and arranging persuasive ideas and evidence through a process of drafting and revising. A heightened awareness of the importance of choosing one’s words carefully, an intolerance for clichés of thought and expression, a sense of the pleasures to be had in sharpening meaning to a razor’s edge, and the rewards of rewriting are some of the takeaways that a receptive student can expect to retain from a term of Expository Writing.

In addition, while most students know how to cite sources responsibly, in Expos they will begin to learn how and why citing sources appropriately, whatever they are, is a bedrock value of an academic community. Responsible citation practices are vital to academic integrity which is based on the values of trust, respect, honesty, responsibility, and fairness.

Courses

The Writing Test that you took over the summer allows the Writing Program to advise you on whether you should enroll directly in the required course Expos 20 or whether you would be better served by enrolling first in the elective course Expos 10.

Expos 10

Students who are recommended for Expos 10 on the basis of the Harvard Writing Test, as well as those who simply want to enroll in Expos 10, will meet with one of the Expos 10 faculty during Opening Days to determine whether placement in Expos 10 is appropriate for them. Each Expos 10 class is small, limited to 10 students, and students work closely with their preceptor, receiving abundant individual attention on the issues that are important to their writing. Students choose to take Expos 10 for a variety of reasons: some know that they haven’t written extensively in their previous courses and want more experience, while others feel unfamiliar with the conventions of the American academic essay. Some have strength in other kinds of writing but have less experience in the kind of analytical writing that Harvard courses will require. And some want to gain more confidence as they approach the expectations of college writing.

Expos 20

Expos 20 is taught in sections, which allows students to choose a course that suits their interests. It also ensures that each class has no more than the maximum number of students allowed (15) so that every student can receive as much individual attention as possible. Each Expos 20 course focuses on a certain topic and group of issues; no previous knowledge of the topic is required for any course. None of the 30 or more Expos 20 courses attempts to offer a comprehensive introduction to a field of study or survey of a body of art or knowledge. Rather, these courses seek to provide a substantive intellectual occasion for writing. Expos is first and foremost a course in writing. Although each course has its own required texts, the focus of whatever course a student chooses will be on strategies for academic writing, and strategies for reading in preparation for writing.

For more information, including how to register for sections, visit writingprogram.fas.harvard.edu.
The Language Requirement

Language study has a critical role in a liberal education. The study of languages is essential to understanding communication and other cultures in the context of a globalized world. Studying a language other than your own provides unique insights into how people from different cultural traditions think, communicate, and organize their world. Such study combats the insularity of an ethnocentric cultural perspective. It also makes entirely new areas accessible for students to research and explore.

You can satisfy the language requirement by:

- Earning a minimum score of 700 on an SAT II Test that includes a reading component, a 5 on an AP exam, or 7 on an International Baccalaureate Higher Level exam;
- Earning a passing score on a placement exam administered by certain language departments;
- Providing evidence from the official high school transcript showing that your high school education was conducted in a language other than English;
- Completing an exam in the relevant language (if your native language is not English but your high school education was in English);
- Passing one appropriate full course or two half-courses in one language at Harvard (must be taken for a letter grade);
- Passing a language course or courses at the appropriate level in approved programs abroad, either term-time or during the summer (must be taken for a letter grade).

Harvard offers instruction, from beginning to advanced levels, in over 45 languages, including Arabic, Czech, Hebrew, Irish, Latin, Nepali, Swedish, Vietnamese, Zulu, and more.

Whether or not you place out of the language requirement, you should consider pursuing language study (at the first-year level and beyond). For most people, college is the last opportunity to study another language in depth, and to develop genuine facility with it. Many alumni report that they wish they had done more language study at Harvard.

Check to see whether you have satisfied the language requirement and to learn your placement recommendations in your Placement Report on the Advising Network Portal, which can be accessed through apo.fas.harvard.edu.

The Concentration Requirement

Your concentration – your commitment to a particular discipline, field, or specialization – constitutes the depth component of your liberal education. A concentration provides you with a broad base of knowledge about a particular area of study and a sharpened set of skills (quantitative, writing, analytical, etc.). As you pursue your concentration, you will become a more sophisticated thinker, and learn to learn more deeply.

Concentration requirements vary widely from field to field. The number of required courses ranges from 10 to 21. Some concentrations require an application. Some are honors-only. Some require a thesis. Some allow for highly individualized design; others are more regimented, having, for instance, strict course sequencing requirements. Though your choice of concentration should be motivated, first and foremost, by what interests you, it is important to apprise yourself soon of the concentration requirements of the different fields you’re considering, in particular any that may require you to start planning early.

For more information about choosing a concentration, see the section “Exploring the Concentrations”. For specific concentration requirements, see the individual concentration pages in this book.
Electives can be used to pursue a number of academic opportunities, including freshman seminars, a secondary field, or a foreign language citation, or simply to satisfy a curiosity.

**Freshman Seminars**

Freshman Seminars ordinarily involve one instructor and twelve students studying a topic of shared interest. Instructors and students are freed from the usual constraints of lecture courses such as exams and letter-grades (all seminars give final grades of SAT or UNSAT). Instead, the focus in seminars is on readings, discussions, essays, and presentations. Seminars also feature special instructional activities such as guest speakers, concerts, exhibitions, studio or lab work, and field trips that enhance the learning experience for freshmen. On both freshman and senior surveys, many students cite a Freshman Seminar as one of the best learning experiences they had at Harvard.

In Freshman Seminars you:
- work in small groups with faculty on topics of mutual interest
- collaborate with other students
- exercise intellectual initiative
- take an active role in shaping your education

Some concentrations count Freshman Seminars for concentration credit. (Check with individual departments to be sure in specific cases.)

You may enroll in only one seminar per term. Instructors are encouraged to give preference in spring term to students who did not enroll in a fall term seminar.

Last year, over 1,330 freshmen enrolled in 128 seminars taught by faculty members from across the university.

For more information, visit [freshmanseminars.college.harvard.edu](http://freshmanseminars.college.harvard.edu).

**Secondary Fields**

Students who are interested in doing focused coursework in an additional academic area may elect to pursue a secondary field. These provide students with an opportunity to undertake guided and recognized work in a field outside of their concentration. The trade-off in pursuing a secondary field is that doing so will reduce your total number of free electives. Many concentrations offer secondary fields, which are optional and not expected.

Students are only allowed to pursue one secondary field.

Secondary fields are declared after you have selected your concentration.

Secondary fields not affiliated with concentrations
- Celtic Languages and Literatures
- Dramatic Arts
- Ethnicity, Migration, and Rights
- Energy and Environment
- Global Health and Health Policy
- Medieval Studies
- Microbial Sciences
- Mind, Brain, and Behavior
- Russia, Eastern Europe, and Central Asia Regional Studies

**Language Citations**

A growing number of students choose to pursue a language citation, which recognizes the exceptional work they do in raising their language proficiency to more advanced levels. To earn a citation, you must complete four semesters of language study above and beyond the basic College requirement, and at least two of the courses you take must be at the third-year level or higher.

More than 35 languages offer the option of a language citation.
Exploring the Concentrations

As you begin exploring different fields of study, be sure ask yourself such questions as...

- What am I most ‘on fire’ to learn about?
- What are the issues that most intrigue me?
- What sorts of problems (in science, the world, history, literature, etc.) do I wish I could solve or study?
- Would I be interested in doing research? Studying abroad?
- What kind of advising would I like to engage with?
- Does the prospect of writing a senior thesis or completing some other capstone project in my senior year excite me?
- What sort of intellectual community would I like to be part of?
- How might my choice of concentration relate to my long-term personal and professional goals?

...and seek out the information you need to best answer them!

Harvard offers 48 fields of study in four broad disciplinary areas (“divisions”): Arts and Humanities, Engineering and Applied Sciences, Sciences, and Social Sciences. Choosing a concentration is the most important academic commitment you will make in college; with 48 to choose from, the task can be both exciting and daunting. This task is about more than just requirements – it’s about you. Finding the right concentration is a matter of understanding your needs, your priorities, your goals. Think about what matters most to you as you strive to create your own Harvard learning experience. And take your time! You have until the end of your third term of study to declare.

Your first three terms are all about exploration. In addition to opportunities for you to explore the Harvard curriculum, and to experience a taste of what the different concentrations have to offer – through the General Education program, a freshman seminar, or courses offered by the departments – concentration advisors are also available to assist you in determining which program will best meet your needs and interests. The more thinking, planning, consulting, and exploring you do this year, the better prepared you will be to make your own best choice next year.

Before the start of fall term classes, the Advising Programs Office and the Freshman Dean’s Office co-host divisional fairs for first-year students. These will help you select courses in fields of study in which you may already be interested and to explore others you may be encountering anew.

Advising Fortnight, an advising program in late spring term, will also help you to further focus your explorations. This program will kick off in Annenberg dining hall with an advising fair attended by representatives of all 48 concentrations as well as the independent secondary fields. Over the next two weeks, every concentration will host at least one event (e.g., an open house, a panel discussion, an alumni presentation) where you can learn more about the concentration and meet faculty, students, or alumni who are eager to share their experiences with you. Certain related concentrations (e.g., the different life sciences fields) will also offer joint events to help students understand how they overlap and differ.

During Advising Fortnight, you will be required to have at least one “Advising Conversation” and to report what you learned on the Advising Network Portal. You will fulfill this requirement by attending at least one departmental event or by meeting one-on-one with a departmental advisor during posted office hours. Though you are only required to report one advising conversation during Fortnight, we hope that you will have many such conversations, indeed that you will take advantage of departmental advising throughout the year. (Faculty and other departmental advisors are always happy to meet with you even if, in the case of faculty, you are not currently enrolled in a class they are teaching.)

Of course, there is also the book you’re reading now. Read on...

Check out “At Fortnight I learned...” on the concentration pages for insights from the Class of 2017

The Class of 2017 reported a total of 2030 Advising Conversations!!
PAFs to Peers...

Seek out and attend office hours.
Frequently. Once I got over my hesitation toward one-on-one time with my instructors, my academic life not only became more manageable, but I have also developed lasting relationships with professors, preceptors, TAs, and other faculty.

You have to be a critical thinker in almost every aspect of your life here (What classes should I take? Why? Do I want final exams, papers, or a mixture? What extracurricular do I want to do? Should I run for a leadership position? What is going to make me happy here in my new life?). Obviously you are smart, but these decisions cannot be made well without the right information. Sometimes you can’t find that information by yourself. Learning how to ask for help navigating Harvard is one of the best ways to be successful in this new environment.

There are so many resources - proctors, PAFS, professors, TFs, office hours, peer counseling groups, the writing center, the BSC - use them. These resources exist because they work.

Remember to be respectful and appreciative of the people around you. Though it may seem like everything is new and overwhelming, taking time to create informal support systems for yourself can make your first months, and all your time thereafter, so much easier and more fun. One of the greatest opportunities Harvard provides is the opportunity to learn from everyone else here-- so take the time to listen!

I assumed at the start of my freshman year that, as a pre-med student, I would concentrate in one of the life sciences, and it wasn’t until after I took the introductory linguistics course on a whim that I realized linguistics was the right concentration for me. All in all, Harvard has an incredible diversity of classes to take and areas of knowledge to study, so use your first two semesters at Harvard to explore new areas and to discover what academic field truly excites you.

At Harvard, I often felt like I was the only one who did not have a massive number of friends, like I’m the only one who hadn’t made any meaningful relationships yet. I wasn’t. Everyone feels that way at some point, but as you engage in classes, in clubs and in entryway study breaks, you will get to know more people better and you will find people who you enjoy spending time with-- talk to a few people, make use of the amazing opportunities here at Harvard and you will find your own group of friends.

Communication is key. Whether it is with your roommates, your friends, your teachers, your PAF, your proctor, or your resident dean, it is important for you to be both respectful and vocal in your interactions with other people. Communication is not something you would think Harvard students would have trouble with. I find that because we are all so good at many things, it can be difficult to admit to needing help. It is easy to think you are the only one who is going through something, or the only one with a question, but there is always someone to talk to. Learning how to communicate an idea or a concern will help you to express yourself outside of college when you are in a work environment as well.

At the end of the day, your well-being comes first. Harvard can be a wonderful place, but it can also be intimidating, confusing, stressful, and scary. You should know that you are by no means alone, and that you have the right to feel whatever it is you are feeling. You have the great fortune to be at a school that cares about its students, and you are among peers that are in the same boat. You will be surprised by how many people want to help and support you if you are just willing to ask.

Your freshman year is a time for you to explore your interests; have the confidence in yourself to try classes you never would have imagined your high school self would take.
Advice on Your First Year

Freshman year is an important time to **figure out what style of class and assignments you do best in**. Making these discoveries will make you a happier student — which is most important — and that will translate into academic success.

**Make sure you get to know the people that are there to help you!** You can gain valuable insight, make new friends, and feel more settled! There are all kinds of people on whom you can rely and from whom you can learn a lot. Ask questions, and seek them out. If you are struggling to figure out your schedule, talk to your advisors; if you are struggling with a class, don’t be afraid to ask for a tutor from the Bureau of Study Counsel; if you are in spring Expos, attend the optional writing workshop for new college students; if you want to get to know a professor, attend office hours!

The important thing is to give yourself a chance to adjust to the change of settings and to get into the rhythm of your dorm life and classes. You can always join things later - not to say you shouldn’t pursue things that you’re interested in now, but **don’t feel that you have to squeeze everything in this first semester or first year**. Leave some things on your list for the next three years that follow.

**Try not to worry too much about fulfilling requirements right away.** **Take the classes that seem like they’re too good to be true.**

**Explore all the different opportunities available to you and be open to new people and ideas.**

**Put your life down on a calendar.** Whether it is a physical paper one or an application on your computer and/or phone, take the time at the beginning of the semester to add your class schedule, extracurricular meetings, assignment due dates, vacation dates, application deadlines, social events, and so forth. Then, most importantly, immediately look at your calendar. Doing so will allow you to see any potential conflicts ahead of time—like two exams on one day, allowing you to make the necessary accommodations and complete assignments efficiently. **Make sure you have time to get enough sleep, eat, and exercise.**

One of the most popular ice breaker questions during the first few weeks of Harvard is “Soooo, what are you majoring in?” What shocked me was that people expected a response even though it was only August of our freshman year. I came to Harvard happily undecided about my major. I quickly realized that I seemed to be in the minority. Everyone around me would quickly respond- “pre-med”, “environmental law”, “English”, “government with a secondary in history”. I was the weird one who was undecided. But as the weeks went by and people took classes in the field of study they liked (or thought they liked), **more and more people became like me – undecided.**

Office hours may seem scary at first, but the sooner you begin to attend them, the easier they’ll get.

Thinking about concentrations can be one of the most important, yet stressful decisions for students as they transition from high school to college. Take full advantage of your first two semesters of college to get a head start on feeling out concentrations and determining which ones you would find most enjoyable and rewarding. **Explore academics, extracurricular opportunities and other programs related to each of the concentration departments.** For example, consider joining extracurricular organizations during the freshman activities fair to learn more about your engagement with material. Take some introductory level classes across departments that you are potentially considering. Utilize faculty dinners to learn more about how large the department is, what kind of requirements are expected of concentrators, and how the professors in that department work with students either on research, academic advising or other interesting excursions throughout the year.

...Advice on Your First Year
An Introduction to Harvard’s Divisions

At Harvard, fields of study are administratively organized in 3 divisions (Arts & Humanities, Sciences, and Social Sciences) and one school (Engineering and Applied Sciences). The different fields that cluster in each of these areas are to some degree overlapping – some because they share a common set of questions and methods (e.g., the various life science fields in the Division of Sciences), others because they are directed towards a similar goal (e.g., the strong technology/design focus of the different fields in the School of Engineering and Applied Sciences [SEAS]). The next few pages introduce you to the different divisions and SEAS. Throughout this book, we use the following icons to identify the divisional/school affiliation of individual fields of study:

1. Division of Arts and Humanities

![Image of books and a globe]

2. Division of Science

![Image of a microscope]

3. Division of Social Science

![Image of a globe]

4. School of Engineering and Applied Sciences

![Image of gears]

As you explore the different fields of study, it is important to bear in mind that many of Harvard’s fields are highly interdisciplinary. Psychology, for instance, though housed in the division of Social Sciences, has strong affinities with the Sciences; History, though housed in the same division, has strong affinities with the Arts & Humanities; East Asian Studies, though housed in the division of Arts & Humanities, has strong affinities with the Social Sciences; and so on. We encourage you to read about all of Harvard’s fields of study. An awareness of interdisciplinary connections greatly expands the range of fields you may wish to explore, and can lead you down unexpected and exciting new paths.
Division of Arts and Humanities

How, runs a common critique, can something as seemingly abstract and unusable as the humanities equip students who want to thrive in the digitized, globalized, discovery-driven economy of the twenty-first century? They are the realm in and around which we define values, form relationships, express our thoughts, feel, imagine, process, and create. The study of the humanities provides a basic toolkit for personal and professional success: how to communicate what we think; how to interpret what we read, see and hear; how to understand and respond to difference. The humanities offer precisely the skills needed to navigate a world marked by rapid change, increasing interdependence, transformative technology, and multimedia communications.

The Division of Arts and Humanities is home to eighteen concentrations:

- Classics
- Comparative Literature
- East Asian Studies*
- English
- Folklore and Mythology
- Germanic Languages and Literatures
- History and Literature
- History of Art and Architecture
- Linguistics
- Music
- Near Eastern Languages and Civilizations
- Philosophy
- Comparative study of Religion
- Romance Languages and Literatures
- Slavic Literatures and Cultures
- South Asian Studies
- Special Concentrations
- Visual and Environmental Studies

*Though it is administratively housed in the division of Arts & Humanities, this department’s faculty and curricular offerings bridge both Arts & Humanities and the Social Sciences.

The thirty-three departments, program committees, and centers in the Arts and Humanities Division of the Faculty of Arts and Sciences are dedicated to the interpretation of every aspect of human culture and artistic making. From the riches of the world's languages to the new media at the heart of our digital age, from the artifacts we inherit from the past to their continuing impact in the present, from the analysis of art, literature, music, language, and culture to the search for philosophical and religious truth, our subject is the forms and meanings of human art, argument, and communication. Ours are the rigorous, reflective, liberal disciplines. Through them, we seek to understand, interpret, and enjoy significant forms of human expression. Through our research and our teaching we transmit an understanding that enables the active, questioning, engaged attitude to life in society we consider essential to good citizenship, good living, and professional success.

Our courses include the critical study of humanistic disciplines such as the classics, philosophy, religion, linguistics, foreign languages and cultures, film and art criticism. They also expose you to art making in music, the visual arts and drama. Ours is a world of critique and performance, thought and practice. We thrive in the diversity of opinions, in the spirited defense of views, and in the patient understanding of difference. We think hard about values, ethics, and aesthetics.

In the Division of Arts and Humanities, you will find a plurality of perspectives with which to think about the world, its riches and its problems. You will join the ongoing conversations which constitute the history of the disciplines with which you are engaging. You will sharpen your abilities to read with care and lucidity, and to express your thoughts in articulate ways, in spoken and written form. And you will think about big and small questions that deal with the meaning of it all. Concerned about concentrating in what you really love?

Yes, because if I want to get a job after graduation, I have to concentrate in something practical!

What could be more practical than superior writing skills, strong analytical abilities, a facility for language, and a talent for making creative connections across fields of study and inquiry? Students of the Arts and Humanities develop deeply useful and transferable skills that are invaluable to employers. You never know when your ability to speak Mandarin or produce a short video will catch the eye of a potential employer and make your resume stand out from the rest. Be who
you are. Study what you love. You will find a way to bring that passion and intelligence into your professional life.

But I might want to go to law school. Will I be able to get into a good law school if I don’t concentrate in government or economics?

Of the 201 members of the current first-year class at Yale Law School, 64 majored in the Arts and Humanities as undergraduates. Law schools want students who have a grasp of the sweep of human history and the forces that have shaped human experience, who can think critically and write with grace and skill. As globalization brings businesses and governments into closer working relationships, an understanding of other cultures, their histories, and their languages is invaluable. Insight into human character and human societies, crucial for the successful practice of law, can be gained by studying Literature, Classics, Philosophy, Religion and the History of Art and Architecture, and by achieving fluency in other languages.

But what about medical schools? There’s no way I can get into a good medical school if I don’t major in science. Of recently surveyed Harvard alumni who are presently enrolled in medical school, after taking a year off following Harvard graduation, approximately 60% were science concentrators as undergraduates and 40% were not. Of Harvard graduates who went directly to medical school following graduation, approximately 80% were science concentrators and 20% were not. Exactly half of the Princeton students admitted to medical school last year were Humanities or Social Science majors.

While science requirements for medical school admission do have to be met, many students with other interests besides medicine, or students who are unsure about whether they want to go to medical school, manage to meet these requirements while concentrating or pursuing a secondary concentration in Music, English, NELC, and other Arts and Humanities departments, or in the year following graduation. Non-science concentrators are accepted to medical schools at a similar rate as science concentrators. The emerging field known as Medical Humanities or Narrative Medicine acknowledges the central place occupied by stories and storytelling in the effective practice of healthcare and offers individuals with an interest in writing and literature a unique place in the world of medicine.

I don’t see myself becoming an English professor or going to graduate school in Classics. What can I do with a degree in this concentration?

Of twenty-five Classics majors we recently sampled, only one went on to be a classicist. Two became doctors, nine became lawyers, five became educators and one became a Professor of English. We found the Director of Global Tax Law for a multinational media company, an associate producer at NPR and a trial attorney for the US Department of Justice. Several graduates entered the financial sector and another became managing editor of the Library of Arabic Literature. Many English majors pursue careers in writing, editing and education. But just as many in our recent survey followed paths defined by personal passions, like growing grapes and running a vineyard, working in speech pathology and engineering, teaching clinical psychiatry and pediatric medicine, directing an art gallery, designing landscapes, and hosting a popular national television show. We found a Foreign Service Officer for the State Department, a fraud analyst for Facebook and a civil rights policy administrator, as well as a managing director for Goldman Sachs. There were two veterinarians, two critical care physicians and a portfolio manager for an investment company.

You are more likely to excel, and to graduate with a distinguished transcript that will catch the eye of a prospective employer, when you study what you really love.

Visit the Division of Arts and Humanities website to learn more about the division at Harvard, artsandhumanities.fas.harvard.edu.
Division of Science

The Division of Science is home to ten academic departments that encompass all of the natural sciences, mathematics, and statistics. These departments are:

- Astrophysics
- Chemical and Physical Biology
- Chemistry
- Chemistry and Physics
- Earth & Planetary Sciences
- Environmental Science and Public Policy
- Human Development and Regenerative Biology
- Human Evolutionary Biology
- Integrative Biology (IB)
- Mathematics
- Molecular & Cellular Biology
- Neurobiology
- Physics
- Psychology*
- Statistics

*Though it is administratively housed in the division of Social Science, Psychology’s faculty and curricular offerings bridge both Social Sciences and Sciences, including a track that is part of the Life Sciences cluster of concentrations.

The breadth of research performed in these departments is extraordinary. Our students, faculty, and affiliated researchers study phenomena from the tiniest subatomic particles to the largest structures in the universe; from the workings of a single protein in a cell to the complete ecology of a forest; from the most abstract realms of mathematics to applied statistical modeling of infectious diseases. All of these fields share a commitment to expanding our knowledge of the universe, including our understanding of ourselves as living organisms.

The academic concentrations that are most closely affiliated with the Division of Science draw on courses and faculty from across these departments, and in many cases also from the other academic divisions and the School of Engineering and Applied Sciences. While some concentrations such as Mathematics are clearly centered in one department, concentrations such as Human Developmental and Regenerative Biology draw widely from many departments. Scientific research today often lives at the boundaries between traditional disciplinary areas, and thus we encourage students to pursue their academic interests based on courses and faculty research, and not to feel confined within one particular department or even within the Division of Science as a whole.

Students who are interested in the natural sciences, mathematics, and statistics will also find relevant courses and concentrations outside the Division of Science. Many of the offerings of the School of Engineering and Applied Sciences draw on the same kinds of skills and approaches to knowledge as do our courses. Within the Social Sciences, the fields of Economics and Government use numerical and computational models that are similar to some models we use in the natural sciences, and the fields of Psychology and Anthropology are increasingly informed by developments in human biology and neuroscience. The undergraduate concentrations in History and Science and in Environmental Science and Public Policy combine focused study in science with a broader understanding of the historical, societal, and environmental impact of science. Even within the Arts and Humanities, methods drawn from the natural sciences have had an increasing impact on research—from advanced quantitative techniques used to analyze and conserve works of art, to the numerical analysis of massive historical, literary, and artistic data sets.

To study the natural sciences requires a basic foundation in mathematics, in the physical sciences, and in the life sciences. Introductory courses in these areas will usually be taken in the first year, continuing through to the fall term of the sophomore year. In general, students who have acquired a solid foundation in any of the concentrations in the Division of Science will find it possible to switch to other science concentrations as their intellectual interests evolve. There is particular flexibility within the “Life Sciences Cluster” of concentrations, which share many basic prerequisites and a
coordinated advising structure. Although many of these introductory courses are quite large, students will find that most upper-level courses in the Division of Science are quite small and focused, and many of our students develop close relationships with faculty mentors, particularly through independent research.

The study of the natural sciences offers an education in critical thinking—including quantitative methods—that will be useful in many careers, not just in scientific research. Although we hope that all of our undergraduates will have an opportunity to pursue independent research in the sciences, most will not end up in research careers. Students with degrees in the natural sciences, mathematics, and statistics have found successful careers in medicine, business, finance, law, and education, not to mention the many who have continued in some area of science. We hope that, no matter what your background or potential career interest, you will take some of the exciting courses offered in the Division of Science, meet our extraordinary faculty and talented students, and do some experimental work in our world-class research facilities. For those who do choose one of our undergraduate concentrations, we welcome you and encourage you to seek the path that is most interesting and satisfying to you as a young scientist or mathematician.

Visit the Division of Science website to learn more about the sciences at Harvard, science.fas.harvard.edu.

Division of Social Science

The social sciences engage broadly with the study of human society and social relationships. At Harvard, the Division of Social Science embraces a number of diverse and highly interdisciplinary fields including:

- African and African-American Studies
- Anthropology (Social Anthropology and Archaeology)
- East Asian Studies*
- Economics
- Government
- History
- History and Science
- Psychology*
- Social Studies
- Sociology
- Women, Gender and Sexuality Studies

*Though it is administratively housed in the division of Arts & Humanities, East Asian Studies’ faculty and curricular offerings bridge both Arts & Humanities and the Social Sciences.

*Though it is administratively housed in the division of Social Science, Psychology’s faculty and curricular offerings bridge both Social Sciences and Sciences, including a track that is part of the Life Sciences cluster of concentrations.

Visit the Division of Social Science website to learn more about the social sciences at Harvard, socialscience.fas.harvard.edu.
The School of Engineering and Applied Sciences has six concentrations:

- Applied Mathematics
- Biomedical Engineering
- Computer Science
- Electrical Engineering
- Engineering Sciences
- Mechanical Engineering

The launch of Harvard’s newest school in 2007 was the University’s answer to several big questions: Given the complex nature of problems such as climate change, the global demand for energy, cyber-security, and providing clean water, a modern infrastructure, and health care for a growing population, what fields will be most relevant in the next century? How can we bring together the vast expertise and resources of the University to address these challenges? What is the most effective way to educate students so that they can have real-world impact on these problems, regardless of their field of study?

All of these global problems involve engineering and technology. None can be solved with technology alone. Through these concentrations, the Harvard School of Engineering and Applied Sciences (SEAS) takes a fresh approach to studying and teaching these increasingly important disciplines. At SEAS, engineering, computer science, applied mathematics, and the applied sciences are an integral part of a liberal arts environment, benefiting from interdisciplinary connections to other parts of a major research university with world-class professional schools.

Students who study engineering, computer science, applied math, and applied sciences enhance their ability to create change by learning how to creatively problem-solve, how to model what already exists, and how to use these models to innovate. The mission of SEAS is to educate well-rounded engineers, computer scientists, applied mathematicians, and applied scientists by enabling them to develop these skills while leveraging strong connections to the arts and humanities, natural sciences, social sciences, and the professions. We aim to change the world by stimulating innovation and by training critical thinkers and doers — world leaders for academia, industry, research, government, medicine, law, and education.

SEAS has no departments and no legacy fields from the 20th century. Rather, the School is designed for the future, organized around teaching foundational engineering and applied science disciplines that are essential to addressing global problems and that harness the entire University’s strengths. Concentrators work with faculty who are solving big, complex problems on the frontiers of translational life sciences, computational science and engineering, energy, environmental science and engineering, robotics and controls, and nanophotonics and nanoelectronics. Harvard has a distinct advantage over other institutions in these interdisciplinary research fields because of the breadth and depth of research and scholarship encompassed by SEAS, the broader Faculty of Arts and Sciences, and the professional schools.

Great teaching is a hallmark of SEAS, coupled with world-class research. We provide an unmatched education for SEAS concentrators. Our goal is to create “T-shaped” engineers and applied scientists (meaning students who have both technical depth in their field and the breadth of the Harvard liberal arts and residential life experience). Our students leave with the demonstrated ability to work in a team, to communicate persuasively, and to use an understanding of the societal and global context to solve real problems. We incorporate design, creativity, and entrepreneurship into the curriculum, while providing a rigorous ABET-accredited engineering program.

In addition to providing an unparalleled education for concentrators, a companion goal of SEAS is for every Harvard College student to take at least one SEAS course and be literate in engineering and technology. Regardless of their field — government, chemistry, history, economics, English — an educated person today must be facile with technology. Harvard College graduates are destined to be leaders who will be required to make decisions that involve engineering or technology.

SEAS is a leader in innovative teaching and learning. Our curriculum includes active learning and engineering design, and we are increasingly utilizing “flipped classrooms” and integrating peer-based learning into our classes. Our introductory
courses provide gateways where all students can learn and find success.

Since it was founded, SEAS has invested heavily in teaching programs and focused on key faculty hires in targeted research fields. Today, SEAS concentrators are 14 percent of all Harvard College concentrators (and roughly 35 percent are women — double the national average for our fields). The number of incoming freshmen indicating an interest in engineering or computer science increased from 6 percent before the launch of the School to 15 percent in 2013. And the number of Harvard College students taking at least one SEAS course has more than doubled to 4,000.

**Applied Mathematics** is a quantitative liberal arts degree that provides the opportunity for combining mathematical thinking with any subject for which mathematics can be productively applied. Applied Mathematics is inherently an interdisciplinary concentration with ties to other concentrations both within and outside of SEAS. In particular, applied math has strong intellectual connections to computer science, mathematics, statistics, and economics. It is common for Applied Math plans of study to be similar to within a few courses to plans of study in these other concentrations, and students often move back and forth between Applied Math and these other concentrations as they refine their academic interests. For example, students may move from Mathematics or Statistics to Applied Math if they want a deeper involvement with a particular area of application than may be provided within these other concentrations. Similarly, students may move from Applied Math to Mathematics or Statistics if they prefer to take more theoretical approach to these studies. Students pursuing these topics can obtain an A.B. degree in Applied Mathematics or a secondary field in Mathematical Sciences. The secondary field is sponsored jointly by the Applied Mathematics concentration and the Mathematics Department.

**Biomedical Engineering** lies at the intersection of the physical and life sciences, incorporating principles from physics and chemistry to understand the functioning of living systems. The overarching intellectual goal of biomedical engineering is to apply quantitative engineering analysis to understand the operation of living systems, and to design novel systems to satisfy unmet needs in clinical medicine. Biomedical engineering distinguishes itself from the other life sciences disciplines by using scientific knowledge to create new biomaterials and devices. Students pursuing these topics can obtain an A.B. degree in Biomedical Engineering or A.B. and S.B. degrees in Engineering Sciences with a biomedical focus.

**Computer Science**. Computation has changed the world -- from social connections to scientific analyses, from finance to marketing, the world has become interconnected, data driven, and computation centric. Computer Science is the study of the principles, techniques, and tools that enable this transformation, today and in the future. Students concentrating in Computer Science take a range of courses encompassing theoretical foundations to practical applications sharing an intellectual heritage from mathematics, engineering, and design. Computer Science concentrators learn about how modern computational systems are designed and built, and how these systems can be used to effectively and efficiently solve a variety of problems. Its lessons extend well beyond the boundaries of computer science, with applications for using and manipulating information in disciplines ranging from medicine to economics. Computer Science is closely related to a number of other concentrations at Harvard. Courses on computer hardware design are also offered in Electrical Engineering; on mathematical modeling of various phenomena in Applied Mathematics; and on analysis of large data sets in Statistics.

**Electrical Engineering** students learn how to analyze, design and build devices and systems for computation, communication and information transfer. Electrical engineering spans a broad range of topics, ranging from the physics of new materials and devices, the circuits and next-generation computing platforms made from these devices, and the algorithms that run on these platforms. The range of subtopics includes power systems, (micro)electronics, control systems, signal processing, telecommunications, and computing systems. The electrical engineering concentration options complement the scientific and technological goals embodied in the physical, life, mathematical, and computer sciences. Students pursuing these topics can obtain an S.B. degree in Electrical Engineering or an A.B. degree in Engineering Sciences with an electrical focus.

**Environmental Science & Engineering** is an interdisciplinary field that applies principles from the natural sciences and mathematics to better understand and address environmental challenges. The overarching goals of the field are to protect human health from adverse environmental conditions, to protect local and global environments from the deleterious effects of human activities, and to improve environmental quality. Students interested in environmental science and engineering study the fundamental processes and technologies underlying environmental systems, including natural and polluted waters and soils, the atmosphere, climate, and energy. Students learn to apply these principles to mitigate
human impact on the environment by providing technical solutions and advancing innovations in environmental measurement, modeling, and control. Students pursuing these topics can obtain an A.B. or S.B. degree in Engineering Sciences with an environmental focus.

**Mechanical Engineering** students receive a foundational education in a discipline central to challenges in energy, transportation, manufacturing, robotics, and the development of public infrastructure. Mechanical engineering deals with the study and application of mechanical systems. It covers a range of subtopics including mechatronics and robotics, structural analysis, thermodynamics and engineering design including the analysis of mechanical systems using finite element methods, the science of new materials and devices for micro electromechanical systems (MEMS), and biological and nanotechnology applications. The concentration options in mechanical engineering complement the scientific and technological goals embodied in the physical, life, mathematical, and computer sciences. Students pursuing these topics can obtain an S.B degree in Mechanical Engineering or an A.B. degree in Engineering Sciences with a mechanical focus. SEAS concentrators are part of a vibrant School and University community, dedicated to excellent teaching and learning and trailblazing research. Students taking SEAS classes gain the technical knowledge and broad-based perspective needed to understand the complexities of technology and society and to develop practical solutions to the challenges that will define life in the decades ahead.

Visit the School of Engineering and Applied Sciences website to learn more about the division at Harvard, [seas.harvard.edu](http://seas.harvard.edu).
The field of African and African American Studies (AAAS) explores the histories, societies, and cultures of African and African-descended people. It is highly interdisciplinary, 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 AAAS. In addressing the ethical, social, and political consequences of racial thinking, our faculty raise questions relevant to the experiences of all peoples.

The department offers two distinct courses of study: the African track and the African American track. African track concentrators come to the program with a variety of interests; e.g., the environment, health, social development, and literature. The African track includes study in the African Languages Program, required courses, electives, and the option of study abroad. Concentrators in this track are encouraged to take courses in a variety of departments.

The African American track attracts students with an equally wide range of interests. There are many reasons students pursue African American studies. First, African American music, literature, and visual arts are significant cultural achievements worthy of study in their own right. Second, African Americans have played a crucial role in the history of the United States, participating in the American Revolution, the Civil War, Reconstruction, women’s suffrage, and the New Deal, and they led the struggle for equality in the second half of the twentieth century. Third, because American political life remains encumbered by racism and its historical legacy, a proper historical, sociological, and economic understanding of race relations continues to be essential for those who seek to make or evaluate public policy. Fourth, some of the social relations that have developed in countries such as the United States, Cuba, Jamaica, Haiti, and Brazil provide important examples of ethno-racial conflict, and through the study of them it is possible to gain insight into what remains a problem across the globe.

Exploring African and African American cultures requires us to explore aspects of many other cultures and peoples of the modern world. Thus diaspora studies are integral to each track. In many parts of the Caribbean and Latin America, for example, religions and performance arts are influenced by traditional African belief systems and practices. The cultures of the African Atlantic diaspora have also developed in interaction with many other peoples.

Advising

AAAS has a very flexible advising structure. The Director of Undergraduate Studies (DUS), Ingrid Monson, meets with all concentrators to discuss their interests and to connect them with like-minded faculty. All concentrators are assigned individual faculty advisors. Study cards are signed by the DUS.

Explore

Suggested gateway courses
- AAAS 10, Introduction to African American Studies; spring (required of concentrators in the African American Studies track)
- AAAS 11, Introduction to African Studies; fall (required of concentrators in the African Studies track)
- AAAS 16. Sociology of the Black Community; fall
- AAAS 20, Introduction to African Languages and Cultures; fall

AAAS Alums

Students who graduate with a concentration in AAAS go on to pursue advanced degrees in fields such as history, literature, political science, and sociology. They also go on to work in a wide variety of careers in education, business, medicine, arts and entertainment, law, public policy, and the arts and sciences.

For profiles of Undergraduate Alumni, please see the following webpage:
aaas.fas.harvard.edu/people/alumni

At Fortnight I learned that...

“...the concentration is very interdisciplinary and flexible (I can be still be pre-med!). Plus they offer funding for research travel and summer language study through the Committee on African Studies.”

“...junior tutorials are especially interesting since they are semester long tutorials on writing something of my interest. Furthermore, it was great to get a heads-up on the fact that a lot of the courses that count for the African Studies track tend to also be listed in different departments.”
Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>12 half-courses (12-14 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis required for High and Highest Honors)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (5 half-courses; pathways: African Studies + African American Studies)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Sophomore and Junior (both half-course)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>African Studies (AS) track + African American Studies (AAS) track</td>
</tr>
<tr>
<td>Language Required:</td>
<td>Yes/No (2 half-courses of an African language required for AS track; none required for AAS track)</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Prof. John Mugane
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Kathleen Cloutier
Undergraduate Program Officer
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Lecturer in African and African American Studies
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*Study abroad credit contact

Come Visit Us!

aaaos.fas.harvard.edu
Barker Center, 2nd floor
12 Quincy St.
Cambridge, MA 02138
617-495-4113

The department’s Social Engagement Program allows students to incorporate academic work with social entrepreneurship and social service.

There are opportunities to do supervised independent research for concentration credit.

Many concentrators do term-time study abroad, often in Africa, the Caribbean, and Latin America.

Students can develop plans of study that combine elements from both tracks.

Approximately 35 faculty members and 30 concentrators.

Programs of study are highly individualized.

The “American” in “African American studies” is construed broadly to include North and South America and the Caribbean.

Small class sizes.

FYI

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Anthropology

Anthropology brings global, comparative, and holistic views to the study of the human condition, exploring the enormous range of similarities and differences across time and space. It includes the study of how human behavior has evolved as well as how language, culture, and society have shaped and continue to shape the human experience.

As a comparative discipline that adapts science and humanities approaches to the study of human development, society, culture and beliefs, economics, politics, the arts, psychology, history, and language, anthropology is uniquely holistic in its understanding and outlook. Anthropology’s tradition of cross-cultural understanding includes both Western and non-Western societies. Its commitment to the comparative exploration of human behaviors over the long sweep of time that marks human evolution makes it a broad, global science. Through its sub-disciplinary foci (including social, linguistic, medical, and applied anthropology, and archaeology), anthropology has developed a multidisciplinary character and has forged strong links to many other disciplines in the sciences, humanities, and arts.

At Harvard the Anthropology Department is divided into two programs: Archaeology and Social Anthropology. (Biological Anthropology, which was once a third part of Anthropology at Harvard, is now encompassed within the concentration in HEB.)

Archaeology investigates the past human condition primarily through the recovery and analysis of the material remains of ancient peoples. It studies past societies using customized approaches and techniques of the social sciences, natural sciences, and humanities in the context of archaeological methods and theoretical frameworks. Goals of archaeology include understanding such developments as the origins of modern humans, the beginnings and spread of agriculture, and the rise and elaboration of complex societies.

Social Anthropology provides comparative and critical perspectives on human thought, practice, and diversity by looking at societies around the globe. It shows that assumptions about human experience and action based on knowledge of a single society are limited and inadequate, and views Euro-American social and cultural orders with the same critical eye it brings to the study of other societies.

Anthropology is not the same endeavor for each concentrator. All students are encouraged to gain a basic knowledge of the two subfields. Beyond this, most students focus their studies within one of the two programs, meeting the concentration requirements set forward by the particular program concerned. Some students may choose to pursue a combined focus on both approaches, meeting reduced concentration requirements for both Social Anthropology and Archaeology.

The structure of the concentration provides students with a broad and solid knowledge of their chosen subfield or subfields. While specialization in either Social Anthropology or Archaeology is the most common pattern of study, the program also encourages interdisciplinary work across programs or between anthropology and other disciplines.

Advising

Undergraduates in Anthropology are NOT assigned individual faculty advisors, at least not for the purpose of general concentration advising. All general concentration advising in Anthropology is handled by the DUS, the ADUS, and the Undergraduate Program Coordinator, who also sign all Plans of Study, Study Cards, etc. for Anthropology concentrators. We do not have designated concentration advisors in the Houses. (There may indeed be a Res. or Non-Res. anthropology tutor in some Houses who may offer valuable advice on the field, but these tutors are not responsible for formal concentration advising or dept. signatures.) In 2014-15, the Anthropology DUS, Richard Meadow, is the principal concentration advisor for students with an Archaeology focus, and the ADUS, Ramyar Rossoukh, principally advises students in the area of Social Anthropology within the concentration.

Explore

Suggested gateway courses*

Archaeology

- Anthro 1010, The Fundamentals of Archaeological Methods & Reasoning; fall
- Freshman Sem. 30g, Digging Up the Past; Harvard and Egyptian Archaeology; fall
- Freshman Sem. 44j, The Aztecs and Maya; spring
- Societies of the World 30, Montezuma’s Mexico: Then & Now; fall
- Anthro 1040, Origins of the Food We Eat; fall
- Anthro 1150, Ancient Landscapes; spring

Social Anthropology

- Anthro 1600, The Ethnographic Encounter: An Introduction to Social Anthropology; fall [NOTE: Anthro 1600 will be required of new concentrators, beginning 2013-14]
- Culture and Belief 58, Case Studies in Medical Humanities; spring
- Societies of the World 25, Health, Culture and Community: Case Studies in Global Health; fall
- Societies of the World 46, The Anthropology of Arabia; fall

*For a more complete listing, concentrations.fas.harvard.edu

Anthro Alums

- Enrolled in graduate school in Archaeology, Social Anthropology, Museum Studies, Conservation, or International/Area Studies. Gone on to professional schools in Medicine, Law, Business Administration, Public Health, Education.
- Joined governmental or non-profit (NGO) organizations in the US and abroad or entered the private sector in such areas as consulting, information technology, sports administration, publishing, international and investment banking, and journalism. Because of the importance of inter-cultural knowledge in global ventures, the experience of anthropology concentrators is often particularly valued.
- Taught school at the primary or secondary level.
- Became productive members of society sensitive to cultural and social variability through time and across space.
Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>10 half-courses (Archaeology: 13 for Honors; Social Anthro: 12 for Honors; Combined: 12 or 13 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis required for High and Highest Honors; Social Anthro only: non-thesis option for Honors)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (Social Anthropology - 4 half-courses; Archaeology - 5 half-courses (administered by the Standing Committee on Archaeology))</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Archaeology or Social Anthro: Sophomore and Junior (both are half-courses); Combined; both of the Archaeology and Social Anthropology Sophomore and Junior Tutorials</td>
</tr>
<tr>
<td>Tracks:</td>
<td>Archaeology, Social Anthropology, Combined Archaeology and Social Anthropology</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No (although strongly encouraged)</td>
</tr>
</tbody>
</table>

Questions?

Richard Meadow,*
Director of Undergraduate Studies and Head Tutor
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617-495-3354

Ramyar Rossoukh
Assistant Dean of Undergraduate Studies for Social Anthropology
rossoukh@gmail.com

Monique Rivera*
Undergraduate Program Administrator
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617-495-3814

*Study abroad credit contact

At Fortnight I learned that...

“...Anthropology concentrators go into various fields. There is not just one track that one has to follow. They kind of just do what they are passionate about.”

Come Visit Us!

anthropology.fas.harvard.edu

Archaeology Program
Peabody Museum
11 Divinity Ave.
Cambridge, MA 02138
617-495-5820

Social Anthropology Program
Tozer Anthropology Building
21 Divinity Ave.
Cambridge, MA 02138
617-495-2253

“...I can get involved in the Archaeology program next year and still be plenty prepared for the concentration. They were very flexible and excited to share insights into the field. One PhD student I talked to discussed her thesis project which integrated lots of physics which greatly interested me.”
Applied Mathematics

We can characterize what applied mathematicians should learn by examining what they do. Mathematical scientists who identify themselves primarily as applied mathematicians function in complementary dual roles in varying proportions.

First, they develop, implement, and study mathematical, statistical, and computational techniques broadly applicable in various fields. Second, they bring mathematical modeling skills to bear on particular scientific problems through judicious approximations to obtain novel insights and predictions when the underlying phenomena are thought to be relatively simple and well understood, or through the creation of conceptual frameworks for quantitative reasoning and measurement when the underlying phenomena are complicated and less well understood. In their methodological role, applied mathematicians may function temporarily as mathematicians, statisticians, or computer scientists; in their phenomenological role, they may function temporarily as physicists, chemists, biologists, economists, engineers, and the like. In both roles, they must possess relevant knowledge, technical mastery, and educated taste; clearly this necessitates specialization.

Ideally, applied mathematicians demonstrate over time substantive involvement with both the mathematical and scientific aspects of their dual roles. Inside academia, their activities are usually carried out in collaboration with students or colleagues; outside academia, they often serve as part of a multidisciplinary team tackling complex problems under time and resource constraints. In either context, a premium is placed on outstanding ability to communicate with fellow technical professionals. Applied mathematics is inherently interdisciplinary, in motivation and in operation. This vision informs the design of the concentration.

The Applied Mathematics concentration involves a broad undergraduate education in the mathematical sciences, especially in those subjects that have proved vital to an understanding of the world around us, and in some specific area where mathematical methods have been substantively applied. The goal is to acquire experience at a mature level, consistent with the nature of a Harvard undergraduate education. Generally, students select the concentration because they like to use mathematics to solve real-world problems. Some want a deeper involvement with an area of application than may be provided within a mathematics, statistics, or computer science concentration. Others want a more mathematically-oriented approach to an area of application than that normally provided within the corresponding concentration; mathematical economics is a prime example. Yet others want a special program not otherwise available, usually involving an area of application in which mathematical modeling is less common.

Advising

Students in Applied Math have a concentration advising team that consists of an Assistant Director for Undergraduate Studies, a Director of Undergraduate Studies, and an individual faculty advisor. Students should plan to meet regularly with their advising team to discuss their plan of study, academic interests, and career goals. Currently enrolled College students outside of Applied Math, including pre-concentrators, are encouraged to contact either the Assistant Director for Undergraduate Studies or the Director of Undergraduate Studies to discuss their interests in Applied Math.

Explore

Suggested gateway courses

- Math 1a, Introduction to Calculus; fall, spring
- Math 1b, Calculus, Series, and Differential Equations; fall, spring
- App Math 50, Introduction to Applied Mathematics; spring

*For a more complete listing, concentrations.fas.harvard.edu

App Math Alums

Applied Mathematics graduates have used their skills to pursue many career paths, from Wall Street traders to analysts to bioinformaticists, or used their knowledge as a stepping stone to graduate work in mathematics, biology/medicine, engineering, or social sciences.

The Society for Industrial and Applied Mathematics (SIAM) website points out an obvious yet incredibly important point: “Industrial careers for those with a background in mathematics rarely carry a simple title like ‘mathematician.’ The very idea of a career in mathematics has evolved and diversified. Mathematicians may stand alone as a science, but as a career, it’s almost always coupled with a specialty or area of research interest.”

Whatever the benchmark, career prospects for graduates are excellent and will likely remain so in the future.

Read about some of our Applied Mathematics alumni at seas.harvard.edu/academics/undergraduate/applied-math/careers

At Fortnight I learned that...

“...there are way more possible focuses for Applied Math than I once thought. I thought it was just computer science, economics, and that was about it, but it turns out that there’s also biology, chemistry, life science of any kind, and many more focuses that the concentration offers.”
Overview

Requires Application: No
Number of Required Courses: 14 or 15 half-courses
Honors Option: Yes (thesis required for High and Highest Honors)
Joint Concentration Option: No
Secondary Field: Yes (4 half-courses)
Tutorials: No
Language Required: No

Questions?

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Co-Director of Undergraduate Studies
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617-496-0439

Dr. Margo Levine*
Assistant Director of Undergraduate Studies
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617-496-8129

Kathy Lovell
Undergraduate Program Administrator
klovell@seas.harvard.edu
617-496-1524

*Study abroad credit contact

Come Visit Us!

seas.harvard.edu/applied-mathematics

Pierce Hall 110
29 Oxford St.
Cambridge, MA 02138
617-495-2833

*For a complete listing of requirements, see the Handbook for Students
Astrophysics

The concentration in Astrophysics builds the foundation from which students may consider some of the deepest questions of the physical universe. What was the state and composition of the Universe at the moment of the Big Bang? What is the nature of the force that currently dominates the expansion of the Universe? How do space and time behave in the vicinity of a black hole? How do galaxies form, and how do stars and planets form within those galaxies? Are there habitable worlds other than our own? Excitingly, students are encouraged not just to study the current state of knowledge regarding these questions, but to participate (through the Harvard-Smithsonian Center for Astrophysics) in answering them.

The science of astrophysics involves the study of matter and radiation in the universe as understood through the laws of physics. Astronomical phenomena exhibit an extreme range of physical conditions, from superfluid neutrons in neutron stars, high-temperature nuclear reactions in supernovae, and strong gravitational fields near black holes, to the unique state of the universe during its earliest phases. Theoretical attempts to describe these and more familiar phenomena (such as stars and galaxies) have achieved a useful understanding in many cases. However, our overall knowledge of the universe is still woefully incomplete, and our contemporary physical knowledge is often stretched to its limits in attempting to understand physical conditions that cannot be reproduced in terrestrial laboratories.

This program builds from a foundation of modern physics to a general account of the known contents of the universe emphasizing current research at each step. Astronomy 16 and 17 provide a complete introductory survey to the major fields of astrophysics, and Astronomy 100 is a survey of modern observational methods that includes travel to use our professional telescopes in Arizona. The research tutorial Astronomy 98 places 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 mentorship of members of the faculty), which culminate in their junior papers and optional senior theses.

Astro Alums

For roughly half of our students, the concentration in astrophysics is the foundation for graduate study (in astrophysics or a related field such as physics or planetary science) resulting in the PhD. Concentrators who have pursued this route work in academia as professors and teachers, at national observatories as astronomers and support scientists, at national laboratories and NASA research centers, at private research foundations, and in industry.

Importantly, half of our concentrators do not intend to seek further study through a graduate degree. Rather, they pursue the concentration out of intellectual curiosity and find that the rigor, approaches, and skills emphasized in the concentration are valued greatly in a host of career paths. Our courses are united by the intersection of imaginative problem solving with quantitative data analysis, and we emphasize independent, mentored research and the presentation of that research through carefully crafted writing and persuasive speaking. Recent graduates have pursued careers in education, medicine, finance, engineering, public administration, the military, public relations, and in the computer software and technology industry.

Advising

All concentrators in Astronomy are assigned individual faculty advisors in consultation with Edo Berger, Director of Undergraduate Studies. These advisors are able to sign study cards as is Prof. Berger in their absence. These faculty advisors may or may not be the person with whom students ultimately do research as they are free to approach anyone of the 400 scientists at the Center for Astrophysics about a research project.

Explore

Suggested gateway courses

- Astronomy 16, Stellar and Planetary Astronomy; spring
- Astronomy 17, Galactic and Extragalactic Astronomy; fall
- Astronomy 16 and 17 may be taken in either order; whichever is taken first, must be taken concurrently with one introductory course in Mechanics:
  - Physics 11a, Mechanics
  - Physics 15a, Introductory Mechanics and Relativity; fall, spring
  - Physics 16, Mechanics and Special Relativity; fall
  - Physical Sciences 12a, Mechanics from an Analytic, Numerical, and Experimental Perspective; spring

At Fortnight I learned that...

"...Astrophysics has an incredible database of information and is using the internet to help foster interest for astrophysics in students."
Overview

Requires Application: No
Number of Required Courses: 12 half-courses
Honors Option: Yes (thesis optional)
Joint Concentration Option: Yes (thesis optional)
Secondary Field: Yes (4 half-courses)
Tutorials: Yes (the required research tutorial is generally taken in spring of junior year)
Tracks: No
Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Peg Herlihy
Department Administrator
pherlihy@cfa.harvard.edu
617-495-3753

FYI

Astrophysics offers joint concentrations with other departments, in particular, Physics, Earth and Planetary Sciences, Computer Science, Mathematics, and Statistics

The Concentration in Astrophysics strives to provide excellent mentorship, both through the assignment of two concentration advisors, and the small class sizes, including tutorial-style offerings in each of the 4 years

The student-to-faculty ratio is the most favorable of all of the science concentrations

The department is extremely interested in encouraging and welcoming all students, regardless of preparation prior to arrival at Harvard, and regardless of whether or not you think you are “good at physics”

Concentrators interested in medicine can indeed complete the pre-med requirements

We anticipate that joint concentrations with the Life Sciences may become more common as the search for life in the Universe moves into an observational phase

Concentrators interested in medicine can indeed complete the pre-med requirements

Questions?

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Peg Herlihy
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Biomedical Engineering

Biomedical engineering lies at the intersection of the physical and life sciences, incorporating principles from physics and chemistry to understand the operation of living systems. As in other engineering fields, the approach is highly quantitative: mathematical analysis and modeling are used to capture the function of systems from subcellular to organism scales. An education in Biomedical Engineering, and engineering more broadly, enables students to translate abstract hypotheses and scientific knowledge into working systems (e.g., prosthetic devices, imaging systems, and biopharmaceuticals). This enables one to both test the understanding of basic principles and to further this knowledge, and it places this understanding in the broader context of societal needs.

In recognition of the pivotal importance of the life sciences and the technologies they inspire to our society, Harvard is committed to broadly educating engineers who will become leaders in the developing field of Biomedical Engineering. The objective of this concentration is to provide students with a solid foundation in engineering, particularly as applied to the life sciences, within the setting of a liberal arts education. The concentration is flexibly structured for a diversity of educational and professional objectives. It enables the acquisition of skills drawn from the humanities, social sciences and sciences, which enhance engineering knowledge and which will contribute to future leadership and technical success.

The A.B. degree consists of 14 half-courses. This degree prepares students for the practice of Biomedical Engineering and for graduate study in engineering and medicine, and it is an excellent preparation for careers in other professions (business, law, etc.) as it provides an ideal framework for a well-rounded technical and scientific education. Advanced courses build on the knowledge acquired in math, science, and introductory engineering science courses. Concentrators are encouraged to complete the common prerequisite course sequence in their first two years at Harvard. This includes Math or Applied Mathematics, Life Sciences and Chemistry, Physics, and Engineering Sciences 53 (Quantitative Physiology).

The technologies that engineers create are changing at an amazing rate, but the fundamentals of engineering that enable these advances remain constant. Our curriculum emphasizes a solid background in the chemical and biological aspects of the Biomedical Engineering field, with ample opportunity to learn about state-of-the-art technologies. In particular, students will take courses in systems modeling to understand and mathematically model non-linear complex biological systems, thermodynamics to appreciate the basic driving forces underlying biological and chemical systems, the fundamental processes of heat and mass transport that often control the rates of system changes, and molecular to tissue level engineering of biological systems. Through this coursework, students also gain experience in the engineering design process, the engineering activity that requires creative synthesis as well as analysis.

Advising

Students in the engineering concentrations, including Biomedical Engineering (A.B.), Electrical Engineering (S.B.), Engineering Sciences (A.B. & S.B., all tracks), and Mechanical Engineering (S.B.), have a concentration advising team that consists of an Assistant Director for Undergraduate Studies, a Director of Undergraduate Studies, and an individual faculty advisor. In general, the ADUS is the first line of communication for concentration related questions and forms (including signing study cards), and students should plan to meet regularly with both their ADUS and faculty advisor to discuss their plan of study, academic interests, and career goals. Currently enrolled College students outside of engineering, including pre-concentrators, are encouraged to contact any of the Assistant Directors for Undergraduate Studies who are prepared to discuss all of the engineering options in SEAS.

Explore

Suggested gateway courses
First year, first term
- Life Sciences 1a, An Integrated Introduction to the Life Sciences: Chemistry, Molecular Biology, and Cell Biology; fall
- Math 1a, Math 1b, App Math 21a, or Math 21a, Mathematical Methods in the Sciences; fall

By end of second year, second term students should complete
- Engineering Sciences 53, Quantitative Physiology as a Basis for Bioengineering; fall (can be taken first or second year)
- and Physics through Physical Sciences 2,3; fall or Physics 12a,b or Physics 15a,b or Applied Physics 50a,b; fall, spring

Biomedical Engineering Alums

Our students can go on to top medical schools and graduate schools in bioengineering. Other students choose to study public policy or public health or economics in graduate school. Some of our students obtain jobs in management consulting, and have been recruited by top firms. Finally, our students can go directly to industry and work as biomedical engineers at medical device or biotechnology firms.

At Fortnight I learned that...

“...Biomedical Engineering integrates all the sciences to find solutions to problems. There are 2 tracks: the AB track and the SB track. The AB track is a better idea if I want to explore a liberal arts education and do more than just engineering.”
Overview

Requires Application: No
Number of Required Courses: 14 half-courses
Honors Option: Yes (thesis required for High and Highest Honors)
Joint Concentration Option: No
Secondary Field: No
Tutorials: No (but all sophomores participate in spring term Sophomore Forum)
Tracks: No
Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

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seas.harvard.edu/programs/biomedical-engineering

Pierce Hall 110
29 Oxford St.
Cambridge, MA 02138
617-495-2833

*For a complete listing of requirements, see the Handbook for Students
Chemical & Physical Biology (CPB) concentrators are interested in applying quantitative tools, physical concepts, and chemical principles to the study of biology. The concentration is jointly administered by the departments of Chemistry and Chemical Biology and Molecular and Cellular Biology.

**Advising**

The Assistant Director of Undergraduate Studies (ADUS; Tom Torello) meets with concentrators and preconcentrators to discuss course choices, research opportunities, and career planning. The ADUS also signs study cards. In addition, each concentrator is matched with a mentor from the Board of Tutors in Biochemical Sciences.

(For more information, go to tinyurl.com/CPB-tutorial-board.)

**CPB Alums**

Most CPB graduates pursue careers in research. Others have applied their quantitative training and critical thinking skills to pursue careers and further education in fields including business/finance, computer programming, education, engineering, law, and medicine.

**Explore**

*Suggested gateway courses*

**First semester**
- LPSA. Life and Physical Sciences A. Foundational Chemistry and Biology (fall)
- LS 1a. Life Sciences 1a. An Integrated Introduction to the Life Sciences: Chemistry, Molecular Biology, and Cell Biology (fall)
- Math (according to math placement*)

**Second semester**
- LS 1b. Life Sciences 1b. An Integrated Introduction to the Life Sciences: Genetics, Genomics, and Evolution (spring)
- Physical Sciences I or Physical Sciences II (spring)

**Third semester**
- MCB 60. Cellular Biology and Molecular Medicine (fall)
- Chem 17. Organic Chemistry (fall)

**Fourth semester - Any of the following courses:**
- MCB 64. The Cell Biology of Human Life in the World (spring)
- MCB 65. (Formerly MCB 56) Physical Biochemistry: Understanding Macromolecular Machines (spring)
- MCB 68. Cell Biology Through the Microscope (spring)
- Concentration Elective

*For a more complete listing, concentrations.fas.harvard.edu*

**At Fortnight I learned that...**

“...CPB attracts students who are interested in taking advanced physics and chemistry classes in addition to the required biology classes, and who are interested in the intersection between these different branches of science.”

“...CPB really attracts students who are interested in exploring the intersection between physics, chemistry, and biology.”
Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
</tr>
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<tr>
<td>Number of Required Courses:</td>
<td>15 half-courses (16 for Honors)</td>
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<tr>
<td>Honors Option:</td>
<td>Yes (thesis required)</td>
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<tr>
<td>Joint Concentration Option:</td>
<td>No</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>No</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Yes (Sophomore + Junior, Full-year, non-credit; exemption for thesis writers)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>No</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Prof. Rachelle Gaudet  
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Lisa Fountain  
Program Coordinator  
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617-495-4106

*Study abroad credit contact

Come Visit Us!

lifesciences.fas.harvard.edu/cpb

Fairchild 95  
7 Divinity Avenue  
617- 495-4106  
Click HERE for a link to the map and directions!
Chemistry

Chemistry is both a basic science, fundamental to an understanding of the world we live in, and a practical science with an enormous number and variety of important applications. Knowledge of chemistry is fundamental to an understanding of biology and biochemistry and of certain aspects of geology, astronomy, physics, and engineering.

Why Study Chemistry at Harvard?

There are two general factors that make a Harvard chemistry undergraduate education truly unique and potentially transformative: having the opportunity for valuable interactions with thought leaders and pioneers of chemistry and having a guide to help you navigate the rich, and perhaps daunting, resources of Harvard Chemistry. In my three years here, I’ve found the Professors accessible and attentive; all my interactions with chemistry faculty, as a whole, have been influential; this is all in large part a result of excellent mentoring. I’ve never felt lost in the sea of potential chemistry courses or completely unsure in terms of how to approach a research opportunity. (Senior Chemistry Concentrator, David Jaramillo)

I think the faculty are one of the biggest strengths of the undergrad chemistry experience— they are so excited about what they do, and invested in sharing their passion for chemistry with students. I have also found that students tend to be really into the classes, which makes for a more upbeat class experience. (Senior Chemistry Concentrator, Jen Guidera)

In many ways, chemistry at Harvard is taught like a language rather than a collection of unlinked facts. It is incredibly gratifying to approach a test having memorized very little but be able to puzzle solve your way through all the problems. (Senior Chemistry Concentrator, Ellie Lin)

Advising

All students have the Co-Director of Undergraduate Studies as their academic advisor and once they join a lab they will also have the faculty member with whom they do research as an additional academic advisor. Concentrators can seek advice from any member of the chemistry faculty.

Explore

Suggested gateway courses

First year, students should enroll in two of the following introductory Chemistry classes
- Chem 20, Organic Chemistry; spring
- Life and Physical Sciences A, Foundational Chemistry and Biology; fall
- Physical Sciences 10, Chemistry: Quantum and Statistical Foundations of Chemistry; fall
- Physical Sciences 1, Chemical Bonding, Energy and Reactivity: An Introduction to the Physical Sciences; spring
- Physical Sciences 11, Foundations and Frontiers of Modern Chemistry: A Molecular and Global Perspective; spring
- Life Sciences 1a, An Integrated Introduction to the Life Sciences: Chemistry, Molecular Biology, and Cell Biology; fall

*For a more complete listing, concentrations.fas.harvard.edu

Chemistry Alums

Every year about 10-30% of the chemistry seniors apply to graduate school in chemistry. However, because a degree in chemistry is an excellent background for many occupations, most graduates pursue opportunities in related fields such as law, medicine, business, consulting, finance, teaching, environmental science, and other areas of science.

At Fortnight I learned that...

“...it is quite flexible, and undergraduate research is very strongly encouraged.”

“...Chemistry concentrators can perform research in virtually any scientific field, and that the concentration is flexible and can cover most, if not all, pre-medical requirements. As a Chemistry concentrator I would still have a lot of room in my schedule to take electives in Music.”
Overview

Requires Application: No

Number of Required Courses: 12-14 half-courses (14-16 for Honors)

Honors Option: Yes (thesis optional)

Joint Concentration Option: No

Secondary Field: Yes (6 half-courses)

Tutorials: Yes (Sophomore: spring term, non-credit, optional; Junior: optional for approved students, offered both terms)

Tracks: No

Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

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George O’Shea*
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chemistry.harvard.edu

Biolabs
52 Oxford St.
Cambridge, MA 02138

617-495-4076

*Study abroad credit contact
There is exciting science on the somewhat arbitrary and fluid boundary between chemistry and physics. Chemists and physicists often study the same phenomena in slightly different ways, and it is very useful, in the boundary area, to have training in both fields. Recognizing this, the physics department has for many years offered the concentration in Chemistry and Physics. 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.

**Chem & Phys Alums**

Concentrators have gone on to graduate work and careers in chemistry, physics, and other quantitative fields. In recent years, the concentration has also attracted many of the most scientifically talented pre-medical students at Harvard. In addition, the intellectual disciplines involved provide a suitable background for careers in many different professions.

**At Fortnight I learned that...**

“...it is a fairly flexible concentration that lets me count really interesting physics and chemistry courses towards requirements and that the optional honors thesis doesn’t have to be integrative. It can be in chemistry, or physics, or both.”

“...It is very flexible, and aside from basic requirements in each category, you must take at least four physics courses and four chemistry courses. An honors thesis is not required, but if you choose to do one it can be in chemistry, or physics, or both (it doesn’t have to be integrative).”

**Advising**

Students in the Physics and Chem/Phys concentrations automatically have Prof. Howard Georgi (Head Tutor) and Dr. David Morin (Associate Head Tutor) as academic advisors. Additionally, each student is given an individual concentration advisor, chosen from among the faculty; this advisor signs the student’s study card. Carol Davis (Undergraduate Student Coordinator) handles many of the administrative and student-life aspects of the concentrations.
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.

Because the requirements of the concentration lie between those of Chemistry and of Physics, it is possible that a given set of courses could satisfy the requirements of one of those concentrations as well as those of the concentration in Chemistry and Physics. By the same token, a transfer to or from one of these concentrations, even as late as the junior year, normally causes little difficulty.

The concentration in Chemistry and Physics is supervised by a committee comprised of members of the Departments of Physics and of Chemistry and Chemical Biology. As the name suggests, the concentration has been established to serve those students desiring to develop a strong foundation in both physics and chemistry.

Tutorial or individual study and research are optional, and may be undertaken within the framework of Physics 90r and/or 91r, or of Chemistry 98r and 99r, to the extent that facilities and staff are available.

Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
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<tr>
<td>Number of Required Courses:</td>
<td>13-16 half-courses</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis optional)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>No</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>No</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Optional. Admission to tutorials requires prior approval by the Director of Undergraduate Studies of the Department of Chemistry and Chemical Biology.</td>
</tr>
<tr>
<td>Tracks:</td>
<td>No</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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617-496-8293

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Come Visit Us!

physics.harvard.edu/academics/undergrad

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Cambridge, MA 02138
617-495-2872

*Study abroad credit contact
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 archaeology, history, and philosophy. Concentrators in both tracks are required to acquire knowledge of Greek or Latin, or both, but neither track presumes any prior knowledge of these languages. Both may be pursued as joint concentrations with other departments.

Classics Alums

From the freshman year onwards, students are taught to develop analytical and interpretive skills that are transferable to almost every aspect of human endeavor. Alumni have become actors, archaeologists, architects, archivists, bankers, doctors, entrepreneurs, financial consultants, hedge-fund managers, interpreters, journalists, landscape designers, librarians, museum curators, novelists, poets, politicians, priests, professors, surgeons, teachers, translators, and various other things.

Advising

The Director of Undergraduate Studies (DUS) serves as the primary academic advisor for every concentrator. Concentrators meet with the DUS at the beginning of each term to discuss course selection, long-term academic planning, internships and research opportunities, and other matters relating to their academic and professional progress. Study cards are signed by the DUS.

At Fortnight I learned that...

“...Classics is an adaptable concentration which extends into numerous other fields. I am excited to study Classics because it is so flexible and it will allow me to explore my other interests through the subject I am most passionate about.”
Overview

<table>
<thead>
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<th>Requires Application:</th>
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<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>11 half-courses (13 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis or courses in prose composition)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (5 half-courses)</td>
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<tr>
<td>Tutorials:</td>
<td>Sophomore (2 half-courses) and Junior (1 half-course)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>Classical Languages and Literatures, Classical Civilizations</td>
</tr>
<tr>
<td>Language Required:</td>
<td>Yes (6 half-courses in Greek and/or Latin for Classical Languages and Literatures, 4 for Classical Civilizations)</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Sarah Lannom
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Teresa Wu*
Department Administrator
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classics.fas.harvard.edu

204 Boylston Hall
Cambridge, MA 02138

617-495-4027

*Study abroad credit contact
Comparative Literature

Comparative Literature is the undergraduate wing of the department of Comparative Literature. We welcome students who are interested in studying literature in more than one national and linguistic tradition, students who want to explore literature in relation to other arts and media (e.g., film, music, visual art), and students who seek to formulate an individualized program of study within the arts and humanities.

Each Comp Lit student designs, with the guidance of a tutor in the program, a course of study that is centered around a core of courses and one-on-one tutorials that reflects the student’s particular areas of interest. Recent students in Comp Lit have focused their studies on fields as far-ranging as Literature and Music, 20th century French literature and film, the graphic novel, translation studies, aesthetic philosophy, and contemporary Arabic and Hebrew narrative, to name but a few.

Students who thrive in Comp Lit generally have interests in a number of different disciplines and fields within the Humanities. They also tend to be self-motivated, intellectually adventurous and edgy, and ready to engage in deep thinking about literature and culture.

Advising

Primary advising in the concentration is provided by members of the Literature Tutorial Board. Each student is assigned an individual advisor. These advisors also sign study cards.

What Literature concentrators say

“...The tutorial system allowed me the kind of freedom and focus that most fields only permit at the graduate level. When most of my friends in other departments were still juggling lectures and sections for their concentrations’ requirements, I was already delineating my own curriculum and exploring it with some of the world’s foremost experts on the subject. As an unexpected bonus, the structure and the dimensions of the concentration fostered a friendly, tight-knit, and vibrant community that I loved calling home.”

“...A combination of factors made Comp Lit stand out...as the perfect choice for me. The blend of languages and cultures (I can’t pick just one!), the option of doing a translation thesis, and the opportunity for really individualized attention (heck yes one-on-one junior tutorial) were significant draws for me.”

Explore

Suggested gateway courses

Any course listed under the Comparative Literature rubric (either as Literature or as Comparative Literature) in Courses of Instruction provides an excellent way of exploring Literature. Literature 101 and Literature 103 introduce students to the study of world literature and are gateways to the department, but interested students are encouraged to enroll in any of the Literature 100 classes.

Students might also consider enrolling in a course from any of the departments in the Humanities that address their interests, e.g., English; any non-English literature department (e.g., Slavic, Romance Languages, East Asian Languages, Near Eastern Languages); Philosophy; Visual and Environmental Studies; and Women, Gender, and Sexuality.

Another great option is a course in a non-English literature or a language course in the foreign language the student wishes to study.

Comp Lit Alums

Overview

<table>
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<th>Requires Application:</th>
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<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>14 half-courses</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis required for all concentrators)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (6 half-courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Sophomore, Junior and Senior</td>
</tr>
<tr>
<td>Tracks:</td>
<td>No formal track</td>
</tr>
<tr>
<td>Language Required:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Isaure Mignotte
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617-495-4186

*Study abroad credit contact

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complit.fas.harvard.edu

Dana Palmer House
16 Quincy St.
Cambridge, MA 02138

617-495-1900

At Fortnight I learned that...

"...the Comp Lit concentration is very flexible in allowing you to take classes from different departments to suit your interests and that they have a very close and interactive community. You can also go abroad to do research."
Computer Science (CS)

Computer science is a dynamic, versatile field, full of open problems and opportunities for creative invention. The concentration in computer science is designed to teach students skills that they will use immediately and also ideas they will exploit in the future in ways we cannot even imagine today.

Computer scientists must know basic mathematics; 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 rapid technological change. At the same time, the requirements permit students to choose courses in computer science and related fields that reflect individual interests and preferences.

Advising

First point of contact for students interested in a Computer Science Concentration or Secondary Field is the Director of Undergraduate Studies. The DUS and the student develop a Plan of Study that meets relevant requirements and addresses the student’s particular interests and needs. Once the student joins the program, the DUS assigns the student a faculty advisor, who will be the person with whom the student meets regularly for advising and to sign the student’s subsequent study cards. The DUS is always available to any computer science undergraduate for technical questions about concentration requirements, for petitions for exceptions to rules, or for any kind of open-ended discussion the student might like to initiate about life at and beyond Harvard.

CS Alums

Many students go on to work in the computer technology field at the leading software companies such as Facebook, Google, Pixar and Microsoft. Our entrepreneurial students have gone on to found technology companies (including Facebook and Microsoft). Students also apply their expertise in the financial industry. Students interested in research consistently go on to pursue PhDs at the top programs in the country.

As computer science is such an integral part of so many aspects of our world, students can find a computer science background helpful in many other fields and careers such as law, government, non-profits, or medicine.

Read about some of the computer science alumni at: seas.harvard.edu/programs/computer-science/careers-alumni

Explore

Suggested gateway courses

- Computer Science 50, Introduction to Computer Science I; fall (Students should ideally take this course in freshman year, though it is possible to take it in sophomore year and still complete the honors eligible program).
- Computer Science 61, Systems Programming and Machine Organization and Computer Science 121, Introduction to the Theory of Computation are fall term courses for those who have satisfied the prerequisites.
- Computer Science 51; spring is the normal follow-on to Computer Science 50.
- Computer Science 20, Discrete Mathematics for Computer Science, is an optional spring term course providing background in logic, probability, graph theory, and other subjects and will prepare students for courses in theoretical computer science such as Computer Science 121 and 124.
- Computer Science ordinarily requires mathematics to the level of Mathematics 21a and 21b or equivalent (Applied Mathematics 21a and 21b; Mathematics 23a and 23b; Mathematics 25a and 25b; Mathematics 55a and 55b). Students should follow Mathematics placement advice in judging whether first to enroll in Mathematics 1a or 1b or a pre-calculus course.

At Fortnight I learned that...

“...computer science expands your way of thinking about problems, and that it can be a difficult concentration but a rewarding and powerful one.”

“... I learned about the option to pursue computer science as a secondary. There are also many extracurricular opportunities to engage in computer science study.”

“...there are several different tracks in computer science for most inclinations and that the current courses I have taken have set me up to follow any of the tracks I want to choose.”
Overview

Requires Application: No

Number of Required Courses: 10-12 half-courses (12-14 for Honors)

Honors Option: Yes (thesis required for High and Highest Honors)

Joint Concentration Option: Yes (thesis required)

Secondary Field: Yes (4 half-courses)

Tutorials: Optional

Tracks: No formal tracks, but concentrators engage in areas of application such as Architecture/Urban Planning, Astronomy, Biology, Biological Sciences, Chemistry, Computer Science, Decision and Control, Earth and Planetary Sciences, Economics, Economics and Computer Science, Electrical Engineering, Environmental Science and Engineering, Geophysical Sciences, Music, Physics, Social and Behavioral Sciences, and Statistics

Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Undergraduate Program Administrator
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617-496-1524

*Study abroad credit contact

... I learned about the different paths you can take in the computer science concentration based on one’s interests. I didn’t know that some of the courses were more math-oriented than others, so it was particularly interesting to learn which courses require a higher level math background. -OR- I learned that the CS offers a high percentage of theoretical classes, which is appealing to me as a mathematically-oriented student.

Come Visit Us!

seas.harvard.edu/programs/computer-science

Pierce Hall 110
29 Oxford St.
Cambridge, MA 02138
617-495-2833
Earth & Planetary Sciences (EPS)

Earth and Planetary Sciences encompass a broad range of science disciplines, technology, and applications to environmental and economic endeavors. Studies of the Earth involve students in the development and application of new tools and technologies such as space probes and sophisticated instruments, as well as field work in remote and challenging settings.

These are intellectually exciting times for the Earth and planetary sciences, which are of unprecedented importance to contemporary society. Our environment is increasingly subject to stresses placed upon it. As never before, we must understand the contrary society. Our environment is increasingly subject to stresses placed upon it. As never before, we must understand the consequences of human activities for the Earth's atmosphere, the oceans, the solid Earth, and the organisms that live on it. Exploring for, extracting, and conserving natural resources are vital to the global political economy. We must mitigate the ill effects of earthquakes, landslides, volcanic eruptions, and severe weather by learning to predict their time and place.

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. This intellectual breadth is not always possible to acquire in a "pure" science program. The department trains students rigorously in the basic sciences, typically in the same foundational courses as students in Astrophysics, Chemistry, Engineering Sciences, and Physics. These foundational courses are followed by upper-level courses that focus on disciplines within Earth and planetary science. Within the EPS department students may focus on geological science, environmental geoscience, solid earth geophysics, geochemistry, geobiology, atmospheric and ocean science, and planetary science.

Alternatively, many students choose to take courses across these disciplines.

Advising

All concentrators and secondary field students are assigned a faculty advisor with whom they meet at least twice per year. These assignments can change as students' interests shift. Additional concentration advising is provided by the Co-Head Tutors (Jerry Mitrovica and Francis Macdonald) and the Academic Programs Administrator (Chenoweth Moffatt).

At Fortnight I learned that...

"...they have a fantastic department as they are a very small one, and that they have great one to one interactions with students as the faculty are really caring. Also there are fantastic trips to go on which are funded!"

Explore

Suggested gateway courses
- EPS 21, The Dynamic Earth: Geology and Tectonics Through Time (fall)
- EPS 22, The Fluid Earth: Oceans, Atmosphere, and Climate (spring)
- SPU 12, Natural Disasters may substitute for EPS 21 (fall)
- SPU 14, How to Build a Habitable Planet may substitute for EPS 21 (fall)
- SPU 25, Energy: Perspectives, Problems and Prospects may substitute for EPS 22 (spring)
- SPU 29, Climate-Energy Challenge may substitute for EPS 22 (fall)
- SPU 30, Life as a Planetary Phenomenon may substitute for EPS 21 (spring)
- SPU 31, Energy Resources and the Environment may substitute for EPS 21 (spring)

EPS Alums

An important goal of our educational mission is to maintain flexibility, ensuring that we serve the needs of students destined for careers in science as well as those destined for other pursuits. Career opportunities in Earth and planetary sciences are diverse, spanning the private, government, and academic sectors. Government service includes research and administration in NASA, the National Oceanographic and Atmospheric Agency, the US Geological Survey, the Environmental Protection Agency, and many other agencies and departments. Earth scientists work in and direct a number of oil and mineral exploration and production companies. There also are abundant opportunities in the academic world. Many opportunities continue to grow for entrepreneurs who build companies specializing in resources, natural hazards, waste repositories and cleanup, and environmental impact. In addition to scientific career paths, an undergraduate degree in Earth and Planetary Sciences is an excellent background for continuing study in law, business, public administration, and medicine. Many former concentrators have found that their studies in EPS have helped prepare them for careers in both anticipated and unexpected ways:

- My background in Earth science has allowed me to make designs that meld with the land and the natural environment.” (Landscape architect)
- Subsequently, I found myself transitioning from academia back to finances, and now I am a portfolio manager overseeing a book of complex investments in the natural resource, energy, and commodity space.” (Portfolio manager)
- Policymakers are constantly challenged to design regulations and programs based on their interpretation of scientific results, and EPS is an excellent foundation for this work in dynamic fields of energy, climate, and environmental policy.” (Chief policy advisor for sustainability)
Overview

Requires Application: No
Number of Required Courses: 14 half-courses and tutorial
Honors Option: Yes (thesis required)
Joint Concentration Option: Yes (thesis required); 11 half courses and tutorial
Secondary Field: Yes (5 half-courses and tutorial)
Tutorials: Yes (attendance at seminars, ungraded; generally fulfilled by end of sophomore year)
Tracks: No (informal thematic plans of study recommended; visit EPS home page for suggestions)
Language Required: No

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eps.harvard.edu
Hoffman Labs
20 Oxford St.
Cambridge MA 02138
617-495-2351

*For a complete listing of requirements, see the Handbook for Students

*Study abroad credit contact
East Asian Studies (EAS)

East Asian Studies is an interdisciplinary concentration that seeks to develop a critical understanding of the human experience in East Asia. A concentrator develops language skills, participates in a series of tutorials, and selects from a rich offering of lecture courses and seminars. The program allows students to learn about East Asia as a whole and also to pursue specialized study of one East Asian society: China, Japan, Korea, or Vietnam. Study abroad is strongly encouraged and supported.

The concentration offers a broad range of possibilities for students interested in the social sciences or the humanities. Students in EAS may take courses that study modern East Asia through approaches drawn from political science, sociology, anthropology, economics, and psychology. Students with an interest in the humanities can choose to study modern and pre-modern East Asia from the perspectives of history, literature, art history, cultural studies, religion, philosophy, and folklore. The sophomore tutorial introduces a variety of perspective from the humanities and the social sciences, and offers concentrators a forum to interact with Harvard’s East Asia faculty. At the end of the sophomore year, students typically decide on a disciplinary or area focus or choose a comparative perspective (involving one or more than one area or discipline) in consultation with the Director of Undergraduate Studies and their assigned faculty advisor. Juniors take an EAS 98 offering or an approved course to serve as their junior tutorial. Many spend the summer in East Asia doing research or internships. Honors candidates usually spend the senior year researching and writing the honors thesis.

Advising

Students in EAS can request a faculty advisor or have one assigned to them.

The Assistant Director of Undergraduate Studies for Sophomores, Juniors, or Seniors signs study cards. Senior thesis writers work with both a faculty advisor and a graduate student advisor.

Explore

Suggested gateway courses

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, if possible.

EAS concentrators are required to take a historical survey course of the region they are studying

- China: Societies of the World 12, China: Traditions and Transformations (fall)
- Japan: Societies of the World 13, Japan in Asia and the World (spring)
- Korea: Societies of the World 27, The Two Koreas or Korean 111 (spring)

EAS 97a may be taken freshman year by students who are strongly committed to EAS as a concentration or secondary field.

EAS Alums

EAS alumni go on to an amazing range of careers. Is concentrating in East Asian Studies compatible with finding a rewarding job after graduation? The simple answer is yes. With the extraordinary dynamism of East Asia today, knowledge of the region and one or more of its languages is hugely attractive to employers. Some of our graduates continue towards an M.A. or PhD degree with a view towards pursuing careers in teaching and research, but the majority find jobs in consulting, finance, business and international trade, government service, law, medicine and many other fields.

The network of Harvard’s East Asia graduates spans the Pacific. Even if your professional future is not in Asia, the concentration will equip you with unusual intellectual opportunities and language skills. Graduating with a degree in EAS demonstrates to potential employers that you have initiative, curiosity, imagination, and perseverance. These are all qualities highly sought by employers.

At Fortnight I learned that...

“...EAS would effectively support my ability to explore East Asia in the context of a number of different disciplines while developing my language proficiency by encouraging study abroad in junior year.”
Overview

Requires Application: No
Number of Required Courses: 12 half-courses (13 for Honors)
Honors Option: Yes (thesis required)
Joint Concentration Option: Yes (thesis required)
Secondary Field: Yes (6 half-courses)
Tutorials: Sophomore and Junior (both half-course)
Tracks: Secondary joint concentrators can take the language track (9 half courses) or the area track (6 half courses)
Language Required: Yes, 4-6 half-courses in Chinese, Japanese, Korean, Mongolian, Tibetan, Vietnamese or an approved combination of courses involving two East Asian languages

*For a complete listing of requirements, see the Handbook for Students

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617-495-8365

*Study abroad credit contact

“...The East Asian department strongly encourages study abroad opportunities for all students, as they can be invaluable learning experiences that fully immerse you in the language and culture of the society you are studying.”

Come Visit Us!

ealc.fas.harvard.edu
Harvard-Yenching Library
2 Divinity Ave
Cambridge, MA 02138
617-495-8365
Economics

Economics is at once broad in its subject matter and unified in its approach to understanding the social world. The Harvard Economics Department aims to teach undergraduate students the basic principles of economics, to introduce them to various subfields within economics, and to give them a foundation in understanding and carrying out economics research.

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, though, the subject matter of economics has broadened so that economists today address a remarkable variety of social science questions. Will school vouchers improve the quality of education? Do politicians manipulate the business cycle? What sort of legal regime best promotes economic development? Why do cities have ghettos? What can be done about grade inflation? Why do people procrastinate in saving for retirement—or in doing their homework?

Economics today is a scientific discipline. Bringing their particular perspective to the questions of social science, economists formulate theories and collect evidence to test these theories against alternative ideas. Doing economic research involves asking questions about the social world and addressing those questions with data and clear-headed logic, employing mathematical and statistical tools whenever possible to aid the analysis.

Advising

The Economics Department has extensive advising resources: four dedicated Lecturer/Advisors (each holding a PhD in economics) who serve as concentration advisors. In addition, each House has its own designated concentration advisor. Concentrators are welcome to speak with any advisor, but are encouraged to focus on getting to know the advisor associated with their House. Additionally, any economics concentration advisor can sign the study card of any economics concentrator.

At Fortnight I learned that...

“...although the concentration is big, there is tons of advising if you make the effort to find it; that concentrating in Economics does not mean that I have to go into banking or consulting; and that it is more about learning the tools to think according to “scarcity” which can be applied to everything.”

“...Harvard’s Economics program is a lot different than most traditional economics courses, or it’s a lot different than what I thought Economics to be. It focuses on the social science aspect more so than just analyzing competitive markets (which is what I believed it to be). I would get more out of it than just a traditional business concentration, as I would learn more about the social world.”
Overview

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<th>Requires Application:</th>
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<tr>
<td>Number of Required Courses:</td>
<td>11 half-courses (15 for Honors)</td>
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<td>Honors Option:</td>
<td>Yes (thesis required for High and Highest Honors)</td>
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<tr>
<td>Joint Concentration Option:</td>
<td>No</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (6 half-courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Sophomore (half-course)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>None</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Dani Doyle
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*Study abroad credit contact

"...Economics is the study and application of scarce resources. It looks into how people accomplish goals, given constraints. It is also the most quantitative of the social sciences."

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economics.harvard.edu

Littauer Center
1805 Cambridge St.
Cambridge, MA 02138
617-495-2144

*Study abroad credit contact
Electrical Engineering

Electrical Engineering provides the information and communications pathways that link us together, the techniques that allow us to send a multitude of complex information over long distances ever more rapidly, and that allow us to carry out demanding computation on massive amounts of data in ever shorter periods of time. Electrical engineers utilize basic materials properties to craft new devices and systems that will be able to rapidly receive, transmit and store information with ever greater accuracy and efficiency.

Harvard’s degree in Electrical Engineering is a Bachelor of Science (S.B.) degree that consists of 20 half-courses. The Electrical Engineering program has been designed to produce flexibility in the choice of engineering courses, with a small select core of required engineering courses and the early inclusion of a strong hands-on (lab) component. As this program was new in the fall of 2012, it will be reviewed for ABET accreditation during the next review in 2015. Students interested in a degree in Electrical Engineering at the Bachelor of Arts (A.B.) level should refer to the Electrical Engineering and Computer Science track of the Engineering Sciences concentration.

Advising

Students in the engineering concentrations, including Biomedical Engineering (A.B.), Electrical Engineering (S.B.), Engineering Sciences (A.B. & S.B., all tracks), and Mechanical Engineering (S.B.), have a concentration advising team that consists of an Assistant Director for Undergraduate Studies, a Director of Undergraduate Studies, and an individual faculty advisor. In general, the ADUS is the first line of communication for concentration related questions and forms (including signing study cards), and students should plan to meet regularly with both their ADUS and faculty advisor to discuss their plan of study, academic interests, and career goals. Currently enrolled College students outside of engineering, including pre-concentrators, are encouraged to contact any of the Assistant Directors for Undergraduate Studies who are prepared to discuss all of the engineering options in SEAS.

Explore

Suggested gateway courses
- Engineering Sciences 50 (Introduction to Electrical Engineering), fall
- Engineering Sciences 51 (Computer-Aided Machine Design), fall and spring
- Engineering Sciences 52 (The Joy of Electronics – Part 1), fall and spring

Electrical Engineering Alums

Past students have attended graduate school at leading universities in areas ranging from engineering to law to business to medicine, while others have entered the workforce right after graduation, working in small start-up companies, as well as in large engineering companies such as Microsoft and Northrop Grumman. Other graduates have taken positions at leading consulting, engineering, and business firms.

Read more about our alumni at: seas.harvard.edu/academics/undergraduate/engineering-sciences/careers

At Fortnight I learned that...

“...areas of study in the concentration (e.g., electronics, programming, image processing) are flexible, and that by studying engineering you learn almost as much science as you do in the natural sciences, but you also learn how to apply science to the real world.”

“...I learned about the pros and cons of studying engineering as opposed to one of the natural sciences. I was told that by studying engineering, you learn almost as much science as you do in the natural sciences but you also learn how to apply it to real-world issues.”
Students planning to pursue the S.B. degree are strongly encouraged to complete their basic math and science (e.g. physics, chemistry, etc.) requirements by the end of their sophomore year.

The S.B. program emphasizes a solid background in applied science and mathematical analysis -- with ample opportunities to apply these fundamentals to real-world issues and learn about state-of-the-art technologies (robotics, etc.) -- through a selection of core electrical engineering courses. Students also have flexibility in determining their specialization through several elective engineering classes.

Students gain experience in the engineering design process, which is a unique engineering activity that requires creative synthesis and analysis to fulfill specified needs. Concentrators have a substantial choice in crafting their programs.

Because it exists within Harvard’s liberal arts environment, the concentration provides both the breadth and depth of study needed to excel in this and other exciting integrative areas of engineering.

Electrical Engineering and Computer Science have a natural link, for example looking at developing next-generation, or energy-efficient computational stations. Electrical Engineers may also choose to work at the device level, developing a better solar cell, laser or electronic device. ES 52, a required course, gives entry-level students an idea of the excitement and enabling power of playing with electronic devices.

Because it exists within Harvard’s liberal arts environment, the concentration provides both the breadth and depth of study needed to excel in this and other exciting integrative areas of engineering.

*For a complete listing of requirements, see the Handbook for Students

**Overview**

<table>
<thead>
<tr>
<th>Requires Application:</th>
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<tbody>
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<td><strong>Number of Required Courses:</strong></td>
<td>20 or 21 half-courses for S.B.</td>
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<tr>
<td>Honors Option:</td>
<td>Yes (thesis required for High or Highest Honors)</td>
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<td>Joint Concentration Option:</td>
<td>No</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>No</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>No (but all sophomores participate in spring term Sophomore Forum)</td>
</tr>
<tr>
<td>Tracks:</td>
<td></td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

**Questions?**

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seas.harvard.edu/programs/electrical-engineering

Pierce Hall 110  
29 Oxford St.  
Cambridge, MA 02138  
617-495-2833
Engineering Sciences

Engineering plays a critical role in enhancing social progress and improving our quality of life, and rapid and efficient access to new innovations is necessary to tackle myriad challenges. The Engineering Sciences program educates future leaders with the technical background necessary to develop and critically evaluate the next wave of engineering innovations, to apply these innovations to important local and global problems, and to make informed decisions about them in a societal context.

Because the Engineering Sciences concentration exists within Harvard’s liberal arts environment, it provides students with both the breadth and depth of study necessary to excel in integrative areas of engineering. The curriculum emphasizes a solid background in applied science and mathematical analysis, with ample opportunities to apply these fundamentals to real-world issues and learn about state-of-the-art technologies. Students gain experience in the engineering design process, which is a unique engineering activity that requires creative synthesis and analysis to fulfill specified needs.

Harvard offers two degrees in Engineering Sciences: the Bachelor of Arts (A.B.) and the ABET-accredited Bachelor of Science (S.B.). The A.B. program requires 14-16 half-courses and the S.B. program requires 20 half-courses. The Engineering Sciences A.B. program has tracks in five engineering areas: biomedical sciences and engineering; electrical and computer engineering; engineering physics; environmental science and engineering; or mechanical and material science and engineering. Students in the Engineering Sciences S.B. concentration typically specialize in one of two tracks: bioengineering or environmental science and engineering.

Students in the bioengineering tracks of the A.B. or S.B. programs apply fundamental principles of biology, chemistry, physics, and mathematics to analyze and design novel biological systems. Bioengineering naturally has applications in healthcare, but can also incorporate energy and sustainability. The A.B. track offers students more flexibility to explore interests in biology and chemistry, while the S.B. track provides more engineering fundamentals, including design. The goals of the A.B. in Engineering Sciences on the biomedical sciences and engineering track and the A.B. in Biomedical Engineering, are similar, but the former contains more engineering courses, while the latter contains more biology and chemistry courses.

Students in the environmental science & engineering tracks of the A.B. or S.B. programs study the fundamental processes and technologies underlying environmental systems. Students apply these principles to develop solutions to complex environmental problems and to mitigate human impact on the environment. The A.B. track offers students the opportunity to study complementary disciplines from other natural and social sciences, while the S.B. track provides a broader basis in engineering fundamentals and design.

Students interested in learning more about the other engineering areas should refer directly to the Biomedical Engineering (A.B.), Electrical Engineering (S.B.), or Mechanical Engineering (S.B.) concentrations, which are also listed in this handbook.

Advising

Students in the engineering concentrations, including Biomedical Engineering (A.B.), Electrical Engineering (S.B.), Engineering Sciences (A.B. & S.B., all tracks), and Mechanical Engineering (S.B.), have a concentration advising team that consists of an Assistant Director for Undergraduate Studies, a Director of Undergraduate Studies, and an individual faculty advisor. In general, the ADUS is the first line of communication for concentration related questions and forms (including signing study cards), and students should plan to meet regularly with both their ADUS and faculty advisor to discuss their plan of study, academic interests, and career goals. Currently enrolled College students outside of engineering, including pre-concentrators, are encouraged to contact any of the Assistant Directors for Undergraduate Studies who are prepared to discuss all of the engineering options in SEAS.

Explore

Suggested gateway courses

- Engineering Sciences 6 (Environmental Science & Technology), spring
- Engineering Sciences 50 (Introduction to Electrical Engineering), fall
- Engineering Sciences 51 (Computer-Aided Machine Design), fall and spring
- Engineering Sciences 52 (The Joy of Electronics – Part 1), fall and spring
- Engineering Sciences 53 (Quantitative Physiology as a Basis for Bioengineering), fall

Engineering Sciences Alums

Concentrators in Engineering Sciences learn how to think critically and develop innovative solutions to a variety of problems, and students can use these skills to address a wide range of real-world issues. Past students have attended graduate school at leading universities in areas ranging from engineering to law to business to medicine, while others have entered the workforce right after graduation with positions at leading consulting, engineering, and business firms. Read more about our alumni at: seas.harvard.edu/programs/engineering-sciences/careers-alumni

At Fortnight I learned that...

"...the Engineering concentration has an integral community aspect. It seems like a somewhat small concentration, which allows for close bonding with other students, which is such an important part of the engineering field, since so much of it is team based."
Overview

Requires Application: No

Number of Required Courses: 14-16 half-courses for A.B.; 20 half-courses for S.B.

Honors Option: Yes (thesis required for High or Highest Honors for A.B. program; thesis written as part of senior capstone design project required for all honors levels in S.B. program)

Joint Concentration Option: Yes for A.B., No for S.B.

Secondary Field: No

Tutorials: No (but all sophomores participate in spring term Sophomore Forum)


Language Required: No

Questions?

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*For a complete listing of requirements, see the Handbook for Students

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Pierce Hall 110
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617-495-2833

Kathy Lovell
Undergraduate Program Administrator
klovell@seas.harvard.edu
617-496-1524
“We like books,” explains Professor Stephen Burt, Director of Undergraduate Studies. “We also like collections of letters and manuscripts and recitations of poems and stage plays. We even like tweets and sometimes films and videos. We study all of those things in their contexts. We study what goes on inside them, and we look at the people who made and continue to make them.” 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, Dickinson, Keats, and 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. Concentrators explore the discipline by way of our three Common Ground classes, in addition to seminars, tutorials, workshops, lecture courses.

Advising

The English Department is committed to providing high quality advising to undergraduate concentrators, prospective concentrators, and any Harvard student interested in the study of English literature. The Undergraduate Program Office assigns each sophomore, junior, and senior concentrator to a faculty advisor, with whom they meet to discuss course options and program tracks, and get their study card signed. All concentrators are encouraged to visit other members of the English faculty during scheduled office hours. The staff of the Undergraduate Program is always available during regular business hours to discuss specific questions regarding the program. Each house has a dedicated English peer advisor; we’ll be happy to put you in contact with a current English concentrator to get your questions answered, student-to-student.

Explore

Suggested gateway courses

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 (English 40-69), which are reserved for English concentrators and prospective concentrators. Even GenEd courses offered by English Department faculty will count as English concentration electives!

English Alums

Graduates of the English program regularly move into rewarding careers in law, advertising, marketing, consulting, finance, real estate, journalism, education, medicine and many others. A moment’s reflection confirms the central need for sustained, critical, interpretive reading in many professions. Interpretive skill is often life’s critical navigational tool, and we teach it. It’s no wonder that law schools and medical schools love English graduates. Visit our website and check out the “Why English?” section for alumni spotlights and career figures.

At Fortnight I learned that...

“...since the English department is relatively small, the amount of individual attention and guidance is incredible. English degrees are useful for any kind of future career, with the English concentration fostering skills in critical thinking, speaking, and presenting one’s views.”

“...English will allow me to strengthen my writing skills as I explore various authors and poets and will help me widen my perspectives before going into a strictly science-based, medical career.”
Overview

Requires Application: No
Number of Required Courses: 11 half-courses (14 for Honors)
Honors Option: Yes (with or without thesis)
Joint Concentration Option: Yes (8 half-courses; joint thesis required)
Secondary Field: Yes (6 half-courses; pathways)
Tutorials: Junior (required for honors; half-course)
Tracks: No formal tracks
Language Required: Required for Honors and Joint

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Director of Undergraduate Studies (spring)

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english.fas.harvard.edu

Barker Center
12 Quincy St.
Cambridge, MA 02138
617-495-2533
The concentration in Environmental Science and Public Policy (ESPP) is designed to provide a multidisciplinary introduction to current challenges and issues of the environment. It is founded on the premise that the ability to form rational judgments concerning many of the complex challenges involving the environment that confront today's society requires both an understanding of the underlying scientific and technical issues and an appreciation for the relevant economic, political, legal, historical, and ethical dimensions. All students have to satisfy a core of requirements in the physical, biological, and social sciences and mathematics. In consultation with their concentration advisor, students also develop an individual plan of study for a series of advanced courses around a particular field of specialization. Through their field of specialization, students develop expertise in a particular field of study relating to the environment.

In the junior year, students take one or more seminars to complement their field of specialization. The seminars are envisaged as a central integrating component of the concentration. The seminars cover a number of current environmental issues, comprehensively and in depth. They are taught by faculty from a number of departments in the Faculty of Arts and Sciences and from several of the professional schools, including the Kennedy School of Government, the School of Public Health, and the Graduate School of Design. Topics covered change from year to year, but have included policy issues relating to environmental health, ecology and land use, renewable energy, conservation and biodiversity, and environmental crises, climate change and population flight.

In the senior year, students undertake a capstone project in which they conduct an in-depth examination of a particular environmental issue consistent with their field of specialization, applying skills and knowledge gained in their courses and tutorial experiences. For students wishing to be considered for honors, the capstone project consists of a two-half course senior thesis, while for non-honors students the typical requirement is a one-half course senior term-paper or equivalent.

Our concentrators appreciate the variety and flexibility of course requirements and their close interactions with faculty. Concentrators also enjoy being in the field, and we offer opportunities for concentrators to conduct work in the field in both course and group settings. We also support independent student research under faculty guidance.

The concentration is overseen by a Committee on Degrees functioning as a Board of Tutors including representatives from several other FAS Departments and from other Schools as appropriate to ensure the requisite breadth of the program. The Faculty serve as concentration advisors and as thesis advisors, and are valuable resource for concentrators.

Advising
Concentrators are assigned individual faculty advisors. Assignments are based on the student’s interests and their current intended field of specialization. For many students, their interests and planned field of specialization will evolve over time. We view this evolution as an integral part of the ESPP advising process. If desired, students may be subsequently re-assigned to an advisor more appropriate for the student’s developing field of specialization.

Students are expected to meet individually with their advisor at least once each term to discuss their plan of study and their resulting course selections, research opportunities, and other academic matters. However, students are encouraged to meet with their advisors more often throughout the year as their interests and desired field of specialization develops. The advisor’s signature on study cards is required. Students may also seek advice from any member of the ESPP Board of Tutors.

Explore

**Suggested gateway courses**
- ESPP 11: Sustainable Development; spring
- EPS 22: The Fluid Earth; Oceans, Atmosphere, Climate and Environment; spring
- SPU 25: Energy: Perspectives, Problems and Prospects; spring
- SPU 29: The Climate-Energy Challenge; fall
- SPU 31: Energy Resources and the Environment; spring
- SLS 22: Human Influence on Life in the Sea; fall
- SLS 25: Trees, Forests and Global Change; spring

Additionally, students are encouraged to take math and chemistry in their first year.

ESPP Alums

Our alumni have followed a variety of career paths. Many of our graduates have pursued graduate/professional school in business, law, medicine, public policy, urban planning, and PhD programs in the natural and social sciences. A number of graduates obtain jobs in consulting or pursue non-profit work; others secure fellowships in the year immediately following graduation.

For further information, please see our Alumni profile page: espp.fas.harvard.edu

At Fortnight I learned that...

“...it’s a pretty viable subject for a variety of activities, including the natural sciences and subjects like greentech. It’s also a smaller concentration that has recently changed its requirements to allow more independence in choosing a focus field and to facilitate the ability to get a secondary as well.”
Overview

Requires Application: Yes
Number of Required Courses: 13 half-courses (14 for Honors)
Honors Option: Yes
Joint Concentration Option: Yes
Secondary Field: Yes; two pathways: Environmental Science and Public Policy (5 half-courses) and Energy and Environment (4 half-courses)
Tutorials: Yes, Junior (seminar)
Tracks: No
Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

Please contact us with questions or to arrange an appointment to discuss our programs. We encourage students to reach out to us early to discuss course selection and scheduling.

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Concentrating in ESPP:
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Eric Simms
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617-496-0746

*Study abroad credit contact

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Harvard University Center for the Environment
24 Oxford St, Third Floor
Cambridge, MA 02138
617-496-6995
Folklore & Mythology

Folklore and Mythology is a liberal education in and of itself. The program encourages the study of any given society through its language and culture, offering an array of choices for drawing on a variety of disciplines in the humanities and social sciences. To focus on the folklore and mythology of a society (at local, regional, as well as national levels) is to understand how that group or society defines itself through epics, music, folktales, legends, dramas, dance, rituals, “beliefs,” proverbs, customs, law codes, festival celebrations, “wisdom literature,” and many other forms of expressive culture. To study the folklore and mythology of any group is to discover how that group identifies itself in relation to others. Concentrators conduct independent research on the material, oral, written, or performed forms of folklore and mythology in a variety of cultures, among them African, North and South American, Celtic, Chinese, English, German, Greek, Indian, Japanese, Scandinavian, and Slavic.

Advising

Concentrators work with individual faculty advisors. They design their special field within the concentration in close collaboration with the Head Tutor (Deborah Foster) or a faculty member of the Committee on Degrees in Folklore and Mythology. Study cards are typically signed by the Head Tutor.

At Fortnight I learned that...

“...Folk & Myth allows a lot of creative freedom for the process of narrowing an area of study. It appears to be a more interdisciplinary, cultural method of study.”

“...instead of a senior thesis, it would be possible for me to do a final project in which I relate it to photography (another strong interest of mine). I also learned how easy it is to concentrate in Folklore and Mythology while also getting a secondary in another field, as I had planned to do the reverse.”

“...the concentration seems really interdisciplinary, which is ideal since I'm unsure of what I want to study.”

Explore

Suggested gateway courses

Culture and Belief 16 (fall). Performance, Tradition and Cultural Studies: An Introduction to Folklore and Mythology. There are also often Freshman Seminars and General Education classes that 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).

F&M Alums

Folklore and Mythology alumni have gone on to do most everything any other graduate of Harvard College has, including medical school, law school, graduate school, publishing, journalism, arts management, even investment banking. In fact, one year in the not too distant past, four students graduated with degrees in Folklore and Mythology: one, whose special field was in Medieval Folk Medicine, went on to medical school; another, whose special field was Celtic Studies, went on to law school; a third, whose special field was English poetry, went on to graduate school, pursuing both a PhD in English and an MFA in creative writing; and finally, the fourth, who combined her interest in Folklore and Mythology with Visual and Environmental Studies, went on to make documentary films, and is now in graduate school in Psychology. Another recent graduate, whose special field was Animation, is now working at Dreamworks. Given Folklore and Mythology’s emphasis on creative and critical thinking as well as cultural analysis, students are prepared for many post-graduate opportunities. Please see our website for a more detailed picture of Life after Harvard with a degree in F&M!
Overview

Requires Application: No
Number of Required Courses: 14 half-courses
Honors Option: Yes (thesis required for High or Highest Honors, or senior project for Honors)
Joint Concentration Option: Yes (thesis or senior project required)
Secondary Field: Yes (5 half-courses)
Tutorials: Sophomore, Junior and Senior
Tracks: Concentrators must choose a special field
Language Required: No. However proficiency in another language is strongly recommended

Questions?
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Holly Hutchison
Department Administrator
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*For a complete listing of requirements, see the Handbook for Students

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Barker Center
12 Quincy St.
Cambridge, MA 02138
617-495-4788

Widener Library houses the internationally renowned Milman Parry Collection of Oral Literature. We invite our concentrators to make our suite of offices in Warren House their home away from home, to sit in our library to study with coffee or tea when tutorials are not in session.

In all cases, faculty members with expertise in students’ areas of interest advise them on their special field course selection and often teach them in the one-on-one junior tutorial. The student/faculty ratio is particularly favorable and students receive close attention from all F&M faculty members.

Other students may design a special field that draws courses from several departments, but which are related by theme; several students in the past have focused, for instance, on medieval studies, taking courses in History, Classics, and Comparative Literature.

Students design their own special field within the concentration in close collaboration with the Head Tutor or an F&M faculty member. For example, a student interested in ethnomusicology at its intersection with Folklore and Mythology would work with a faculty advisor from the music department to select a subset of courses in music to take in conjunction with the required F&M courses, and to integrate these two areas of interest in junior and senior tutorials, culminating in a senior thesis or project.

Students are invited to F&M special events that revolve around lectures or performances, as well as other social occasions, where they meet and interact with Harvard faculty, visiting scholars and fellow F&M concentrators.

Each year, students are invited to participate in the annual Folklore and Mythology symposium, dedicated to a particular topic, where they are introduced to leading scholars in the field as well as returning F&M alumni.

The Committee on Degrees in Folklore and Mythology includes faculty from Anthropology, Celtic Languages and Literature, Classics, German and Scandinavian, English, Near Eastern Languages and Civilizations, Religion, History, Comparative Literature, and South Asian Studies.

In all cases, faculty members with expertise in students’ areas of interest advise them on their special field course selection and often teach them in the one-on-one junior tutorial. The student/faculty ratio is particularly favorable and students receive close attention from all F&M faculty members.

*Study abroad credit contact
Our program invites you to explore the languages, literatures, societies and cultures of the German-speaking and Scandinavian regions of Europe: Germany, Austria, Switzerland, Liechtenstein; and Denmark, Iceland, Norway, and Sweden. We offer language courses in German and Swedish as well as tutorials in Danish, Dutch, Norwegian, Icelandic, and Old Norse, all of which provide a gateway to an exciting exploration of the tremendous impact these cultures have had on the development of Western civilization – from the Vikings to the present day. Consider the impact of figures such as Kant, Marx, Nietzsche, Kierkegaard, and Freud on the development of modern thought; of literary giants such as Goethe and Kafka, Ibsen and Strindberg; of the fairytale worlds of Hans Christian Anderson and the Grimm brothers; of the current blockbuster crime fiction of Stieg Larsson; of Berlin as a modern film metropolis and as a center of innovative new art and architecture; and of Bach, Mozart, Beethoven, and Schubert in the classical music tradition. Our highly personalized concentration and secondary field options enable students to combine language study with fields such as film, drama, comparative literature, philosophy, art history, architecture, history, music, and folklore. Students can choose among the following options within the concentration: German Literature, German Cultural Studies, and Scandinavian Studies, or they may choose to combine their studies in a joint concentration with another field.

Advising
Students are advised by the Director of Undergraduate Studies, who also signs study cards.

At Fortnight I learned that...

"...the department has a wonderful sense of community."
A highly personalized course of study includes the opportunity to work closely with our professors, whose guidance begins with the very first language course through the writing of a senior thesis, and often lasts beyond graduation.

Even if you are not a concentrator, we welcome all students and faculty to join in our many social occasions: our German Club and Scandinavian Society have hundreds of members, who get together frequently for “Stammtisch” at the Queen’s Head Pub, relaxing afternoon coffee hours or Scandinavian “fika”, film nights, as well as Scandinavian performance events, the annual German play production and musical events.

We have a student-run Journal of Germanic Studies, Simplicissimus, featuring poetry, essays, and short stories by Harvard College students about German, Dutch, Yiddish, Norwegian, Swedish and Icelandic topics.

We strongly encourage students to participate in one of our exciting work- and study-abroad programs in Germany, Austria, Switzerland, Sweden, Denmark, and Norway.

Faculty members help students carve a course of study that best suits their interests, often encouraging students to explore courses in related fields (such as history, government, philosophy, linguistics, music, and art history).

Our department and classes are smalls.

**Overview**

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Required Courses:</strong></td>
<td>9-10 half-courses (11-12 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes in German and Scandinavian Studies (5 half-courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Sophomore (optional) and Junior (optional) and Senior (required for honors candidates)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>German Literature, German Cultural Studies, Scandinavian Studies, Joint Concentration</td>
</tr>
<tr>
<td>Language Required:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students*

**Questions?**

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Of all the social sciences, political science has perhaps the least definite boundaries and the most adventurous border crossers. Because it concerns itself with power in all of its many forms and consequences, political science covers many different subjects. These include the philosophy and ethics of exercising power and the history of political ideas (political theory); the operation and distinctiveness of politics in the United States (American politics); the diversity of political regimes, institutions, and behaviors in the contemporary world and the significance of these divergences (comparative politics); the interaction among international actors, the causes of war and peace, and the roots of global poverty and prosperity (international relations). Political scientists work in and across these disciplinary subfields using a large and varied tool kit: qualitative methods such as historical and archival research, fieldwork, interviews, and textual analysis; and various quantitative methods such as statistical analysis, formal modeling, and experiments. Some departments of political science specialize in a particular subfield or methodology. The Harvard Government Department, however, prides itself on its comprehensiveness, diversity, and vibrant pluralism and has strength in all areas of the discipline.

The department understands that undergraduates concentrate in Government for many reasons: some with scholarly intent, some with a passion for policy, some with an eye to a political career, and many just wishing to know more about this inescapable human concern. Nevertheless, we have common goals for all concentrators. First, we aim to make all students aware and critical of their first opinions (since human beings are at their most opinionated in politics). Government students learn to analyze, argue, and persuade: out loud and on paper. This begins in sophomore tutorial, which is focused on debates over democracy. Second, we try to assure that concentrators grasp the main approaches and topics in the discipline of political science by requiring a "literacy" course in political science methods and at least one course in every subfield. Finally, we offer each student the possibility of satisfying his or her particular intellectual bent and curiosity through a cluster of electives and a required seminar. You have the freedom to choose your particular path through the Government curriculum, but we work closely with you to assure your choices are thoughtful and informed.

Advising

When students declare as sophomores, the Teaching Fellow for their sophomore tutorial (Gov 97) serves as their advisor. In their junior and senior years, students work with the designated Government residential tutor in their House. (In a few Houses, this person is a non-resident affiliate.) Students are also always welcome to meet with staff in the Government office.

Explore

Suggested gateway courses
- Gov 10, Foundations of Political Thought (spring)
- Gov 20, Foundations of Comparative Politics (fall)
- Gov 30, American Government: A New Perspective (fall)
- Gov 40, International Conflict and Cooperation in the Modern World (spring)
- Gov 50, Introduction to Political Science Research Methods (fall)

*For a more complete listing, concentrations.fas.harvard.edu

Gov Alums

Common paths for Government concentrators are into the fields of law, government, business, education, media, medicine (including public health and health policy), academia, and non-profits/NGOs.

To read some profiles of our alumni, go to: gov.harvard.edu/undergraduate-program/help-im-about-graduate

At Fortnight I learned that...

“...smaller classes are readily available in junior and senior year, and that government has a far greater diversity of studies than I initially thought. Since Gov is one of the largest concentrations at Harvard, I will always have plenty of peers to go to for insight and advice.”

“I could do a joint concentration with another concentration that interests me, such as Sociology. I also learned that I do not have to take prerequisites for this concentration, and can focus on what interests me most.”
In our seminar program, students work closely with faculty members. Although we are a large department, we make an extra effort to make our concentrators feel welcome.

We offer course credit for acting as research assistants for faculty projects.

We have a house-based advising system with an assigned concentration advisor for each House. Our Undergraduate Office is also open from 9 to 5 for drop-in advising and we sponsor a number of events for informal interaction with faculty.

Approximately 30-40% of all concentrators choose to write an honors thesis each year.

Government concentrators have access to some of the foremost experts in the field of political science.

The undergraduate Government concentration is not a part of the Harvard Kennedy School, although we do have a list of pre-approved courses at HKS that count for Government elective credit.

**Overview**

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>10 half-courses (13 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (5 half courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Sophomore tutorial, seminar (1 basic, 2 honors), and Senior tutorial (honors)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>No</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

**Questions?**

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*Study abroad credit contact

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History

History is more than just the study of the past; it examines how societies, people, and nature actually functioned in the past and in turn, how that context affects the present. Our faculty’s courses enable students to encounter the unfamiliar and to approach it with empathy and analytical understanding. We teach our concentrators to appreciate change over time, contingency, complexity, and diversity of perspectives; to analyze sources closely, to research deeply, to write clearly, and to speak with confidence. Our Department teaches tomorrow’s leaders why yesterday matters.

Historians study politics and government; diplomacy and international relations; science and technology; finance and economics; religion and philosophy; literature and arts; cultural and social changes and exchanges; archaeology, anthropology, evolutionary psychology, and genetics. Interdisciplinarity is native to historical practice. Our students familiarize themselves with the methods and theoretical assumptions of other disciplines, even while learning how these methods and theories are just as much products of history as the questions they were developed to address. The in-depth study of history — with its emphasis on rigorous analysis, research, and writing — prepares students exceptionally well for navigating the data-rich, networked, globalized world in which they live.

History makes all your interests more interesting. And, to be honest, who wouldn’t relish the chance to spend their college years reading really great books and thinking about the issues that intrigue them most?

Advising

The History department offers extensive advising support to students. For an overview of faculty, staff, and peer advising roles in the department, and of the many advising resources that are available to you, go to:

history.fas.harvard.edu/programs/undergraduate/advising-resources/index.php

At Fortnight I learned that...

“...a History concentration is perfect for someone with many academic interests. You can study many subjects -- science, government, economics, folklore -- under the umbrella of history. By concentrating in History I can study everything I love without having to sacrifice other areas of academia.”

History Alums

Just as history is everything, so too you can do anything with history. Our alumni have gone on to a wide range of careers from magic to medicine, from brewing beer to business, from the military to the media. History teaches you to examine issues critically and creatively, grasp details while seeing the big picture, and think boldly but flexibly enough to change your opinions when change is warranted. These skills are valued and actively sought after in countless fields. In a typical year, about 25% of our graduating concentrators move on to law school, around 25% enroll in business school, and approximately 10% move on to academic careers. The remaining 40% are spread across the public and private sectors and across the globe, with teaching, consulting, journalism, and careers in government and the non-profit sector well represented. Thanks to close interactions with faculty who can recommend them with first-hand experience, our concentrators typically do very well in securing offers of jobs and further education.

Explore

Suggested gateway courses

General Education Courses Fall 2015
• 1011, The World of the Roman Empire (Fulfills Societies of the World); fall
• 1445, Science and Religion in American History (Fulfills United States in the World or Culture and Belief); fall
• SW 12, China
• SW 14, The British Empire
• SW 43, “Japan’s Samurai Revolution
• US 40, New World Orders? From the Cold War to Contemporary International Relations

General Education Courses Spring 2015
• 1020, A Global History of Modern Times (Fulfills Societies of the World); spring
• 1035, Byzantine Civilization (Fulfills Societies of the World); spring
• 1462, History of Sexuality in the Modern West (Fulfills United States in the World or Culture and Belief); spring
• ER 34, Liberty
• SW 18, Europe on Trial: Retribution, Renewal and Reconciliation Since 1945
• SW 45, Beyond the Great Wall: China and the Nomadic Frontier
• US 30, Tangible Things: Harvard Collections in World History
• US 41, Power and Protest: The United States in the World of the 1960’s

*For a more complete listing, concentrations.fas.harvard.edu
Overview

Requires Application: No
Number of Required Courses: 10 half-courses (12 for Honors)
Honors Option: Yes (thesis required Honors)
Joint Concentration Option: Yes, with East Asian Studies (thesis required), Near Eastern Languages and Civilizations (thesis required) and Classics (thesis required); possible to negotiate joint concentrations with other language departments (e.g. German)
Secondary Field: Yes (5 half-courses)
Tutorials: Sophomore (1 half-course) and Senior (if writing a thesis—2 half-courses) + 2 seminars required before the senior year in lieu of junior tutorial
Tracks: No
Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Heidi Tworek*
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*Study abroad credit contact

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history@fas.harvard.edu
History & Literature

History and Literature’s innovative and rigorous approach to interdisciplinary scholarship allows students the flexibility to design an individualized course of study. With their tutors, students explore cutting-edge research in the humanities, while learning how to shape research projects of their own. History and Literature’s tutorials provide the opportunity to learn about and apply interdisciplinary tools of analysis to a rich variety of topics. They also allow students to integrate their courses in literature, history, and related fields into a challenging and coherent plan of study.

What is history? What is literature? These are questions we ask every week. There is no single way to describe how these two disciplines fit together, and how they resist being fit together. Discovering and exploring that relationship is the touchstone of the student’s experience in History and Literature.

Advising

History and Literature concentrators have mandatory sophomore, junior, and senior year tutorials. Students’ tutors, each year, serve as their primary academic advisors and sign their study cards. Students are welcome to drop by the History and Literature office at any time for additional advising.

Hist & Lit Alums

Graduates of History and Literature have gone on to careers in a range of fields, including business, banking, consulting, medicine, law, government, media, public policy, education, the arts, and academia.

Go to histlit.fas.harvard.edu/content/alumni for Alumni Voices, a series of profiles of History and Literature alumni. You can also click on the link on the profile pages for recent alumni to see the courses they took to fulfill their concentration requirements in History and Literature.

Explore

Suggested gateway courses

First year

• First year students are encouraged to take History and Literature 90 seminars in their field(s) of interest and to explore courses in History and the literature department relevant to their interests (English, Romance Languages, German, Slavic).

• Students should begin or continue to acquire foreign language skills as needed for their field of interest

*For a more complete listing, concentrations.fas.harvard.edu

Other ways to explore

• Visit our open office hours, Mon-Thurs 10-12 and 2-4 in Barker 122 during the semester.

• Contact a peer advisor to get a current student’s perspective: histlit.fas.harvard.edu/content/peer-advisors

At Fortnight I learned that...

“...this concentration gives concentrators vital communication skills that are useful in post college careers. Some of the panelists discussed their careers in finance and consulting and their current educational pursuits at HBS, which were paths that I did not realize were possible with a humanities concentration.”

“...studying Hist & Lit doesn’t restrict you at all, and that being able to write and think with a humanities perspective is valuable in fields like medicine and business.”

“...in Hist and Lit, unlike in pure History, you select a field of study that corresponds to a specific global region. I also learned that there is much overlap in advising between the History and History and Literature department that greatly facilitates thesis writing. I like how each curriculum allows the student to tailor his study to the era or location that interests him or her the most.”
Overview

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requires Application:</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of Required Courses:</td>
<td>14 half-courses</td>
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<tr>
<td>Honors Option:</td>
<td>Yes (thesis required for all concentrators)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes, but History and Literature must be the primary concentration</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>No</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Sophomore, Junior, and Senior</td>
</tr>
<tr>
<td>Tracks:</td>
<td>America, Latin America, Postcolonial Studies, Modern Europe, Medieval Europe, Early Modern Europe, additional special fields by arrangement with the Director of Studies</td>
</tr>
<tr>
<td>Language Required:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Dr. Jennifer Brady*
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617-495-3448

Dr. Rachel Gillett
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Betsy More
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*Study abroad credit contact

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12 Quincy St.
Cambridge, MA 02138
History & Science

History and Science is an interdisciplinary field of study. The program offers students a variety of opportunities to expand their understanding of the scientific enterprise and to explore in detail how science has developed in history and how science has shaped other human activities. Students are challenged to ask big questions about science, medicine, and technology, and their place in human societies across time.

How do scientists come to know things about the natural world? Why should we believe what they tell us? What are some social, ethical, political and religious implications of science? How do they affect the way people in different times and places live their lives? Students focus on many topics and time periods, from Darwinism to modern biotechnology, medieval understandings of women’s bodies to modern computing. At the same time, through the tutorial program, all students are taught skills of advanced source analysis, independent research, and academic writing which both prepares them to write a senior thesis, if they wish, and sets them up to succeed in a wide range of graduate programs and careers after college, from consulting to law school to medical school.

By taking a combination of courses from our department and also outside of it, students can learn how sciences as diverse as theoretical physics and economics interact with other areas of culture such as literature, film, art, or government.

Advising

The Director of Undergraduate Studies (DUS), Anne Harrington, has overall responsibility for academic advising in the concentration. The ADUS, Nadine Weidman (weidman@fas.harvard.edu), is also available for individual consultation. The Manager of Student Programs, Allie Belser, is the primary concentration advisor for all concentrators. She also signs their study cards. Additional advising is provided by the faculty who lead History and Science sophomore, junior, and senior tutorials. Freshmen considering History and Science should contact the Manager of Student Programs, the DUS, or the ADUS.

At Fortnight I learned that...

“History and Science is the perfect concentration for me—a student with a love for the humanities and a passion for science and premedical studies.”

Explore

Suggested gateway courses

- History of Science 100. Knowing the World: Introduction to the History of Science (fall)
- History of Science 108. Bodies, Sexualities, and Medicine in the Medieval Middle East (fall)
- History of Science 122v. Science and the Cold War (spring)
- History of Science 132v. History of the Earth and the Environment (spring)
- History of Science 136. History of Biotechnology (spring)
- History of Science 149v. Explaining Epidemics (spring)
- History of Science 176. Brainwashing and Modern Techniques of Mind Control (spring)
- History of Science 180. Science, Technology and Society in Modern East Asia (fall)
- History of Science 186v. Technology and the Everyday (spring)
- Culture and Belief 34. Madness and Medicine: Themes in the History of Psychiatry (fall)
- Ethical Reasoning 33. Medical Ethics and History (fall)
- Science of Living Systems 12. Understanding Darwinism (fall)
- Science of the Physical Universe 17. The Einstein Revolution (spring)
- Freshman Seminar 22l. Justice in Health: Ethics of Public Health in the Contemporary World (fall)
- Freshman Seminar 41q. Boston Green (spring)
- Freshman Seminar 44t. The Atomic Bomb in History and Culture (fall)
- Freshman Seminar 44w. The Masquerade of Common Scents: An Exploration of Ephemeral Knowledge (fall)

Hist & Sci Alums

Many of our alumni have used their time in our concentration as a launching pad for further professional study, especially law and medical school. In fact, our Medicine and Society cluster is an honors-only option designed especially for premedical students. Because we teach advanced research skills, our graduates have also been attractive candidates for positions in business consulting, government, and health or science policy. Some have also gone on to teach in programs like Teach for America, where their broad training in both science and history have made them highly competitive. Finally, some of our alumni have so enjoyed their time in our concentration that they have decided to seek a Ph.D. in the field.

A 2013 survey of our alumni asked about their career paths since graduating, and how useful History and Science had been in their professional lives since college. The survey attracted over 500 enthusiastic responses; the highlights can be found on the History and Science Student Lounge on the department’s website.
History and Science may be a good choice for you if you are interested in...

Overview

Requires Application: No
Number of Required Courses: 11 half-courses (13 for Honors)
Honors Option: Yes (thesis required)
Joint Concentration Option: Yes, subject to approval, and only with History and Science as the primary concentration. A thesis is required.
Secondary Field: Yes (5 half-courses)
Tutorials: Sophomore and Junior, Senior for honors
Tracks: History of Science; Science and Society; Medicine and Society focus; Mind, Brain, and Behavior focus
Language Required: No

Questions?

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Alice Belser*
Manager of Student Programs
Concentration Advisor/Secondary Fields Contact
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*For a complete listing of requirements, see the Handbook for Students

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hsdept@fas.harvard.edu

*Study abroad credit contact
The History of Art 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. Art history is a multifaceted discipline embracing many different methods, perspectives and interests. 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. It also fosters the ability to make and explain judgments of quality and value.

Instruction in critical analysis is aided by the department’s partnership with one of the world’s greatest teaching museums, comprising the Fogg, Busch-Reisinger, and Sackler Museums. This offers students a unique opportunity of first-hand study of original works of art in many media. Generally, course work offers coverage of the history of art, while a sequence of small-group tutorials develop critical skills. For students with a special interest in architecture, the concentration offers courses on architectural history and urban planning. Requirements for all concentrators provide exposure to a variety of areas within art history, as well as allow for the selection of a major field focus from among the following: African, Ancient (Egypt, Ancient Near East, Greece, Rome), Architecture, Baroque and Rococo, Byzantine, Chinese, Japanese, South Asian, Islamic, Latin American/Pre-Columbian, Medieval, Modern and Contemporary, and Renaissance.

### HAA Alums

What does one do after undergraduate study in History of Art and Architecture? Well, most anything, really: many of our students go on to graduate study in History of Art and Architecture and careers in Academia or in Museums – we have many alumni on faculty at universities across the country, and curators and conservators at museums around the world; many others go on to graduate study in the practice of Architecture, becoming architects, landscape architects, or urban planners. Many have gone into a wide variety of career directions – equipped with skills in visual, textual, and historical analysis which are particularly applicable to career pursuits in a modern world which is a far more visually-oriented society than the text-based society of the twentieth century.

Alumni of History of Art and Architecture hold positions in advertising, media, design, the arts (filmmaking, music production, drama, dance), and the fashion industry. Many go into finance – we have many bankers and consultants in our alumni ranks, along with professionals in marketing, merchandising, and brand development. Several have pursued medicine and completed the pre-med track alongside their concentration in History of Art and Architecture. They made particularly striking candidates to Medical Schools’ admissions boards. Many have gone on to Law School and are practicing attorneys. Others hold positions in government, from the State Department and Department of Transportation to the Israeli Knesset. We also have creative and striking individualists: journalists, caterers, actresses, yoga instructors, children’s book writers, cookbook writers, bloggers, professional athletes, hoteliers, and a ship-broker – we are in touch with many of these former students, and may perhaps be able to offer a bridge of communication to those students wishing to talk with “someone in the field.”

In short, like many other concentrations in the Humanities and Social Sciences at Harvard and elsewhere, study of History of Art and Architecture need not necessarily be directed toward a specific vocational or professional end. History of Art and Architecture offers concentrators the opportunity to pursue the study of things and questions about which they are excited and to develop skills useful in many walks of life and careers.

### At Fortnight I learned that...

“...HAA concentrators are now all over the world and go on to graduate school and a variety of careers. The concentration includes a lot of travel. It is a small and close-knit department.”
Requires Application: No

Number of Required Courses: 12 half-courses (14 for Honors)

Honors Option: Yes (thesis required)

Joint Concentration Option: Yes (thesis required)

Secondary Field: Yes (6 half-courses)

Tutorials: Sophomore and Junior (both half-course), Senior (honors)

Tracks: African, Ancient, Architecture, Baroque and Rococo, Byzantine, Chinese, Indian, Islamic, Japanese, Latin American/Pre-Columbian, Medieval, Modern and Contemporary, Renaissance

Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Thomas Batchelder*
Undergraduate Coordinator
Secondary Fields Contact
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haa.fas.harvard.edu

Sackler Museum
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Cambridge, MA 02138

617-495-2377

*Study abroad credit contact
Human Developmental and Regenerative Biology (HDRB)

Human Developmental and Regenerative Biology 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.

To the extent that “translational” or “applied” research focuses on the application of discoveries made in model systems to humans, the HDRB concentration will embrace the opposite approach. Its emphasis will be on rigorous basic science with a focus on what the study of humans reveals about fundamental biology and, reciprocally, what a greater understanding of biology teaches us about ourselves. We believe that a fundamental understanding of how the human organism develops and maintains itself requires foundational knowledge in life sciences, chemistry, and physical sciences, which are in turn dependent on a fundamental knowledge of mathematics. The requirements for the concentration reflect this view.

HDRB is governed by the Department of Stem Cell and Regenerative Biology. The framework of the concentration takes advantage of faculty strength in both the Faculty of Arts and Sciences, and Harvard Medical School. HDRB concentrators will focus on human biology with significant emphasis on hands-on research. The curriculum provides a range of courses that will benefit students interested in medicine and biomedical research, as well as other fields in which a comprehensive understanding of human biology is needed.

Advising

Primary advising in the concentration is provided by the Associate Director of Education (Bill Anderson), who also signs study cards.

HDRB Alums

The Human Developmental and Regenerative Biology concentration graduated its first class in 2012. Most alumni pursue graduate studies in medicine or the biological sciences. Some have also entered private industry to work in biotech. However, the critical thinking and analytical skills stressed and honed by the HDRB curriculum can be translated to a variety of careers, such as business/consulting, public health/policy, education, and intellectual property law.

Explore

Suggested gateway courses

First year

• Life Sciences 1a or Life and Physical Sciences A; fall (according to placement)
• Math (according to preparation and placement scores).
• Life Sciences 1b; spring
• Physical Sciences 1; spring. 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.

Second year, first term

• Students ordinarily enroll in Human Developmental and Regenerative Biology, Stem Cell and Regenerative Biology 10; fall.
• Organic chemistry (Chemistry 17). Students with an exceptionally strong chemistry background who took Chemistry 20 in the spring of their first year typically enroll in Stem Cell and Regenerative Biology 10 and Chemistry 30 in their third semester.
• To fulfill molecular biology requirements for HDRB, students must take one of the following courses: MCB 52 (fall term), MCB 60 (fall term), or SCRB 20 (spring term). As a result, some students will also enroll in Molecular and Cellular Biology 52 or Molecular and Cellular Biology 60. Students are encouraged to speak to Dr. Bill Anderson, the HDRB advisor, prior to enrolling in any combination of SCRB 10, Chemistry 17, MCB 52/MCB 60 concurrently.

At Fortnight I learned that...

“...the ‘mindset’ of the HDRB concentration is a lot different than I originally believed, in that the concentration utilizes a more broad-scale method of thinking and analyzing, rather than simple memorization. Classes like SCRB 10 teach you how to think analytically.”

“...HDRB seeks to integrate modern technology, like the use of stem cells, into biology and medicine.”
Students have studied a variety of different topics, including, for example, stem cell differentiation, organogenesis, designing drugs to target proteins of interest in human disease, RNA regulation, epigenetic control of gene development, and in vitro disease modeling.

All HDRB students spend at least one semester working on a hands-on project in a lab of interest.

Department offers opportunities to perform independent research in a faculty member’s lab.

Some of the most exciting discoveries in modern biology have emerged from studies of development including the description of the major signaling pathways used for intercellular communication, the discovery of small regulatory RNAs, an understanding of how genes control body pattern, and animal cloning.

The field of developmental and regenerative biology encompasses one of the more exciting and expansive areas in the life sciences.

Advances in developmental biology have enhanced our understanding of cell and molecular biology, influenced and defined approaches to regenerative medicine, and informed thinking about problems in evolution.

Overview

Requires Application: No

Number of Required Courses: 13 half-courses (15 for honors)

Honors Option: Yes (thesis required)

Joint Concentration Option: No

Secondary Field: No

Tutorials: Typically Junior, 1 half-course research. Thesis, 2 half-courses.

Tracks: No

Language Required: No

*For a complete listing of requirements, see the Handbook for Students

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*Study abroad credit contact

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Cambridge, MA 02138

617-495-4106
Evolutionary theory provides a powerful framework for investigating questions about why humans are the way they are. Human evolutionary biologists seek to understand how evolutionary forces have shaped our design, our biology, and our patterns of behavior. Examples of questions in which we are interested include:

- Are humans adapted to eating cooked food?
- Why do human males invest in their offspring?
- How are humans different from non-human primates?
- What are the genetic bases for these uniquely human traits?
- When, where, how and why did Homo sapiens evolve?
- What is the role of hormones in behavior and development?

Human Evolutionary Biology (HEB) provides a general foundation in human and organismic biology as part of the life sciences cluster of concentrations. Students interested in addressing questions about human and non-human primate cognition from the perspective of human evolutionary biology may pursue a special program of study affiliated with the University-wide Mind/Brain/Behavior Initiative.

We encourage our students to get involved in research in HEB, and we offer many small, advanced courses for students to work intensively with members of the faculty. Opportunities vary from primarily lab-based research — such as in behavioral endocrinology, dental histology, evolutionary genetics, phylogenetics, anatomy, or primate and human nutrition — to field-based work — such as studying indigenous peoples in South America or primates in East Africa. Our faculty works closely with undergraduates on research projects of all kinds, for senior theses, research seminars and tutorial classes.

**HEB Alums**

Many of our graduates have commented that one of the advantages of an undergraduate education in HEB is the diverse and powerful skill set that they developed in the concentration. The skills that HEB students learn, and that are valued and considered most useful in almost any career, include critical thinking, scientific writing and research, the ability to critically evaluate original scientific literature, and small group communication, to name a few. Students also say they greatly appreciate learning to think about the human condition from an evolutionary perspective — this gives them the tools to think more deeply about the causes of some of the problems that humans face and the kinds of solutions that might be most effective and practical given our history. In short, a degree in HEB does not prepare you for any field specifically, but rather gives you the opportunity to develop valuable “transferable” skills, on which you can build, that will allow you to succeed in almost any field.

Most of our graduates go on to work in the fields of medicine or public health (many attending medical school), while a minority pursue PhD programs in graduate school in the life sciences. Others enter consulting, business, or teaching, but graduates can be found following a very broad range of pursuits.

**At Fortnight I learned that...**

“...HEB is a ‘big picture’ concentration, since it deals with the idea of evolution, so most of the questions explored in the courses are ‘why’ questions about what makes us human and how we became who we are today. It is less focused on “how” questions such as ones that deal with how specific processes and pathways within the body work.”
Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
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</thead>
<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>13 half-courses (15 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis optional)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>No</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (5 half-courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Sophomore, Junior research, Senior (thesis writers only)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>All students must include 1 course in: evolution (human or primate), physiology/anatomy, and behavior (human or primate)</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students*

Questions?

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Program Coordinator  
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617-495-3399

*Study abroad credit contact

Advising

The Assistant Director of Undergraduate Studies, Carol Hooven, and the Associate Concentration Advisor advise students and sign study cards.

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Biolabs  
52 Oxford St.  
Cambridge, MA 02138  
617-496-1193

*Our research and teaching is constantly informed and illuminated by an evolutionary approach. Because we are interested in humans from a comparative perspective you should also expect to learn something about nonhuman species, especially our close relatives the apes*

*We focus on the cultural and ecological aspects of human behavior as well as on the genetic, anatomical, and physiological*

*Research opportunities are readily available*

*Research in HEB incorporates multiple disciplinary approaches (genetics, functional anatomy and physiology, paleontology, human and primate behavior) in answering questions about human health and our place in nature, and how and why we came to be who we are today*

*Our department has a feeling of warmth and intimacy. Your advisors will get to know you well, and you are always welcome to drop by their offices.*

*Our evolutionary perspective enables us to answer not only the “how” questions of human biology (i.e., exactly how is the head stabilized during running?), but the “why” (i.e., why do humans walk upright when closely related primates walk on all fours?)*

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*We focus on the cultural and ecological aspects of human behavior as well as on the genetic, anatomical, and physiological*
Evolution is the strand that ties together all of biology: from the adaptive specifics of a membrane pore to grand events in the history of life, such as the Cambrian Explosion, when, 540 million years ago, life went in a single bound from simple to complex. But adaptive evolution is a response to the demands of the environment, whether this is the environment within a cell or an ecological community of interacting organisms. Integrative Biology (IB) therefore is inherently inter-disciplinary, encompassing mathematical and computational biology, functional and genetic approaches to morphology and development, as well as genetics, evolution, and ecology.

Advising

Concentrators are assigned individual faculty advisors. General advising in the concentration is also provided by the Assistant Head Tutor, Andrew Berry. The IB concentration is administered by the Department of Organismic and Evolutionary Biology.

IB Alums

IB students are often pre-med, pre-vet or planning on going on to graduate school in some area of biology (ranging from ecology to molecular biology). Because Public Health is, to some extent, about human ecology, many IB pre-meds are particularly interested in public/global health. Many go to work in environmental organizations. Many, too, go into business, consulting, banking, or the Law.

Explore

Suggested gateway courses
First year
- Life Sciences 1a or Life and Physical Sciences A (fall)
- Life Sciences 1b (spring)

Second year, first term
- OEB 10 (fall), the survey course required of concentrators (this course serves as a prerequisite for the department’s more advanced courses)

Other ways to explore
- Contact us if you’re interested in joining IB’s Undergraduate Group (OEBug), which organizes (and funds) IB-related activities. It’s a great way to become a part of the IB undergraduate community
- Come talk to us if you’re interested in kicking off a research career in IB

At Fortnight I learned that...

“...Integrative Biology is a very flexible concentration that allows you to mix and match different kinds of investigation in biology into a concentration that best suits your interests. I like that I could choose to either delve deeply into a specific ‘track,’ or choose a little bit of everything from “dinosaurs to proteins all through the lens of evolution.”

“...I IB seems like, by far, the most attractive concentration for me in the life sciences. It seems flexible, interesting, and I think it has a liberal arts spirit to it that I really appreciate.”

“...I learned about the different types of classes offered by the department and, namely, about the range of classes you can take. In addition to the general requirements, I would have to take 4 classes in the hard sciences or applied math, which fits in perfectly with my schedule since I’m pre-med, and it would complement my schedule nicely in addition to being very flexible.”

*For a more complete listing, concentrations.fas.harvard.edu
Overview

Requires Application: No
Number of Required Courses: 13 half-courses
Honors Option: Yes (thesis required for Highest Honors)
Joint Concentration Option: No
Secondary Field: Yes
Tutorials: None, Supervised Research and Reading Courses required
Tracks: No formal tracks
Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

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*Study abroad credit contact

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Cambridge, MA 02138

*Study abroad credit contact
Linguistics

“Linguists are no different from any other people who spend more than nineteen hours a day pondering the complexities of grammar and its relationship to practically everything else in order to prove that language is so inordinately complicated that it is impossible in principle for people to talk.” (Ronald W. Langacker 1973)

Linguists are engaged in the study of language structure, which is the ultimate interdisciplinary enterprise. Linguistic theory attempts to model a complex domain of human knowledge that is also central to philosophy of mind and to cognitive psychology. The linguistic models that theoretical linguists construct are formal in character and rely on computational and mathematical methodologies. As such, linguistics has a mutually beneficial relationship with computer science and the study of artificial intelligence. An individual language is a cultural artifact, and so the reconstruction of an extinct language can shed light on the physical surroundings and the social institutions of its speakers, while the study of a living understudied language leads to the understanding of material culture, folklore, and society of a new community. That makes linguistics a topic of interest to anthropologists, sociologists, and archaeologists.

Students who gravitate to linguistics are necessarily interested in language, but that means different things for different people. Linguists are not necessarily polyglots. Many are intrigued by formal systems and the prospect of modeling complex behavior; others are interested in the relationship of natural languages to other symbolic systems; still others are drawn into the formal study of language by the similarities and differences they have noticed among individual languages.

Advising

Primary advising in the concentration is provided by the Head Tutor (Maria Polinsky, polinsky@fas.harvard.edu) who also signs all study cards. Students may seek out additional advising from members of the faculty who work on topics of shared interest.

Explore

Suggested gateway courses
- Empirical and Mathematical Reasoning 11: Making Sense: Language, Thought and Logic (Spring 2016)
- Linguistics 83: Language, Structure, and Culture (Fall)
- Linguistics 101: Introduction to Linguistics (Spring)
- Psychology 1605: Psychology of Language (Spring)

Linguistics Alums

Undergraduate training in linguistics at Harvard is second to none, as evidenced by the fact that each year graduating concentrators enter the most competitive graduate programs in the country. However, the majority of graduating seniors do not pursue academic careers. Instead, concentrators in linguistics become consultants, earn professional degrees in medicine and law, and pursue careers in industry. A growing trend for graduating seniors is to work in the field of automated speech technology at companies such as Google Inc.

At Fortnight I learned that...

“...the Linguistics department is a close community where the department can afford to spend individual time with students and that the concentration is well-suited to interdisciplinary study in a variety of fields (e.g., computer science, literature).”
Our department offers exposure to many fields of linguistic study with particular emphasis in three domains: linguistic theory, historical linguistics, and the cognitive aspects related to language.

As Boston is a major center of linguistic research, students are often exposed to developing research in area departments and laboratories as well as main workshops and conferences in the field.

**Overview**

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</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (5 half-courses in one of three areas: Language History and Language Structure; Language and Linguistic Theory; Language, Mind and Brain)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>1 half-course sophomore year and 1 half-course junior year</td>
</tr>
<tr>
<td>Tracks:</td>
<td>Linguistics (with and without honors); Linguistics with a related field (with and without honors); Linguistics and Mind/Brain/Behavior (honors only); Linguistics as a joint concentration (honors only)</td>
</tr>
<tr>
<td>Language Required:</td>
<td>Students must demonstrate knowledge of one foreign language by end of junior year; Honors tracks require two foreign languages (except Linguistics and MBB and Linguistics as a joint concentration, which require only one).</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students*

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85
Mathematics

Mathematics is the science of order, and mathematicians seek to identify instances of order and to formulate and understand concepts that enable us to perceive order in complicated situations.

Perhaps the most important concept of mathematics is that of function, which provides us with the means to study dependence and change. The study of real functions of a real variable (and later complex functions), particularly in connection with the limit concept, is called analysis. The most effective tool for this study is the infinitesimal calculus that analyzes the relation between functions and their derivatives. The study of number systems and their generalizations is called algebra. Here the primary concepts are group, ring, field, and module. The last great branch of mathematics is geometry, which now goes far beyond the classical study of the space we live in to include spaces of high dimension and topology, the abstract theory of shape.

Pure mathematics is concerned with these concepts and their interrelationships, while applied mathematics considers the relation of mathematical concepts to problems arising in other disciplines. Applied mathematics is not a single subject; rather it is almost as many different subjects as there are other disciplines. (But it would be a mistake to think that applied mathematics is organized in terms of the disciplines to which it is applied.)

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.

Explore

Suggested gateway courses

First year (potential concentrators should enroll in a math course at the appropriate level)

- Mathematics 21a, Multivariable Calculus and Mathematics 21b, Linear Algebra and Differential Equations (fall and spring)
- Mathematics 23a and 23b, Linear Algebra and Real Analysis I and II (fall and spring)
- Mathematics 25a and 25b, Honors Linear Algebra and Real Analysis I and II (fall and spring)
- Mathematics 55a, Honors Abstract Algebra and Mathematics 55b, Honors Real and Complex Analysis (fall and spring)

*For a more complete listing, concentrations.fas.harvard.edu

Advising

The department assigns all students a faculty member as their concentration advisor. If you prefer to change your assignment, please talk to Cindy Jimenez in room 334 (cindy@math, tel. 495-9116). Your advisor can help you plan your course-work, and will sign your study card. How much contact you have with your advisor and how helpful he or she is will depend almost entirely on your initiative. Feel welcome to drop by during his or her office hours or during our 4 pm teas (see below), or to invite your advisor to lunch in Annenberg or at your House, courtesy of Harvard (just ask the checker in the dining hall for the form). Your advisor can help you plan your courses, choose a thesis topic, serve as a thesis advisor, learn about mathematical research, and apply to grad school.

Math Alums

A concentration in mathematics provides a valuable background for many different careers. About half of our seniors go on to graduate school, either in mathematics or in nearby fields. Others pursue professional training in law, business, or medicine, or go on to work in any number of areas, from finance to the arts.

At Fortnight I learned that...

“...there is a lot of freedom in the pure math concentration and that my desire to pursue a full and diverse liberal arts education could easily correspond with the math concentration. Particularly, they embraced my interest in VES.”
Overview

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<thead>
<tr>
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<tr>
<td>Number of Required Courses:</td>
<td>12 half-courses (thesis required for Honors eligibility)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required if Mathematics is the primary field)</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (4 half-courses; Mathematical Sciences)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>None required, but Math 99r is suggested</td>
</tr>
<tr>
<td>Tracks:</td>
<td>Mathematics and Teaching Option</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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*Study abroad credit contact

“Math is hard but beautiful.”
Mechanical Engineering

Engineering plays a critical role in enhancing social progress and improving our quality of life, facilitating the modern healthcare and energy systems and the transportation, communications, and computational infrastructure that connects the global community. Engineering has also enabled fundamental advances in basic science. Imaging and manufacturing structures at the nanoscales, virtually “lossless” transmission of information, and unprecedented levels of computational power have led to fantastic new discoveries. These technologies have allowed us to decode the genome, understand the formation of galaxies, and make correlations between social networks and underlying human psychology. In the 21st century, rapid and efficient access to new innovations is necessary to tackle myriad challenges. The Mechanical Engineering program educates future leaders to have the technical background necessary to develop and critically evaluate the next wave of engineering innovations, to apply these innovations to important global and local problems, and to make informed decisions in a societal context.

Engineering has evolved over the years to not only delve deeply into specific fields, but also to seek out solutions to real-world problems by combining concepts from a broad range of scientific disciplines. For example, alternative energy is a rapidly expanding and immensely important field that requires integration of a wide range of science and engineering disciplines. Topics include understanding the inherent properties of materials and devices that harness the sun’s rays, assessing the challenges associated with large-scale production and distribution of fuels, addressing both the societal and environmental impacts of new technologies, and controlling the dynamics of power supply and demand in large, “smart” networks of generators and users.

Because it exists within Harvard’s liberal arts environment, the Mechanical Engineering concentration provides students with both the breadth and depth of study needed to excel in this area of engineering. The curriculum emphasizes a solid background in the applied sciences and mathematical analysis, with ample opportunities to apply these fundamentals to real-world issues and learn about state-of-the-art technologies. Students also gain experience in the engineering design process, which is a unique engineering activity that requires creative synthesis and analysis to fulfill specified needs.

Harvard’s degree in Mechanical Engineering is a Bachelor of Science (S.B.) degree that consists of 20 half-courses. As this program was new in the fall of 2012, it will be reviewed for ABET-accreditation during the next review in 2015. Students interested in a Bachelor of Arts (A.B.) degree in mechanical engineering should refer to the Mechanical Engineering and Materials Science track of the Engineering Sciences concentration. Additionally, students interested in learning more about the other engineering areas should refer to the Biomedical Engineering (A.B.), Engineering Sciences (A.B. or S.B.), or Electrical Engineering (S.B.) concentrations, which are listed in this handbook.

Advising

Students in the engineering concentrations, including Biomedical Engineering (A.B.), Electrical Engineering (S.B.), Engineering Sciences (A.B. & S.B., all tracks), and Mechanical Engineering (S.B.), have a concentration advising team that consists of an Assistant Director for Undergraduate Studies, a Director of Undergraduate Studies, and an individual faculty advisor. In general, the ADUS is the first line of communication for concentration-related questions and forms (including signing study cards), and students should plan to meet regularly with both their ADUS and faculty advisor to discuss their plan of study, academic interests, and career goals. Currently enrolled College students outside of engineering, including pre-concentrators, are encouraged to contact any of the Assistant Directors for Undergraduate Studies who are prepared to discuss all of the engineering options in SEAS.

Explore

Suggested gateway courses
- Engineering Sciences 6 (Environmental Science & Technology), spring
- Engineering Sciences 50 (Introduction to Electrical Engineering), fall
- Engineering Sciences 51 (Computer-Aided Machine Design), fall and spring
- Engineering Sciences 52 (The Joy of Electronics – Part 1), fall and spring
- Engineering Sciences 53 (Quantitative Physiology as a Basis for Bioengineering), fall

*For a more complete listing, concentrations.fas.harvard.edu

Mechanical Engineering Alums

Concentrators in engineering sciences learn how to think critically and develop innovative solutions to a variety of problems, and students can use these skills to address a wide range of real-world issues. Past students have attended graduate school at leading universities in areas ranging from engineering to law to business to medicine, while others have entered the workforce right after graduation with positions at leading consulting, engineering, and business firms.

Read more about our alumni at: seas.harvard.edu/academics/undergraduate/engineering-sciences/careers

At Fortnight I learned that...

“...pursuing a degree in Mechanical Engineering will give me a broad foundation and a good background that will prepare me for a variety of different fields or subspecialties in engineering after I graduate.”
The program offers rigorous preparation for a diverse range of careers in industry, education, and government.

Students actively engage with hands-on learning through coursework and independent research.

Courses with laboratory components provide experience using state-of-the-art technologies.

Concentrators can study abroad (generally requires planning starting in freshman year).

Students planning to pursue the SB degree are strongly encouraged to complete their basic math and science (e.g., physics, chemistry, etc.) requirements by the end of their sophomore year.

Concentrators can also apply their knowledge to projects outside of the classroom.

Concentration is broad-based and multidisciplinary.

All S.B. students complete an engineering design project during their senior year in which they develop and prototype a new technology.

A.B. and S.B. programs share many course requirements, and there is some flexibility in moving between them during the first two years.

Overview

Requires Application: No
Number of Required Courses: 20 half-courses for S.B.
Honors Option: Yes (thesis required for High and Highest Honors)
Joint Concentration Option: No
Secondary Field: No
Tutorials: No (but all sophomores participate in spring term Sophomore Forum)
Tracks: AB Engineering Sciences (Mechanical and Materials Science and Engineering Track) or SB Mechanical Engineering
Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Kathy Lovell  
Undergraduate Program Administrator  
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617-496-1524

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seas.harvard.edu/programs/mechanical

Pierce Hall 110  
29 Oxford St.  
Cambridge, MA 02138

617-495-2833

HARVARD SCHOOL OF ENGINEERING AND APPLIED SCIENCES
The Molecular and Cellular Biology (MCB) concentration emphasizes the intersection of modern research in cellular biology with medicine and society. It is rooted in the investigation of biological processes based on the study of molecules and their interactions in the context of cells and tissues, and in understanding how the vast information context of the genome orchestrates the behavior of the cell. MCB is therefore ideally suited for students who wish to study molecular and cellular processes at the heart of both normal physiology and disease.

Advising

The Assistant Director of Undergraduate Studies (ADUS, Tom Tolerro) meets with concentrators and preconcentrators to discuss course choices, research opportunities, and career planning. The ADUS also signs study cards. In addition, each concentrator is matched with a mentor from the Board of Tutors in Biochemical Sciences.

(For more information, go to tinyurl.com/MCB-tutorial-board.)

MCB Alums

MCB graduates often go on to careers in medicine and/or research. Others pursue careers and/or further training in a variety of other fields, including public health, science policy, law and intellectual property, business, education, and science writing. The Board of Tutors in Biochemical Sciences, which runs the MCB tutorial program, recruits some tutors from fields outside of academia. Those tutors are excellent resources for students contemplating a career outside of research or medicine.

Explore

Suggested gateway courses

First semester
- LPS A. Life and Physical Sciences A. Foundational Chemistry and Biology (fall)
- LS 1a. Life Sciences 1a. An Integrated Introduction to the Life Sciences: Chemistry, Molecular Biology, and Cell Biology (fall)
- Math (according to math placement*)

Second semester
- LS 1b. Life Sciences 1b. An Integrated Introduction to the Life Sciences: Genetics, Genomics, and Evolution (spring)
- Physical Sciences I or Physical Sciences II (spring)

Third semester
- MCB 60. Cellular Biology and Molecular Medicine (fall)
- Chem 17. Organic Chemistry (fall)

Fourth semester - Any of the following courses:
- MCB 64. The Cell Biology of Human Life in the World (spring)
- MCB 65. (Formerly MCB 56) Physical Biochemistry: Understanding Macromolecular Machines (spring)
- MCB 68. Cell Biology Through the Microscope (spring)
- Concentration Elective

*For a more complete listing, concentrations.fas.harvard.edu

At Fortnight I learned that...

“...there are many different ways I could study genetics within this concentration. I also learned about the restructuring of the MCB concentration and that there are many ways to look at MCB within the concentration.”

“...it is in line with my interest. I really want to understand the DNA’s mysteries and functions and from the conversation I had, MCB offers me this chance. I also learned of the different research opportunities at my disposal in this field.”
Overview

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Requires Application:</td>
<td>No</td>
</tr>
<tr>
<td>Number of Required Courses:</td>
<td>12-13 half-courses (14-15 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (non-thesis and thesis option)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>By application</td>
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<tr>
<td>Secondary Field:</td>
<td>Yes (6 half-courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Yes, sophomore to senior year, non-credit</td>
</tr>
<tr>
<td>Tracks:</td>
<td>None</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students*

Questions?

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Dr. Tom Torello*  
Assistant Director of Undergraduate Studies  
(Secondary Field Contact)  
torello@fas.harvard.edu  
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Lisa Fountain  
Program Coordinator  
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617-495-4106

*Study abroad credit contact

Come Visit Us!

lifesciences.fas.harvard.edu/mcb

Fairchild 95  
7 Divinity Avenue

617-495-4106  
Click HERE for a link to the map and directions!
The concentration in Music provides an understanding of music in diverse cultural and historical contexts as well as a solid foundation in composition, theory, analysis, and criticism. While the Department of Music is not in itself a school of music with a performance department, we strongly encourage performance activities.

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 repertories; 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.

Students are then offered a wide range of advanced, specialized electives that build on the foundations laid in Music 97 and Music 51/150. A variety of courses in music theory, composition, musicology, ethnomusicology, and performance-related areas allow students to engage with musical questions at a deep level. In musicology and ethnomusicology, these courses take the form of proseminars for small groups that explore in detail selected musical issues and direct students toward significant independent projects. Several advanced courses in acoustic and electronic composition are given each year, with occasional offerings in orchestration and other specific compositional topics. Advanced theory and analysis courses include such topics as tonal and post-tonal analysis, jazz harmony, and modal and tonal counterpoint. Performance-oriented courses include chamber music, historical performance practice, and conducting.

Students are welcome to take a term of Supervised Reading and Research (Music 91) as an elective. This consists of individual work with a faculty member of the student’s choice. A term of Music 91 is especially encouraged for juniors intending on pursuing a senior thesis. For those writing senior theses, a year of senior tutorial (Music 99) is required. Options for senior theses include research papers, original compositions, or senior recitals. There are no general examinations for undergraduates.

For students who wish to pursue a program with more emphasis on performance, the department offers a 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.

Advising
All students are required to confer with the Head Tutor or the Assistant Head Tutor at the outset of their concentration or joint concentration, in order to develop an overall plan for fulfillment of requirements. All concentrators will continue to be advised by one of these two officials at the start of each term.

Explore
Suggested gateway courses
These courses teach skills important in musicianship, theory, and analysis:

- Music 51a and 51b. Theory 1a and 1b (fall and spring)
- Music 150a and 150b. Theory 2a and 2b (fall and spring)

Each of the courses below provide extensive knowledge of the history and literature of Western music as well as the principles of ethnomusicology and world music repertories.

- Music 97a. Music History and Repertory: Medieval to Baroque (fall)
- Music 97b. Music History & Repertory: Classical to Contemporary (spring 2016)
- Music 97c. Music History and Repertory: Music in Cross-Cultural Perspective (fall)

Music 10hfr (dance), Music 12hfr (Harvard-Radcliffe Orchestra), Music 180r and Music 187r are the only courses that can be taken as a fifth course in the fall term.

Music Alums
Harvard graduates in music are composers, performers, administrators, teachers, lawyers, physicians, and many other things. Recent graduates work at Jazz at Lincoln Center, the Metropolitan Opera, the Hartford Symphony Orchestra, M.I.T., Haverford College, Google, and various legal and medical institutions.

At Fortnight I learned that...

“...the Music concentrators at Harvard form a small but passionate community and family where everybody knows everybody else. What sticks out most in my mind from the conversation is the idea Professor Kelly presented to me that music chooses people more than people choose music.”
The concentration has a number of courses required of all students. Students should consider enrolling in Music 51a, which is entered by taking a placement examination before fall courses begin.

The music concentration is highly individualized.

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.

Students who have taken college courses in music at other institutions may receive concentration credit for work done elsewhere.

Concentrators in music learn to appreciate, analyze, perform, and compose music; they are familiar with repertories across history and around the world. They learn self-discipline, analytical thought, collaborative strategies, independence, and creative action.

Joint concentrations welcome.

We encourage potential concentrators to enroll in Music 51a as early as possible to allow for the greatest possible flexibility in the path through the concentration.

Questions?

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Abby Rahn
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Come Visit Us!

music.fas.harvard.edu

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617-495-2791
musicdpt@fas.harvard.edu

*Study abroad credit contact
Near Eastern Languages & Civilizations (NELC)

The Department of Near Eastern Languages and Civilizations introduces students to the ancient and modern peoples, languages, cultures, and societies of the Near and Middle East. Loosely defined as stretching from Morocco in the west to Iran and Afghanistan in the east, the region is home of the world’s great religions and civilizations. Historically, the influence of its languages, literatures and cultures has extended to Central, East and Southeast Asia, sub-Saharan Africa, Europe and North America. Thus, the study of the Near and Middle East is an important area of academic inquiry on account of its political, economic and cultural significance on the international stage.

Undergraduate concentrators develop skills in one (or more) of the languages and literatures of the region on their way to choosing from a wide variety of directions of study. The Department offers instruction in a range of ancient and modern languages including Akkadian, Arabic, Aramaic, Armenian, Babylonian, Egyptian, Hebrew, Iranian, Persian, Sumerian, Turkish (Ottoman and Modern), and Yiddish. The concentration provides a solid grounding in the student’s area of focus and offers an in-depth look at how scholars explore these languages and cultures that have been so influential throughout the world.

Students choose one of four specific tracks for concentration: The Middle East in Antiquity, Histories and Cultures of Muslim Societies (Islamic Studies), Jewish Studies, or Modern Middle Eastern Studies. All tracks have a requirement that involves the study of at least four terms of a language of the region.

Advising

Every concentrator is assigned a faculty advisor in their field of study who advises them on developing their plan of study, and who signs their study card. Generalist advising is also provided by the Director of Undergraduate Studies (DUS; Khaled El-Rouayheb).

Explore

Suggested gateway courses

- Middle East in Antiquity
  - [Ancient Near East 100. History of the Ancient Near East]
- Culture and Belief 23. From the Hebrew Bible to Judaism, From the Old Testament to Christianity

- Jewish Studies
  - Aesthetic and Interpretive Understanding 29. Modern Jewish Literature
  - Culture and Belief 27. “Among the Nations:” Jewish History in Pagan Christian and Muslim Context

- Histories and Cultures of Muslim Societies (Islamic Studies)
  - Aesthetic and Interpretive Understanding 54: For the Love of God and His Prophet: Religion, Literature and the Arts in Muslim Cultures
  - Religion 1806: The Vocabulary of Islam

- Modern Middle Eastern Studies
  - The Modern Middle East 100 (formerly Near Eastern Civilizations 100). Approaches to Middle Eastern Studies (required for concentration and secondary field)
  - Islamic Civilizations 170. Islam, Modernity and Politics

For a more complete listing, visit: [nelc.fas.harvard.edu/gateway-courses](nelc.fas.harvard.edu/gateway-courses)

NELC Alums

Concentrators go on to careers in such fields as journalism, politics and diplomacy, business, religious affairs, and academic teaching and research.

At Fortnight I learned that...

- “...there are many different pathways -- career tracks, study abroad tracks, and class tracks -- through this concentration.”
- “...I can study abroad my junior year.”
- “...about the different NELC tracks work (Jewish Studies Track, Modern Middle East Track, etc).”
Overview

<table>
<thead>
<tr>
<th><strong>Requires Application:</strong></th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td><strong>Number of Required Courses:</strong></td>
<td>12 half-courses (14 for Honors)</td>
</tr>
<tr>
<td><strong>Honors Option:</strong></td>
<td>Yes (thesis required for Honors)</td>
</tr>
<tr>
<td><strong>Joint Concentration Option:</strong></td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td><strong>Secondary Field:</strong></td>
<td>Yes (5 half-courses in Middle East in Antiquity, Histories and Cultures of Muslim Societies (Islamic Studies), Jewish Studies, Modern Middle Eastern Studies)</td>
</tr>
<tr>
<td><strong>Tutorials:</strong></td>
<td>Yes, 3 half-courses, basic, 5 for Honors</td>
</tr>
<tr>
<td><strong>Tracks:</strong></td>
<td>Yes, four tracks, Middle East in Antiquity, Histories and Cultures of Muslim Societies (Islamic Studies), Jewish Studies, Modern Middle Eastern Studies</td>
</tr>
<tr>
<td><strong>Language Required:</strong></td>
<td>Yes (4 half courses)</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Student Coordinator
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617-496-4960

**Prof. Shaye J.D. Cohen**
Department Chair
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617-496-6422

**Prof. William Granara**
Director of Modern Language Programs
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*Study abroad credit contact

Come Visit Us!

nelc.fas.harvard.edu

Semitic Museum
6 Divinity Ave, Room 106
Cambridge, MA 02138

617-495-5757
Neurobiologists explore what is arguably the least understood and most important area of biology: how billions of electrically charged neurons create our rich sensory, emotional, and intellectual life (and no less than all animal behavior!). Neurobiology as a field is an amalgam of all biological approaches: genetics, chemistry, molecular biology, cell/network biology, and cognitive science. Neurobiologists study every aspect of the brain: e.g., sensation, decision-making, movement, development, degeneration, and disease. As such, when you become a Neurobiology student you will get broad training as a biologist as well as a new perspective on what it means to be a human.

The field of neurobiology encompasses phenomena on vastly different scales – from molecules to societies. Within this vast field, the Neurobiology concentration allows students to choose and focus on the topics and approaches that they are most interested in (from > 30 neurobiology courses).

The concentration has two tracks: 1) Neurobiology and 2) Mind, Brain, and Behavior (MBB). Students in the MBB track receive credit for approved courses that study the mind using different approaches (e.g., Psychology, Philosophy). All MBB track students conduct independent research and complete a senior thesis. (While research is optional for the Neurobiology track, to be eligible for honors, students must enroll in an independent research course -- Neurobiology 98r or Ls100r -- for one semester. Students interested in research may begin at any time, although we recommend that most students join a lab by junior year.)

Advising
Primary concentration advising is provided by the Assistant Director of Undergraduate Studies (ADUS), Ryan Draft, and the Neurobiology Advisor, Laura Magnotti.

Explore
*Suggested gateway courses*

First year
- Life Sciences 1a or Life & Physical Sciences A; fall
- Life Sciences 1b and/or Physical Sciences 1; spring. If there is a conflict, the department recommends enrolling in Physical Sciences 1 and delaying Life Sciences 1b until sophomore year.
- Math Ma or 1a/b or Math 19a/21

Second year
- Molecular and Cellular Biology 80. Neurobiology of Behavior (fall)
- Organismic and Evolutionary Biology 57. Animal Behavior (spring)
- During the sophomore year, students may consider taking one physical or computer science/engineering science course (e.g., chemistry, physics, or CS 50) and/or one intermediate biology course (LS 2; MCB 60, 63, 64, 65, or 68; SCRB 20, SCRB 25; or OEB 53).

*For a more complete listing, concentrations.fas.harvard.edu*

Neuro Alums
Many students assume that concentrating in Neurobiology will lead them in only two directions – either to medical school or into research. It is not true! There are hundreds of career possibilities in the area of neurobiology. Why? The brain is necessarily involved in everything we do, and as a result, an understanding of neuroscience can bring an extremely important perspective to almost any field. Moreover, the concentration provides scientific training and strong analytical skills that are valuable for many different career paths. Our graduates commonly go on to careers in teaching and education, health services, research and biotech, business and management, law, government and policy, writing and publishing, general and life science consulting, non-profit organization management, and the creative sector.

At Fortnight I learned that...

"...you can be afforded as much flexibility as you want both inside and outside the concentration. I also learned that people who concentrate in Neurobiology are not confined to the sciences in post-graduate work. In fact, many go on to pursue careers in advertising, law, and the like."
Students can choose from a range of physical and applied science courses including chemistry, physics, engineering, math, or computer science.

Concentrators enjoy small discussion-based classes and year-long neurobiology tutorials that focus on a research area of outstanding interest.

Numerous opportunities for hands-on training in research in a variety of different academic departments and hospitals.

Students must complete one math (or applied math) course at or above the level of Math 19a (e.g., 19a, 21a or 21b) to build a strong quantitative background in biology.

Study abroad encouraged: successful completion of Harvard summer abroad programs in Tokyo, Japan (RIKEN); Oxford, England; and Trento, Italy ordinarily count toward the concentration. There are special neurobiology summer programs in Bangalore, India, and Lisbon, Portugal. Students also study abroad during term-time.

Overview

<table>
<thead>
<tr>
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<td>13 half-courses (14 for Honors)</td>
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<tr>
<td>Honors Option:</td>
<td>Yes (thesis required for Highest Honors)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>No</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (5 half-courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>1 half-course, optional; junior seminar required for MBB track</td>
</tr>
<tr>
<td>Tracks:</td>
<td>Neurobiology Track; Mind, Brain, and Behavior Track (thesis required)</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

Prof. Venkatesh Murthy*
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Dr. Ryan Draft*
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*Study abroad credit contact

Come Visit Us!

lifesciences.fas.harvard.edu

BioLabs
Room 1082C
16 Divinity Avenue
617-495-3399
Philosophy is the study of fundamental questions.

- Why is there something rather than nothing
- Is there a god?
- What is a good life?
- What is the right thing to do?
- What, if anything, is the source of moral obligation? What is justice?
- Do we act freely?
- How is the mind related to the natural world?
- How is language related to reality?
- Is there an external world?
- What does it take to know something, rather than merely believe it?

You have probably asked yourself some of these questions at one time or another. They do not belong to a specialized science or domain of inquiry; nevertheless as reflective human beings we cannot help but confront them. These are the questions we end up asking ourselves if we keep asking, “Why?”

Philosophy draws on a wide range of considerations, from the history of ideas, from economics, literature, religion, law, mathematics, the physical sciences, psychology, and so forth. And these disciplines can become the focus of philosophical reflection in their own right, as philosophers try to understand their central concepts and methodological assumptions. What is a physical explanation? A biological function? A mental representation?

Philosophers pursue these questions in a disciplined and systematic way, aiming not simply to answer them but also to understand just what is being asked in the first place.

Advising

Concentration advising is provided by three members of the Head Tutor’s advising team: the Head Tutor (Bernard Nickel), the Associate Head Tutor (Cheryl Chen), and the Assistant Head Tutor (James Bondarchuk). All three are available to meet with students during office hours or by appointment to discuss course selection and to sign study cards. Students in the Mind, Brain, and Behavior track meet regularly with the MBB advisor (Alison Simmons - asimmons@fas.harvard.edu). For more information, contact the Undergraduate Coordinator, Emily Ware (eware@fas.harvard.edu).

Explore

Suggested gateway courses
- Philosophy 3: Introduction to Problems of Philosophy, fall
- Philosophy 7: Introduction to Ancient Philosophy, spring
- Philosophy 11: Philosophy of Law, spring
- Philosophy 13: Morality and Its Critics, fall
- Philosophy 19: Introduction to Philosophy of Religion, fall
- Philosophy 22: Introduction to Philosophy of Psychology, spring
- Philosophy 33: Indian Philosophy, spring
- Culture and Belief 31: Saints, Heretics and Atheists: A Historical Introduction to the Philosophy of Religion, spring
- Empirical and Mathematical Reasoning 17: Deductive Logic, fall
- Freshmen Seminar 31j: Skepticism and Knowledge, fall
- Freshmen Seminar 33q: Death and Immortality
- Freshmen Seminar 33k: Exploring Religious Belief in Light of Philosophy and Cognitive Science, fall
- Freshmen Seminar 37z: Socrates and His Critics, spring

Philosophy Alums

Harvard philosophy concentrators have gone on to pursue diverse and rewarding careers. Philosophy alumni have achieved success in law, finance and consulting, business, internet startups, medicine, journalism, the arts, non-profit work, education, and academia (both in philosophy and in other academic disciplines). The question to ask yourself is not, “What can I do with a philosophy degree?” but rather, “What can’t I do with one?”

At Fortnight I learned that...

“...the department is very small, so I would get a lot of personal attention. I learned that it is possible to concentrate in Philosophy and continue being pre-med. Philosophy concentrators do very well on all standardized tests because they learn how to think logically, and that skill is useful in so many fields and jobs.”
The skills you acquire studying philosophy – the ability to think and write clearly, the ability to bring to light unnoticed presuppositions, to explain complex ideas clearly, to tease out connections and implications, to see things in a broader context, to challenge orthodoxy – are highly marketable, especially in a volatile and rapidly changing economic climate.

Whether they take just a course or two or end up concentrating, students find their time studying philosophy to be among the most rewarding intellectual experiences of their college careers.

To study philosophy is to grapple with questions that have occupied humankind for millennia, in conversation with some of the greatest thinkers who have ever lived.

The main reason to study philosophy is that you find intrinsic value in reflection and contemplation.

**Overview**

<table>
<thead>
<tr>
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<tbody>
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</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
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<tr>
<td>Secondary Field:</td>
<td>Yes (6 half-courses; pathways: General Philosophy, Classics of Western Philosophy, Philosophy of Science, Moral and Political Philosophy, Philosophy of Mind and Psychology, Special Topic in Philosophy)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>2 half-courses for basic, 4 half-courses for Honors</td>
</tr>
<tr>
<td>Tracks:</td>
<td>Mind, Brain, and Behavior</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students*

**Questions?**

Bernhard Nickel  
Head Tutor  
bnickel@fas.harvard.edu

Cheryl Chen  
Associate Head Tutor  
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James Bondarchuk  
Assistant Head Tutor  
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Emily Ware  
Undergraduate Coordinator  
eware@fas.harvard.edu

**Come Visit Us!**

fas.harvard.edu/~phildept

Emerson Hall 209a  
25 Quincy St.  
Cambridge MA 02138

617-495-2191
Physics

Physics is the paradigmatic natural science. The concentration in Physics, administered by the Department of Physics, encourages students to explore the remarkable range of physical phenomena that the laws of physics explain and allow us to control. Many concentrators seek an understanding of the subtle, profound, and fundamental laws — relativity, quantum mechanics, and the basic force laws—that govern the behavior of matter and energy in our Universe. Often these studies involve the smallest units of matter: molecules, atoms, nuclei, and sub-nuclear particles. A major interest of other Physics concentrators is the exploration and explanation of the diverse properties to which these laws give rise in macroscopic systems such as fluids and solids. Still others study aspects of more complex systems like oceans and atmospheres, stars, and living matter. Physics makes use of cutting edge technology and theory to push our understanding of these systems to amazing extremes of size, temperature, information density and complexity, and in turn the phenomena we study lead to new technologies that allow us to explore even further.

At Fortnight I learned that...

“...Physics degrees are applicable to a wide range of professional fields, and in fact quite a few physics concentrators don’t end up doing things directly related to physics, but rather things related to the problem-solving skills physics builds. It’s also a very good department with very strong faculty and advisors. They care about their students.”

Advising

Students in the Physics and Chem/Phys concentrations automatically have Prof. Howard Georgi (Head Tutor) and Dr. David Morin (Associate Head Tutor) as academic advisors. Additionally, each student is given an individual concentration advisor, chosen from among the faculty; this advisor signs the student’s study card. Carol Davis (Undergraduate Student Coordinator) handles many of the administrative and student-life aspects of the concentrations.

Explore

Suggested gateway courses

Intro Physics
- Physics 15a (fall and spring), Introductory Mechanics and Relativity or Physics 16 (fall), Mechanics and Special Relativity (concentrators are roughly split between 15a and 16)
- Physics 15b, Introductory Electromagnetism (fall and spring)
- Physics 15c, Wave Phenomena (fall and spring)
- Physics 143a. Quantum Mechanics I (fall and spring)

Mathematics
- Math 1b, Calculus, Series, and Differential Equations (fall and spring)
- Math 21a, Multivariable Calculus (fall and spring)
- Math 21b, Linear Algebra and Differential Equations (fall and spring)

Advanced physics (Common 100-level courses)
- Physics 143b, Quantum Mechanics II (fall)
- Physics 153, Electrodynamics (spring)
- Physics 181, Statistical Mechanics and Thermodynamics (spring)
- Physics 191r, Advanced Laboratory (fall and spring)

*For a more complete listing, concentrations.fas.harvard.edu

Physics Alums

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 deduction — provide an excellent base for subsequent graduate work in professional schools of medicine, education, law, business, and public administration.
**FYI**

- Biophysics option allows a limited substitution of biology courses for physics-related courses.
- Optional tutorial and independent study programs that enable students to examine special fields and topics under the guidance of experts include: (1) Physics 91r: individual study of material not covered in regular courses, supervised by a member of the department; (2) Physics 90r: individual research under the supervision of a faculty member interested in the field. Applied physics option emphasizes courses covering physical applications.
- No required tutorials: we believe it is important to keep the concentration requirements flexible enough to satisfy the differing goals of a great variety of students.
- Offers a physics and teaching option, which provides both preparation in physics and eligibility for the teaching certificate required for public school teaching in many states.

### Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
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<tbody>
<tr>
<td><strong>Number of Required Courses:</strong></td>
<td>12 half-courses (13 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis optional)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (4 half-courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>None</td>
</tr>
<tr>
<td>Tracks:</td>
<td>Applied Physics, Biophysics, Physics and Teaching</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students*

### Questions?

**Prof. Howard Georgi***

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617-496-8293

**Dr. David Morin***

*Associate Head Tutor*

morin@physics.harvard.edu

617-495-3257

*Study abroad credit contact*

### Come Visit Us!

[physics.harvard.edu](http://physics.harvard.edu)

Jefferson Lab

17 Oxford St.

Cambridge, MA 02138

617-495-2872
Psychology

Psychology is the scientific study of the mind. Observing, experimenting, and analyzing human and other minds is our focus. How we do this varies greatly. We can, of course, look at the brain itself to understand the mind and we increasingly do so, as new technologies allow. But the measure of behavior is our primary method to understand the mind.

The kinds of questions psychologists attempt to answer are:

- How do we perceive the physical world?
- Is our view of it consistent with reality?
- How do we make sense of the social world?
- Can we really understand the minds of others?
- Do the groups others belong to matter?
- How do memories form and how do we forget?
- Can we be said to have a memory even if we can't "remember"?
- What are the rules by which we reason and think?
- Are we rational beings or only boundedly so?
- How much of our behavior is influenced by conscious mental processes and how can we study our own consciousness?
- What's the role of emotion as expressed in the joy, surprise, sadness, anger and fear of everyday life as well as in depression, schizophrenia, and other disorders?
- What are the causes of these kinds of disorders, and how can they be treated?
- How do all these processes develop from infancy to adulthood, including the ability for language?

To answer these and other questions about the mind, psychologists pay attention to evolutionary factors, the biological bases of behavior, cultural and social inputs, as well as the day-to-day situations in which individuals find themselves.

Most of the research conducted in Harvard’s Department of Psychology concerns basic psychological processes such as attention, perception, memory, categorization, reasoning, decision-making, language, cognitive and social development, social cognition, intergroup relations, and morality. In addition, 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 mind, brain, and behavior through empirical investigation, and their teaching and research reflect this goal.

*Though it is administratively housed in the division of Social Science, Psychology’s faculty and curricular offerings bridge both Social Sciences and Natural Sciences, including a track that is part of the Life Sciences cluster of concentrations.

Explore

Suggested gateway courses

First Take
Science of Living Systems 20 (fall and spring), Psychological Science (required for all concentrators and as a prerequisite for all psychology courses – can skip if Psychology AP score of 5 or IB score of 7)

Then Take
- Psychology 14, Cognitive Neuroscience (fall)
- Psychology 15, Social Psychology (fall and spring)
- Psychology 18, Abnormal Psychology (fall)
- Science of Living Systems 15, Origins of Knowledge, Developmental Psychology (spring)
- Molecular and Cellular Biology 80, Neurobiology of Behavior (fall)

If considering the CNEP track, Take: LPSA, LS1a, and/or LS1b

*For a more complete listing, concentrations.fas.harvard.edu

Advising

Freshmen and sophomores can speak with the Undergraduate Office Staff (listed below) for questions and advising. Email or drop-in hours are easiest, but you can also request an appointment. For concentrators, psychology has a set of graduate student advisors assigned by house who sign study cards and can advise on all matters such as requirements, courses, possible careers, etc. Students may also speak with Head Tutor Mahzarin Banaji about psychology as a field, research, and careers.

Psychology Alums

Because of its natural connections to both the life sciences and the humanities, Psychology provides concentrators with a strong foundation from which to imagine careers in business, law, medicine, or government, as well as prepare for higher education (master’s degree and PhD) in psychology, neuroscience, and related fields. In addition to these areas, our alumni have commonly gone into many fields such as other clinical/social work fields, education, non-profit work, tech, and design.

At Fortnight I learned that...

"...psychology can be extremely diverse, ranging from the cognitive neuroscience to human emotions and even to how societies shape their ideas and cultural norms. I was really fascinated with how integrated the field of psychology is!"
Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No (only required for MBB track in Cognitive Science)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>12 half-courses (12-14 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis and non-thesis options)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>No</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (6 half-courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Sophomore tutorial required, Junior tutorial (strongly recommended for thesis writers), and Senior tutorial (full year, required for thesis students)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>General Track, Cognitive Science (an MBB Track), Cognitive Neuroscience and Evolutionary Psychology (a Life Science Track)</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

For general inquiries related to concentration or secondary field or careers in psychology:
**Melissa Dias**
*Undergraduate Coordinator*
Secondary Field Contact: melissadias@fas.harvard.edu

For research laboratory or Study Abroad questions:
**Danielle Truxaw***
*Research Advisor*
truxaw@fas.harvard.edu

**Laura Chivers***
*Advising Administrator*
lchivers@wjh.harvard.edu

For questions about psychology as a field, academic careers:
**Prof. Mahzarin Banaji**
*Head Tutor*
mahzarin_banaji@harvard.edu

*Study abroad credit contact

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wjh.harvard.edu/psych/ug

William James Hall 218
33 Kirkland St.
Cambridge, MA 02138

617-495-3712

First year students may contact us in the Undergraduate Office at psychology@wjh.harvard.edu to ask questions or set up a meeting.

Additionally, we have weekly drop in advising hours you can find here: wjh.harvard.edu/psych/ug/advising/PreConc.html

We encourage all upperclassmen, including undeclared sophomores, to contact the psychology advisor assigned to your house listed here: wjh.harvard.edu/psych/ug/advising/CA.html
Religion, Comparative Study of

Religion is momentous, controversial and influential. Religious commitments and institutions are cited daily as sources of the very best and worst in individual, political and communal life. A glance at the news and a look at history make it clear that there has never been a greater need for close study and understanding of the world’s religious traditions in order to better understand global cultures and current events, to interpret history and literature intelligently, and to develop a more penetrating sense of our shared humanity. Although human beings have always practiced what we now call “religion,” the term itself is a modern category. The undergraduate concentration in the Comparative Study of Religion at Harvard—founded in 1974—is relatively new. Given the staggering range of religious phenomena throughout human history and across the world, the study of religion has developed into the most interdisciplinary of undergraduate concentrations, bringing together humanistic and social scientific methods. Students and scholars approach religion through the varied disciplines of philosophy, history, sociology, political science, anthropology, literary and scriptural interpretation and cultural studies.

Harvard’s concentration in the Comparative Study of Religion is a vibrant community comprised of students who are deeply committed to their work, and the nation’s most distinguished teaching faculty in the study of religion. Students interact regularly with faculty and graduate students who share their interests. The program provides students with an understanding of the religious traditions of the world through study of sacred texts and rituals; philosophy, literature and theology; and the lived experiences and history of participants in the tradition. Courses engage life’s biggest questions including the meaning of life and death, humanity and divinity, good and evil, sacrifice and community. Course work exposes students to central concepts in the field such as god(s), ritual, gender, authority, orthodoxy, scripture and prophecy. Anthropological, historical, philosophical, phenomenological, sociological and literary approaches open religion to closer analysis and deeper understanding.

Advising

Advising in the Comparative Study of Religion is one of the concentration’s strongest features. Sophomores entering the concentration are assigned a faculty advisor in their field of interest who meets with them two or three times per term to discuss courses and to help shape the student’s plan of study. Programs of study are designed for each student in consultation with the DUS and the student’s faculty advisor. Junior tutorials are small, designed around student interests and led by advanced graduate students at the cutting edge of their field who students consult as they consider the option of writing a senior thesis. The ADUS joins the advising team for seniors, and students writing an honors thesis have both faculty and doctoral student advisors, in addition to the support of the ADUS.

Explore

Suggested gateway courses

- Rel 12. Critical Issues in the Comparative Study of Religion
- Rel 13. Scriptures and Classics
- Rel 40. Incarnation and Desire: Introduction to Christianity
- Rel 46. Letters of Paul: Ethnicity, Sex, Ethics, and the End of the World
- Rel 47. Christian Approaches to Ethics and Politics
- Rel 48. Catholicism Faces Modernity: Classics of 20th c. Roman Catholicism
- Rel 52. Religion, Secularism, and Modernity
- Rel 57. Faith and Authenticity: Religion and Existentialism (fulfills ER)
- Rel 1491. Power and Piety: Evangelicals and Politics in Contemporary U. S.
- Rel 1447. Saint to Witch: Female Spirituality in the European Middle Ages
- Rel 1502. The Philosophical Reinvention of Christianity
- Rel 1802. Introduction to Islamic Mysticism: The Sufi Tradition
- CB 19: Understanding Islam and Contemporary Muslim Societies
- CB 23: From the Hebrew Bible to Judaism, From the Old Testament to Christianity
- CB 60: Religion in India: Texts and Traditions in a Complex Society
- CB 25: Studying Buddhism Across Place and Time
- ER 17: Ethics, Religion, and Violence in Comparative Perspective
- US World 33: Religion and Social Change

*For a more complete listing, concentrations.fas.harvard.edu

Religion Alums

Most of our alumni pursue meaningful and successful careers in fields such as business, law, medicine, politics, public service, scholarship, government, creative art and teaching, while some graduates continue their study of religion in graduate or professional programs. Recent graduates are studying at Harvard Law School, teaching with Teach for America, pursuing graduate work at Cambridge University, practicing medicine and starring in television roles. The Comparative Study of Religion is an excellent interdisciplinary concentration in the liberal arts because it prepares graduates to understand current events and global cultures intelligently while developing a deeper and more reflective sense of humanity. Our alumni attest that the study of religion, the critical thinking skills, and the refined writing ability they gained in this concentration have been significantly important to them in making sense of current events and global politics, and in succeeding in their workplaces and communities. Many of our graduates have a strong interest in service and are committed to working in their chosen profession to make the world a better place.
Overview

Requires Application: No
Number of Required Courses: 12 half-courses (14 for Honors)
Honors Option: Yes (thesis required)
Joint Concentration Option: Yes
Secondary Field: Yes (6 half-courses)
Tutorials: Sophomore and Junior (both half-course)
Tracks: (A) Two major traditions in comparative context; or (B) One major tradition in comparative context. Major traditions include: Ancient Near Eastern and Israelite, Buddhism, Christianity, East Asian, Greek/Hellenistic/Roman, Hinduism, Islam, Judaism, Modern West, South Asia, Religion in the Americas, and African and Afro-Atlantic Religions
Language Required: Honors candidates are advised to study the language(s) they will need to interpret texts from the tradition(s) they choose. The ability to be aware of primary texts in their original language is a consideration for honors theses

Questions?
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617-496-1018

James Reich
Assistant Director of Undergraduate Studies
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617-496-1010

*Study abroad credit contact

At Fortnight I learned that...

"...each student chooses a particular focus of a set list of religions and about the freedom associated with what you study. It was really stressed how interdisciplinary the field is. I also got a really good impression of the concentration community."

Come Visit Us!
studyofreligion.fas.harvard.edu
Barker Center
12 Quincy St.
Cambridge, MA 02138
617-495-5781
csrel@fas.harvard.edu
With their rich cultural and literary heritage and their worldwide reach, Romance languages play a key role in the world’s multicultural societies. That’s why the department offers such a wide range of fields – French and Francophone Studies, Hispanic Studies, Italian Studies, Latin American Studies, Portuguese and Brazilian Studies, and Romance Studies. Moreover, the department encourages students to study abroad, either during the summer or during term time, and works closely with the Office of International Education to help students meet their specific needs and academic and cultural interests.

Although each field within the concentration has its own requirements, all provide concentrators with a solid grounding in their chosen language and encourage the study of culture. Classes are small, giving students a unique opportunity to develop critical thinking skills and express themselves in both oral and written form. The department offers a wide spectrum of courses that accommodate students intending to pursue graduate degrees in literature, art, history, and related fields, as well as those planning careers in medicine, law, business, social work, or other fields. Our students acquire the skills to navigate across cultural boundaries, with an emphasis on creative thinking, international and social awareness, close research and analytical tools, and the ability to deal with the unfamiliar.

Advising

Depending on the specific track in RLL they pursue, students work with the Undergraduate Advisor for that track.

RLL Alums

Concentrators in Romance Languages and Literatures routinely go on to a wide variety of careers in fields where world experience and strong analytical, creative, and communicative skills are valued: business, law, foreign service, medicine, public health, education, finance, the arts. In fact, approximately one quarter of our concentrators intend to pursue a career in medicine! It’s no surprise that many of our alumni have pursued careers abroad, not only in European nations but also and especially in the new economic powerhouses of the world, such as Brazil, Argentina, and Mexico.

At Fortnight I learned that...

“...the department is very flexible and tailored to individuals. I also learned that I could combine my Spanish and Portuguese classes into one concentration!”

“... I will be able to pursue studies in Spanish and French history and literature. In light of my interest in international health and medicine, there are even some courses that focus on medical literature of the past, instructed in the target languages.”

“...RLL would expose me to very experienced and passionate faculty as well as numerous opportunities to apply my skills. I am also following a premed track, so I believe a humanities concentration would give me not just an edge in applying to Med school, but a rare perspective when compared to mostly science concentrators.”

Explore

Suggested gateway courses

Freshmen are encouraged to take languages courses in the department at the appropriate level as determined by the Harvard Placement test or their SAT II test.

Throughout the year students are cordially invited to attend department lectures, colloquia, and conferences, as well as such special events as Brazil Week and the New England Italian Film Festival.

The Mahindra Humanities Center offers humanities seminars, lectures, and other events on subjects of interest to undergraduates, graduate students, and faculty. See their calendar at mahindrahumanities.fas.harvard.edu.

Faculty in the department often teach Freshman Seminars which is another good way to explore the department before choosing your concentration.
Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>12 half-courses (14 for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes. A thesis is required for Highest Honors and is optional for High Honors or Honors.</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes, in French, Italian, Portuguese, or Spanish. Five half-courses are required.</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Yes. Half-course required for sophomore and junior concentrators. Senior thesis writers take the senior tutorial.</td>
</tr>
<tr>
<td>Tracks:</td>
<td>French and Francophone Studies, Hispanic Studies, Italian Studies, Latin American Studies, Portuguese and Brazilian Studies, Romance Studies</td>
</tr>
<tr>
<td>Language Required:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

Professor Mary M. Gaylord
Director of Undergraduate Studies
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617-496-6027

Cathy Downey
Undergraduate Program Coordinator
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617-495-1860

Come Visit Us!

rl.fas.harvard.edu/home

Boylston Hall
4th Floor
Cambridge, MA 02138

617-495-2546
The concentration in Slavic Literatures and Cultures offers you the opportunity to study the great works and cultural traditions, past and present, of Russia and the other Slavic countries, especially Ukraine, Poland, and the Czech Republic. These countries share a rich cultural life as well as a turbulent and fascinating history, from the medieval period through the days of the Russian, Habsburg, and Ottoman Empires, from the twentieth-century dramas of world war and Cold War all the way to present-day efforts to reimagine democracy, dissent, and national traditions for the twenty-first century. In the Slavic concentration, you will develop advanced proficiency in Russian or another Slavic language (such as Czech, Polish, or Ukrainian), and you will use your knowledge of the language to read everything from newspapers and primary historical texts to great works of world literature like War and Peace, Crime and Punishment, and The Master and Margarita. As a meeting point of East and West, the Slavic countries offer new perspectives on European and American culture, as well as a rich mix of political, literary, and religious traditions that will help you better understand your own place in the world today.

Advising

General advising in the concentration is provided by the Director of Undergraduate Studies (DUS). Students working on a capstone project or senior thesis are matched with a faculty advisor.

At Fortnight I learned that...

"...SLL is a very flexible concentration that I will be able to tailor to my specific interests. I was also thrilled to find that learning Bosnian/Croatian/Serbian and doing a junior seminar in South Slavic Languages and Literatures is a distinct possibility!"

Explore

Suggested gateway courses

Our faculty offer a number of General Education courses that will introduce you to the themes and major works of Slavic literature, politics, and culture. Most of our concentrators have no knowledge of Russian when they come to Harvard, but they do begin studying language as soon as possible – in general, they will start with Russian (or another Slavic language) in their freshman year. Students can take the year-long sequences in Elementary and Intermediate Russian, or they may choose intensive courses that cover a year’s worth of Russian in one semester; for students who want to begin reading Russian literature in the original as soon as possible, we also offer introductory and intermediate courses that teach the language through readings from Russia’s greatest poet, Alexander Pushkin, and the great 20th-century novel The Master and Margarita by Mikhail Bulgakov. These foundational courses in the language prepare students for third-year offerings and beyond.

Study abroad, whether a summer or a semester, is strongly encouraged and easily accommodated; for many of our students, a summer language program in Moscow or St. Petersburg becomes part of their language study within the concentration. Courses at the fourth-year and fifth-year level ensure opportunities for students to continue developing their language skills after accelerating their language proficiency through study abroad.

SLL Alums

Our alumni have gone on to a wide range of jobs – including careers in television and publishing; medical school; work for government agencies, NGOs, and research centers; political and business consulting; and graduate study in the United States and Europe. For many, a degree in Slavic Languages and Literatures means the opportunity to work, study, or do an internship in Moscow or St. Petersburg, or Prague, considerably broadening their field of career opportunities. If you go on to professional school, your preparation in a foreign language and culture will open your eyes to new fields of study and give you the chance to travel during your graduate studies and afterwards; Slavic can form the basis for a subfield in public health, law, journalism, and other professions. Our students are well-prepared for a wide variety of careers that require knowledge of languages at a professional level, understanding of other cultures, and the creativity and initiative necessary to work with people from other countries.
Most students begin studying Russian (or another Slavic language such as Czech, Polish, or Ukrainian) in their freshman year, although it is possible to begin later. If you are willing to take intensive language courses or summer programs, you can enroll in the Department of Slavic and Russian Studies.

While our tutorials focus on literature, art, and culture, we welcome students with an interest in politics, history, linguistics, anthropology, and other fields. A rigorous and rewarding language program that will allow you to communicate your ideas to Russian speakers, read classic works of literature in the original Russian, and follow newspapers, blogs, and other primary texts about contemporary politics and culture.

Individualized advising and flexible requirements that give you significant freedom in designing your own program of study. Opportunity to work closely with a faculty member on your Senior Honors Thesis or capstone project.

Many opportunities for study abroad.

A broad conception of Slavic studies that accommodates students interested in history, politics, art, theater, and many other disciplines.

Overview

Requires Application: No
Number of Required Courses: 12 half-courses (13 for Honors)
Honors Option: Yes (thesis required)
Joint Concentration Option: Yes (thesis required)
Secondary Field: Yes (5 half-courses; pathways: Central European Studies, Russian Studies)
Tutorials: Sophomore (half-course) and Junior (full year)
Tracks: No formal tracks
Language Required: Yes

*For a complete listing of requirements, see the Handbook for Students

Questions?

Justin Weir
Director of Undergraduate Studies
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617-496-3737

Judith Klasson
Department Administrator
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617-495-0912

Steven Clancy
Director of the Language Program,
Language Faculty Advisor for Study Abroad
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617-496-0624

Come Visit Us!

slavic.fas.harvard.edu
Barker Center 3rd Floor
12 Quincy St.
Cambridge, MA 02138
617-495-4065
Social Studies

The Committee on Degrees in Social Studies is an interdisciplinary concentration in the social sciences at Harvard College. We aim to give our students the knowledge, skills, and experiences they need to do high level work in the social sciences, including conducting primary research in preparation for a senior thesis. Our curriculum is comprised of a set of foundational courses in social theory, economics, statistics, and the philosophy and methods of the social sciences, followed by junior tutorials that immerse students in social science topics and teach research methods. Students develop individualized focus fields in close consultation with their academic advisors. Examples of focus fields are “Education in American Society,” “Development in Latin America,” and “Liberty and Freedom in Modern Social Thought.”

The faculty and staff of the Committee on Degrees in Social Studies aim to provide the best possible teaching and advising to Harvard undergraduates. We expect our students to do excellent work in the classroom and we provide extensive resources to support them. We understand that our students’ interests inside the classroom are often influenced by their experiences outside the classroom, and our advisors work to help students connect their learning with their lives. Many of our students do work that is connected with public service, and we encourage this. We expect our students to respect a range of ideas and opinions in the classroom and to use their time in college to explore their own values and beliefs in relation to empirical evidence as well as the values and beliefs of others.

Social Studies is a great concentration for students who are interested in studying a social science topic from an interdisciplinary perspective. Students craft their own plans of study, drawing courses from across the college and, frequently, from the graduate schools. We offer small tutorials, one-on-one advising, and a vibrant and supportive intellectual community. Social Studies students develop excellent analytical, research, and writing skills, and they devote their senior year to writing a thesis, which serves both as a capstone to their undergraduate education and a chance to develop and complete a major independent project.

Advising

Primary concentration advising is provided by sophomore tutorial tutors, on a House by House basis. These tutors ordinarily serve as students’ advisors until they graduate. General advising in the concentration is also provided by the Director of Undergraduate Studies (Anya Bassett), the Assistant Director of Studies for Freshmen and Sophomores (Bonnie Talbert), The Assistant Director of Studies for Juniors and Seniors (Nicole Newendorp), and the Undergraduate Program Administrator (Kate Anable).

Explore

Suggested gateway courses

First year
Students considering Social Studies may want to take Economics 10 or any upper level course for which Economics 10 or Social Analysis 10 is a prerequisite.

Students may want to take an ethical reasoning, moral reasoning, or philosophy course to determine whether they enjoy theory.

Students should take social science courses in areas that interest them. For example, a student who is interested in development in East Asia should take a course on that region to learn more about the history, economics, or politics of at least one of the countries in that area of the world. A student who is interested in poverty in the United States should take a course on a related topic, such as a sociology course on urban poverty or a course on social problems in the American economy.

Second year, first term
Potential concentrators must enroll in Social Studies 10a, which is a prerequisite for applying to the concentration. Students should take courses in economics and statistics, especially if they are planning to study abroad in their junior year.

Students should continue to take social science courses in areas that interest them.

*For a more complete listing, concentrations.fas.harvard.edu

Social Studies Alums

Social Studies alumni pursue a wide range of careers, and they report that their Social Studies education prepared them well for life after Harvard. Immediately after graduation, some students have worked in consulting or the non-profit sector in the US or abroad, studied abroad on fellowships, or joined public service programs like Teach for America. Many Social Studies students ultimately earn degrees in law, business, public policy, and academia (often in combination with each other), and a number every year go into medicine.

At Fortnight I learned that...

“...the concentration is a very wide one. One can create a very individualized plan of study and really focus on what interests oneself. I also learned that it is more theory-based than perhaps other social sciences like sociology that are more data-driven.”
Overview

Requires Application: Yes
Number of Required Courses: 13 half-courses
Honors Option: Yes (thesis required for all concentrators)
Joint Concentration Option: Only by petition and only with area studies concentrations (NELC, EAS) with African and African American Studies or with the Study of Women, Gender, and Sexuality.
Secondary Field: No
Tutorials: Sophomore and Junior and Senior (all full year)
Tracks: Students create individualized focus fields
Language Required: No

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Kate Anable
Undergraduate Program Administrator
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Come Visit Us!

socialstudies.fas.harvard.edu/home

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617-495-2163

*For a complete listing of requirements, see the Handbook for Students
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. Thus Sociology is unusual in its concern with the interrelation of social forces studied in isolation elsewhere. The breadth of subjects one can study in sociology is quite wide but the focus on social relations and the effect of society on the individual is the common denominator.

The Department of Sociology at Harvard has a diverse and distinguished faculty. Our faculty includes the world’s foremost experts in race, ethnicity and immigration, inequality, economic sociology and organizations, urban poverty and the city, gender and family, crime and punishment, social movements and social change, politics, work, culture, social networks, comparative and historical sociology, and sociological theory. Students may take courses in a variety of areas or they may put together a focused program of study reflecting their own particular interests.

Course emphases range widely from the theoretical to the applied and incorporate an array of approaches, including field-based sociology, qualitative methods, quantitative and computer-based analysis, historical and comparative studies, and theoretical explorations. Our students receive instruction in classical and contemporary social theory along with cutting-edge qualitative and quantitative methods. Students also learn how to apply sociological analysis to real-world issues—whether from third world development to corporate capitalism, or from crime in the streets to crime on Capitol Hill.

Advising

Sociology concentrators are advised by our Associate Director of Undergraduate Studies, Rachel Meyer (meyer2@fas.harvard.edu). During study card week we strongly encourage you to take the opportunity to meet with the ADUS and other faculty from our Committee on Undergraduate Degrees. The schedule for faculty who can sign study cards will be available by the end of August and posted here: sociology.fas.harvard.edu/study-card-schedule. For your convenience, Concentration Advisors are also available to sign study cards in the Houses to which they are assigned. For questions about concentration requirements and related matters you can also contact Laura Thomas (lthomas@wjh.harvard.edu).

To learn more about Sociology concentration advising, as well as who your House Concentration Advisor is, please visit:

sociology.fas.harvard.edu/pages/advising

Explore

Suggested gateway courses
If you are interested in exploring Sociology there are four routes to consider
1. You can take one of our courses that are designed to give you an introduction to the discipline including:
   • Sociology 10: Introduction to Sociology (spring)
   • Sociology 22: Men, Women, and Work (fall)
   • Sociology 24: Introduction to Social Inequality (fall)
   • Sociology 26: Introduction to Global Social Change (fall)

2. You can take a General Education course that is also a sociology course including
   • SOW 21: China’s Two Social Revolutions
   • USW 31: American Society and Public Policy
   • SOW 34: Caribbean Societies
   • SOW 44: Human Trafficking: Slavery and Abolition in the Modern World

3. You can take an elective from one of our 100-level courses in an area that interests you including
   • Sociology 115: Media and Popular Culture (fall)
   • Sociology 119: From Plantations to Prisons: An Overview of the US Punishment System (spring)
   • Sociology 132: Food, Culture, and Globalization (fall)
   • Sociology 135: Education and Culture (fall)

4. If you have confidence that you are going to concentrate in sociology you can consider taking one of the following core courses that are required for concentrators
   • Sociology 97: Social Theory (offered fall only)
   • Sociology 128: Models of Social Science Research (offered fall only)

*For a more complete listing, concentrations.fas.harvard.edu

Sociology Alums

The breadth of interests touched on by the discipline of sociology is matched by the career choices of our undergraduates who are working in a large number of different areas, including law, medicine, non-profits, investment banking, management consulting, government, journalism, teaching, and higher education. As such, Sociology’s breadth seems particularly valuable in our increasingly global, inter-dependent world.

At Fortnight I learned that...

“...Sociology is an interdisciplinary concentration that covers issues that I am very interested in--politics, inequality, crime, justice, etc.--and that also provides a strong background in methods/reasoning/research. The broadness of the concentration and one’s ability to use other departments’ courses in fulfilling the requirements make this an opportunity for a very liberal education!”
Sociology is a relatively small department with a generous student-faculty ratio and a strong tradition of commitment to undergraduates. The concentration takes pride in its advising system, which allows for personal attention to students. Not true that field is only useful for future social workers or political activists. Sociologists often study problems with important public policy implications, but sociology itself is not primarily concerned with providing care for the needy or political ammunition for partisan debates. We prepare students to develop sociological questions and to design and conduct systematic and rigorous research, with an emphasis on field based research, which they pursue through course projects and senior theses. Department is extremely diverse. Substantial access to faculty and administrators and flexibility in meeting individual intellectual agendas.

### Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>12 half-courses</td>
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<tr>
<td>Honors Option:</td>
<td>Yes (thesis required)</td>
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<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
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<td>Secondary Field:</td>
<td>Yes (5 half-courses)</td>
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<tr>
<td>Tutorials:</td>
<td>Sophomore and Junior (both half-course) for basic, additional Senior (full year) for Honors</td>
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<tr>
<td>Tracks:</td>
<td>No formal tracks</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students*

### Questions?

**Christopher Winship**  
Director of Undergraduate Studies  
[chris_winship@wjh.harvard.edu](mailto:chris_winship@wjh.harvard.edu)  
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**Dr. Rachel Meyer***  
Associate Director of Undergraduate Studies  
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**Laura Thomas**  
Undergraduate Advising and Program Administrator  
lthomas@wjh.harvard.edu  
617-495-3713

*Study abroad credit contact*

### Come Visit Us!

[sociology.fas.harvard.edu](http://sociology.fas.harvard.edu)  
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33 Kirkland St.  
Cambridge, MA 02138  
617-495-3812  
sociology@wjh.harvard.edu
South Asian Studies (SAS)

A concentration in South Asian Studies enables students to develop a critical understanding of the diverse cultures, histories, languages, and literatures of South Asia, which includes modern India, Pakistan, Tibet, Nepal, Bangladesh, and Sri Lanka. South Asia is home to more than a billion people – its influence has extended historically from Central, East, and Southeast Asia to Europe and North America, each of which today have vibrant South Asian diasporas. The study of South Asia is an important area of academic inquiry, especially in recent decades as the region emerges as a global cultural, economic, and political power.

At Fortnight I learned that...

“...South Asian Studies is a very small department, and that because of its small size members of the department work with students to craft their own individual plans of study.”

“...you can incorporate South Asian Studies into many other concentrations, like History and Religion.”

“...it is a very flexible concentration. I learned about the two options for concentrators: South Asian Languages, Literatures, and Cultures or South Asian Studies.”

Advising

Students are assigned a faculty advisor based on their area of study. Students continue with the same advisor throughout their three years, unless there is a reason for making a change. Students meet with their advisor at least once a term and at other times as needed.

Explore

Suggested gateway courses
First year: Students interested in exploring South Asian Studies begin language study (Sanskrit, Tamil, Tibetan, or Urdu-Hindi) in the first semester of their freshman year if possible.

Language study continues in the second semester. Students may also take one or more general courses in South Asian Studies
• Aesthetic and Interpretive Understanding 30, Love in a Dead Language
• Aesthetic and Interpretive Understanding 54, For the Love of God and His Prophet
• Culture and Belief 19, Understanding Islam and Contemporary Muslim Societies
• Culture and Belief 28, Hindu Worlds of Art and Culture
• Culture and Belief 25, Studying Buddhism, Across Place and Time
• Culture and Belief 46, Music, Debate, and Islam
• Culture and Belief 60, Religion in India: Texts and Traditions in a Complex Society
• Freshman Seminar 32x, Topics in Indo-Tibetan Buddhism
• Freshman Seminar 33, Temples and Museums: Politics of Display and the Arts of South and Southeast Asia - (New Course)
• Freshman Seminar 36l, Asia in America
• Freshman Seminar 36s, Comparative Historical Mythology

Second year
• Students who did not take introductory Sanskrit, Tamil, Tibetan, or Urdu-Hindi should begin such a sequence (which must be completed by the end of the sophomore year).
• Students who have completed the introductory language sequence should continue at the intermediate level

*For a more complete listing, concentrations.fas.harvard.edu

SAS Alums

Recent concentrators in the Department of South Asian Studies have gone on to PhD programs in the Arts and Humanities, MD/PhD programs, Law Schools, careers in Public Service, and positions at McKinsey and Company and Bain Capital.
Requires Application: No
Number of Required Courses: 11 half-courses (13 for Honors)
Honors Option: Yes (thesis required)
Joint Concentration Option: Yes (thesis required)
Secondary Field: Yes (6 half-courses; pathways: South Asian Languages, Literatures, and Cultures, South Asian Studies)
Tutorials: Junior for basic (half-course) and Senior for Honors (full year)
Tracks: South Asian Languages, Literatures, and Cultures, South Asian Studies
Language Required: Yes

*For a complete listing of requirements, see the Handbook for Students

Questions?

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Shankar Ramaswami
Director of Undergraduate Studies
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Cheryl Henderson
Department Administrator
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*Study abroad credit contact

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Cambridge, Massachusetts 02138
617-495-3295
southasianstudies@fas.harvard.edu

--

FYI

Harvard College Library contains one of the largest collections of Sanskrit manuscripts and printed texts in the West, strong collections in Urdu and Sindhi literatures and South Asian studies in general.

The Harvard-Yenching Library’s holdings of Buddhist texts are perhaps the finest in the world.

Students are assigned faculty advisors.

Highly interdisciplinary.

Students interested in the social sciences may create academic programs which combine the study of languages, literatures, and cultures with course work in anthropology, economics, public health, sociology, and/or urban planning.

The department prides itself on its student faculty ratio and its vibrant intellectual community.

Students interested in the humanities may study pre-modern and/or modern South Asia from the disciplinary perspectives of anthropology, history, literature, linguistics, music, philosophy, and/or religion.

Study abroad strongly encouraged.

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Study abroad strongly encouraged.
The option of petitioning for a special concentration is for the serious student whose academic interests cross departmental lines. Special Concentrations offers a student the opportunity to design his or her own program of concentration with the advice and consent of the various members of the faculty and administration. This option addresses special educational objectives not accommodated by existing concentrations.

**History of the Program**

Special Concentrations was established in 1971 by a vote of the Faculty of Arts and Sciences. Although by design never one of the larger concentrations, Special Concentrations has always had a solid core of students in widely divergent fields. There are currently some twenty Special Concentrators covering fields as varied as The Cognitive Development of Faith; Stage Directing: Form and Function, Architecture and Environmental Science; and Education and Human Development.

Among the perennially popular fields have been Urban Studies and Dramatic Studies. Interest in some areas, such as Psychobiology, and Environmental Science, which once drew a number of concentrators, has declined due to a change in the requirements in the relevant departments allowing the pursuit of such interests within their departmental frameworks or the development of new interdisciplinary concentrations. The popularity of certain fields waxes and wanes depending upon the current topical interest in the field and the availability of Faculty Advisors. For example, during the late 1990's and early 2000's, there was a surge of interest in health policy as reports of inadequate health care in U.S. cities dominated headlines. More recently, there has been increased attention paid to global health challenges.

**FYI**

Special Concentrations is not for everyone. It is not for students who wish to avoid particular departmental requirements or to create a broad, unfocused concentration that could be described as “general studies.” Nor is it for students who do not know precisely what they want to study and who have trouble narrowing their interests to a single field. Rather, it is an opportunity for students who know quite clearly what they wish to investigate, although it requires integrating courses and research from more than one area. In all cases, students should begin to consult with faculty members who are expert in their areas of interest to determine what direction would be best to follow.

The Standing Committee on Special Concentrations, which is composed of faculty from a wide range of disciplines, sets the general policies and educational guidelines for the program and considers individually each petition submitted. The detailed administration of each student’s program is supervised by his or her faculty advisor and by the Director of Undergraduate Studies (DUS).

Although most special concentration proposals include a full tutorial program culminating in a senior thesis for honors candidates, Special Concentrations is also open to students who prefer a basic course of study. The standing committee must be convinced not only of the quality, rigor, and legitimacy of the topic, but also of the applicant’s high level of self-motivation, perseverance, and conscientiousness, since the success of each Special Concentration depends more than in a regular departmental concentration on the drive and determination of the student. Each approved Special Concentration exists as a small committee within our program. Plans of Study for the individual concentrations are unique, but all are interdisciplinary. For example, several current programs deal with health and public policy, combining coursework from history and science, economics, sociology, and government. A burgeoning interest in urban studies lately has produced several Special Concentrations, some emphasizing city planning, others leaning toward government or economics. Theater and performance studies continue to be the focus of many Special Concentrations in recent years.

Special Concentrations represents a small but significant portion of undergraduate concentrators. It seems best for those students who have not only an unusual interest, but who also have a clear grasp of the direction in which they are heading. Although there are exceptions, most successful Special Concentrations applications have been submitted by upperclassmen who have spent one or two terms studying in one of the College’s established concentrations.
**Special Concentrations Alums**

Since each student designs his or her own concentration, there is no general answer to the question of what students who graduate with a degree in special concentrations go on to do after their time at Harvard. A look at some our recent alumni, however, indicates the following: some students have gone on to Medical School, Law School, Ph.D. programs in Linguistics, History, and Performance Studies, Business School, acting in New York City, making documentary films, being CEO of a business development company, and playing professional football! In other words, concentrators go on to do just about everything.

**Overview**

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<td>Number of Required Courses:</td>
<td>14 half-courses (16 for Honors)</td>
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<td>Honors Option:</td>
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<td>Joint Concentration Option:</td>
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<td>Secondary Field:</td>
<td>No</td>
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<td>Tutorials:</td>
<td>Sophomore (optional), Junior (required for Honors), Senior (1 half-course required for basic, 2 for Honors)</td>
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<td>Tracks:</td>
<td>None</td>
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<td>Language Required:</td>
<td>Not required</td>
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</table>

*For a complete listing of requirements, see the Handbook for Students*

**Questions?**

Dr. Deborah Foster*
Head Tutor
dfoster@fas.harvard.edu
617-495-8056

Stephanie Alusow*
Staff Assistant
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617-495-0450

*Study abroad credit contact*

**Advising**

As part of the process of applying to pursue a Special Concentration, students must enlist the support of a faculty advisor who can assist them in developing their study plan and who will supervise their academic work. The Director of Undergraduate Studies (Deborah Foster), provides general advising and signs study cards.

> “...the special concentration application process is complex and requires patience and persistence. Finding faculty advisors is essential to first hone a plan of study and then help closely with the proposal process.”

**Come Visit Us!**

[Link to specialconcentrations.fas.harvard.edu](specialconcentrations.fas.harvard.edu)

Barker Center
Room 120

617-495-4245
smacaris@fas.harvard.edu
Statistics

Statistics is a relatively young discipline, organized around the rapidly growing body of knowledge about principled methods for data collection and data analysis, the making of rational decisions under uncertainty, and the modeling of randomness in any quantitative inquiries, including the social, natural, and medical sciences. Statistics has a theoretical core surrounded by a large number of domains of application in fields such as anthropology, astronomy, biology, business, chemistry, computer science, economics, education, engineering, environmental sciences, epidemiology, finance, forensic science, geophysical sciences, government, history, law, linguistics, mathematics, medicine, physics, population science, psychology, sociology, and many others. A basic goal of the concentration in Statistics is to help students acquire the conceptual, computational, and mathematical tools for quantifying uncertainty and making sense of complex data arising from many applications—including statistically sound ways of collecting such data. Because Statistics offers an opportunity to branch out and explore a variety of areas it appeals to students who wish to acquire core skills while preserving their chance for a broad general education. It also appeals to those with strong mathematical interests who enjoy seeing formal argument bear direct fruit in practical use.

Students may elect one of three paths toward a concentration in statistics. Two programs of study (the tracks in bioinformatics/computational biology and quantitative finance) provide interdisciplinary education in statistics and biology or finance. Students wishing a more flexible program of study typically choose the standard concentration requirements.

The Bioinformatics and Computational Biology Track in Statistics is aimed at undergraduates with interest in quantitative methods and modeling applied to data from the biological and life sciences. The recent explosion of size and complexity of data in the biological and life sciences, such as the human/animal/plants genome projects with gene and protein sequences, has motivated the development of new statistical methodologies and models, such as models for gene and protein motifs search, phylogenetic reconstruction, and gene expression analysis. Core requirements in statistics emphasize statistical modeling, especially as it relates to biological systems. Additional courses in biology allow students to learn the terminology as well as to obtain a strong foundation in molecular and cellular biology, evolutionary biology, or ecology. The Quantitative Finance Track in Statistics is 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.

Advising

Students are welcome to consult with any faculty in the department. Additional concentration advising is provided by the co-Directors of Undergraduate Studies (David Harrington, Joe Blitzstein, Michael Parzen), the Student Coordinator (Alice Moses), and the Department Administrator (Betsey Cogswell-cogswell@stat.harvard.edu).

All of the persons above sign study cards.

Explore

Suggested gateway courses
• Statistics 100, Introduction to Quantitative Methods for the Social Sciences and Humanities (fall)
• Statistics 101, Introduction to Quantitative Methods for Psychology and the Behavioral Sciences (fall)
• Statistics 104, Introduction to Quantitative Methods for Economics (each of the three courses Stat 100, 101, 104 introduces the principles of applied statistics, with each emphasizing different fields of application; as prerequisites for further study, they are interchangeable) (fall and spring)
• Statistics 110 (fall), Introduction to Probability and Statistics 111 (spring), Introduction to Theoretical Statistics (these two courses are required for the concentration and secondary field, and provide a calculus-based foundation in probability and statistics).

*For a more complete listing, concentrations.fas.harvard.edu

Stats Alums

Recent alumni have obtained a wide variety of jobs (especially in finance, consulting, and tech companies) and gone on to a wide variety of graduate programs (especially in statistics, biostatistics, and medicine).

See: stat.harvard.edu/alumni/AB.html for more information.

At Fortnight I learned that...

"...a concentration in Statistics can be very flexible. There are many different “tracks” I can concentrate in. I also learned how applicable Statistics is to various fields, e.g., finance, business, sports management, journalism.”"
Concentration provides classical and modern methods for learning from data and quantifying risk, randomness, and uncertainty


Studying statistics is useful preparation for a wide variety of jobs in industry and government and for graduate study in many fields. Statistics can be applied almost anywhere; to reflect this, the concentration allows many opportunities to learn about how statistics is used in other fields; by definition, statistics should not be studied in isolation.

Overview

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<td>Honors Option:</td>
<td>Yes (thesis required for Honors-eligibility)</td>
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<td>Joint Concentration Option:</td>
<td>Yes (with participating departments; thesis required)</td>
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<td>Secondary Field:</td>
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<td>Junior (half-course, optional)</td>
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<td>General, Quantitative Finance, Bioinformatics and Computational Biology</td>
</tr>
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<td>Language Required:</td>
<td>No</td>
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</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

Prof. David Harrington*
Co-Director of Undergraduate Studies
dph@hsph.harvard.edu
617-495-8710

Prof. Joseph Blitzstein*
Co-Director of Undergraduate Studies (fall 2014)
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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 faculty 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.

Within VES, each course of study has slightly different requirements. These have been selected so that students will encounter several broad areas of concern. In film and studio arts, concentrators work toward comprehensive accomplishment in their chosen area while simultaneously exploring a variety of other practices and studying related history and theory. In film studies, students explore ways of understanding the theory and history of the moving image. In Environmental studies, students embark on an analysis of the built environment, design and urbanism.

Upon graduation, concentrators in VES enter a wide variety of fields. Some pursue careers as artists or filmmakers while others go into media 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.

**VES Alums**

Besides going on to become filmmakers and visual artists, VES alums put their visual skills to work as curators, gallerists, educators, studio executives. Some, by embarking on further graduate studies, practice law or medicine. Many, however, go on to work in explicitly visual fields. VES graduates have received Academy Award nominations and won top prizes at the Locarno, Sundance and Tribeca Film Festivals, while others have had their work exhibited in some of the world’s most prestigious venues, such as the Whitney Biennial, the Corcoran Gallery of Art, or the Los Angeles County Museum of Art. Our graduates often seek project-based professions that call for innovative thinking and collaborative effort.

**Advising**

New concentrators are assigned a faculty member in the department when they declare, though “nuts and bolts” advising (about course requirements, etc.) is generally provided by the Director of Undergraduate Studies (Ruth Lingford) and the Manager of Academic Programs (Paula Soares). All of these advisors sign study cards, but Paula generally signs when faculty advisors are not available. Paula welcomes drop-ins to her office (Carpenter Center 102) or appointments made in advance.

*For a more complete listing, concentrations.fas.harvard.edu*
Overview

**Requires Application:** Yes

**Number of Required Courses:** 12 half-courses

**Honors Option:** Yes

**Joint Concentration Option:** Yes, but rarely granted

**Secondary Field:** Yes (6 half-courses; areas: Film/Video, Environmental Studies, Film Studies, Studio)

**Tutorials:** Sophomore and Junior (both half-course, rarely undertaken) Senior (thesis, optional)

**Tracks:** Studio Arts and Film/Video, Film Studies, Environmental Studies

**Language Required:** No

---

**Questions?**

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**Paula Soares***
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---

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**At Fortnight I learned that...**

“...even as someone with almost no experience in film or VES in general, it is still a viable option to concentrate or do a secondary in VES.”
The study of gender and sexuality has long constituted a vibrant and engaging arena for interdisciplinary work and intellectual inquiry. At the heart of this field is the assertion that gender and sexuality are fundamental categories of social organization and power that are inseparable from race, ethnicity, class, nationality, and other categories of difference. The concentration in Women, Gender, and Sexuality Studies (WGS) brings together a wide range of academic fields in the humanities, social sciences, and sciences (including history, literature, visual studies, anthropology, sociology, political science, psychology, and biology, to name just a few). As an interdisciplinary field of study, WGS pays close attention to how social norms have changed over time and how they vary across cultures. The concentration also actively investigates the ways in which ideas about gender and sexuality have shaped public policy, civil rights, health care, religion, education and the law, as well as the depiction of women and men in art, literature, and the popular media. WGS courses are characterized by a strong commitment to critical thinking, as well as a spirit of open and sustained intellectual inquiry.

**Women, Gender & Sexuality Studies (WGS)**

**Explore**

*Suggested gateway courses*

Any General Education Course offered by WGS faculty; Any other topical course in WGS listed as 1100 or 1200 level. See the WGS website for up-to-date list of courses.

**Fall**

- SWGS 1200fh. Our Mothers, Ourselves: Postwar American Feminist Thought
- SWGS 1211. Queer Practice (New Course)
- SWGS 1221. La Chicana: Race, Gender, and Mexican-American Identity (New Course)
- SWGS 1233. Gender, Sexual Violence, and Empire
- SWGS 1247. I Will Survive: Women’s Political Resistance Through Popular Song (New Course)
- SWGS 1249. Gender in African History
- SWGS 1253. Sexual Health and Reproductive Justice (New Course)
- SWGS 1271. Women and War: Gender, Race, and the Politics of Militarism (New Course)

**Spring**

- SWGS 1144. Gender and Science (New Course)
- SWGS 1167. Gender and Education
- SWGS 1210qt. Queer Theory
- SWGS 1261. On Love: Gender, Sexuality, Identity (New Course)
- SWGS 1272. Global Reproductive Health (New Course)

*For a more complete listing, concentrations.fas.harvard.edu*

**WGS Alums**

WGS Alumnae/i have pursued a variety of career paths, including medicine, teaching, art, law, publishing, public service, and academia, but what unites them is a demand for critical thinking and problem-solving skills.

For a closer look at what Alumnae/i have done with their WGS degrees, visit our Alumnae/i page, linked from wgs.fas.harvard.edu

**At Fortnight I learned that...**

“...the goal of the WGS department is not to find an answer to every question on gender, sexuality, etc.; rather, the department wants to engage its students in such a way that they keep questioning and complicating their own preconceived notions about these sensitive topics.”

**Advising**

Concentration advising is provided by the Director of Undergraduate Studies (DUS; Caroline Light) and the Assistant Director of Undergraduate Studies (ADUS; Linda Schlossberg). Sophomores are welcome to work with both of these advisors. Juniors typically work with the DUS; seniors, with the ADUS.

For a more complete listing, concentrations.fas.harvard.edu
Overview

<table>
<thead>
<tr>
<th>Requires Application:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Required Courses:</td>
<td>12 half-courses (13 half-courses for Honors)</td>
</tr>
<tr>
<td>Honors Option:</td>
<td>Yes (thesis required for Honors)</td>
</tr>
<tr>
<td>Joint Concentration Option:</td>
<td>Yes (thesis required)</td>
</tr>
<tr>
<td>Secondary Field:</td>
<td>Yes (5 half-courses)</td>
</tr>
<tr>
<td>Tutorials:</td>
<td>Sophomore (half-course, required), Junior (half-course, required for thesis track) and Senior (full year, required for thesis track)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>No formal tracks</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

*For a complete listing of requirements, see the Handbook for Students

Questions?

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*For a complete listing of requirements, see the Handbook for Students

Our students have joint concentrated with a wide range of concentrations, including Social Studies, English and American Literature, Human Developmental and Regenerative Biology, Statistics, African and African-American Studies, Sociology, History and Literature, Romance Languages and Literature, East Asian Languages and Cultures, Religion, Government, History of Science, and Visual and Environmental Studies.
Secondary Fields

In addition to offering concentrations, many Harvard departments also offer students the option of pursuing a less intensive structured course of study: secondary fields. Secondary fields may be of especial interest to students whose elective course choices cluster in a particular area of study, providing them with an opportunity to explore an intellectual passion in greater depth. Secondary fields are entirely optional. For a complete listing of secondary fields and their requirements, go to the undergraduate Handbook for Students. A few secondary fields do not have corresponding concentrations:

- Celtic Languages and Literatures
- Dramatic Arts
- Ethnicity, Migration, Rights (EMR)
- Global Health and Health Policy (GHHP)
- Medieval Studies
- Microbial Sciences
- Mind, Brain, and Behavior (MBB)
- Regional Studies—Russia, Eastern Europe, and Central Asia (REECA)

Profiles of these secondary fields appear in the pages that follow. One additional secondary field – Energy & Environment – is affiliated with the Environmental Science and Public Policy concentration. This secondary field is new to the College, and is also profiled in this guide.
Harvard is one of the only universities in North America where you can explore the culture, literature, history and languages of the Celtic-speaking peoples. A secondary field in Celtic will introduce you to a vibrant and varied subject that encompasses literatures and languages from medieval to contemporary. Some students take a broad interest in the Celtic cultures, others in Celtic folklore and mythology, and some in the Celtic languages and literatures of Ireland, Scotland, or Wales. We teach some of the classics of the Celtic literatures in English translation but we also offer instruction in the original linguistically-significant languages, both medieval and modern. These languages now receive unparalleled support in their home countries, making this an ideal, vital, and exciting time to engage with them. Irish literature with its tales of kings, heroes, saints and fantastical beings is the oldest vernacular literature in Western Europe. The tradition of Welsh poetry encompasses heroic deeds, loss and lament, romantic love and the beauties of the natural world in patterns of fascinating complexity, and Welsh stories are some of the earliest in which King Arthur appears. Scotland’s Gaelic folklore tradition is considered to be the ‘finest flower of Western Europe’. With courses on topics as diverse as Celtic Saints and The Hero of Irish Myth and Saga, we have courses for every interest in the Celtic world.

**Celtic Alums**

A number of our Secondary Fielders have been awarded Fulbright or Mitchell scholarships to allow them to pursue further study in Celtic in Europe. Our alumni, in common with other graduates of the humanities at Harvard, go on to a wide range of careers in which the transferable skill set, acquired with us, is highly prized and rewarded.

**Questions?**

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**Overview**

<table>
<thead>
<tr>
<th>Number of Required Courses:</th>
<th>5 half-courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint Concentration Option:</td>
<td>No (Although concentrators in Folklore and Mythology may elect Celtic as their special field)</td>
</tr>
<tr>
<td>Tracks:</td>
<td>Suggested ‘sample tracks’ are detailed at celtic.fas.harvard.edu/sampleTracks.shtml</td>
</tr>
<tr>
<td>Language Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: concentrators in Folklore and Mythology may elect Celtic as their special field

*For a complete listing of requirements, see the Handbook for Students*
Dramatic Arts (Secondary Field)

Dramatic Arts at Harvard includes the study and practice of theater, dance, opera, and other multimedia or multisensory performance forms. Like other Secondary Fields at Harvard, Dramatic Arts provides the opportunity to pursue focused study outside of the formal constraints of a concentration. Unlike many others, however, Dramatic Arts is built on the premise that historical, literary, theoretical, and practical studies are best when conceived of as mutually interdependent. Work in each deepens one’s work in the others. Thus, the program combines text-based academic course work with studio training (in both traditional and non-traditional senses). It offers, ideally, immersion in the broad and rich history of performance forms, a philosophical encounter with fundamental questions about art, embodied action, and experience, and a lived sense of what it means to make performance happen, with all the tools of the multimedia present or with only the tools of one’s body.

Number of Required Courses: 6 half-courses

- At least two practice-based or studio courses (acting, directing, dance, choreography, dramaturgy, design, etc.) chosen from courses sponsored by the Dramatic Arts program (i.e. “Courses” with the “Dramatic Arts” rubric, not “Cross-Listed Courses”).
- At least two courses focused on critical and scholarly approaches from either the courses sponsored by the Dramatic Arts program or from the list of Cross-listed Courses.
- Two additional courses from either list.

*For a complete listing of requirements, see the Handbook for Students

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The energy-environment challenge is a defining issue of our time, and one of Harvard’s greatest contributions to meeting that challenge will be the education of a new generation of leaders in science, business, law, design, and public service. To this end, the Environmental Science and Public Policy (ESPP) program, in coordination with the Harvard University Center for the Environment (HUCE), is pleased to offer the secondary field in Energy and Environment (E&E). Through coursework and a colloquium, students engaged in the E&E secondary field will increase their exposure to, and literacy in, the interdisciplinary nature of issues related to energy and the environment.

In the context of the E&E secondary field, ‘Energy’ refers to the production, distribution, and use of energy by individuals and society for a variety of purposes. This includes the various technologies, policies, and challenges associated with meeting increasing global energy demands. ‘Environment’ refers to the understanding of the relationships and balances of the natural and constructed world at multiple scales, including how anthropogenic activities and policies affect the intimate relationship between energy demand, environmental quality, and climate change.

Students from a wide range of concentrations, including the humanities, are invited to participate in the program to explore how different disciplinary perspectives on energy and environment intersect and inform one another. For example, a student concentrating in English may wish to increase their knowledge of the environment and energy from the perspectives of environmental literature or history. A student studying global health may want to better understand the impacts of climate change on water resources, nutrition, and human health. Or, a student in the physical sciences may want to expand their training by improving their understanding of climate dynamics and energy production to support their interest in materials science and energy storage. All participating students share exposure to the core issues related to climate change, the consequences of energy choices, and changes in our physical and biological environment, preparing them to make informed professional and personal decisions about some of the most pressing societal challenges of the 21st century.

**Explore**

Students choose at least one course from the following, which include content related to both energy and environment:

- SPU 25. Energy: Perspectives, Problems and Prospects (M. McElroy)
- SPU 29. The Climate-Energy Challenge (D. Schrag)
- SPU 31. Energy Resources and the Environment (J. Shaw)
- SLS 22. Human Influences on Life in the Sea (R. Woollacott, J. McCarthy)
- ESPP 11. Sustainable Development (W. Clark)
- ES 6. Environmental Science and Technology (C. Vecitis)

**Overview**

**Number of Required Courses: 4 half-courses**

**Types of Required Courses:**

One foundational course and three upper-level courses (at least one course must be chosen from each of two elective categories: Social Sciences and Humanities, and Natural Sciences and Engineering)

**Additional Requirements:**

- Participation in a colloquium.
- Secondary must be declared by beginning of 6th term of study.

*For a complete listing of requirements, see the Handbook for Students*

**FYI**

Students interact closely with Harvard faculty who are conducting leading research in the areas of energy and the environment

E&E is closely aligned with the Environmental Science and Public Policy (ESPP) concentration, both of which are administered by the Harvard University Center for the Environment

Students from all concentrations, including the humanities, are invited to participate in the program

**Questions?**

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espp.fas.harvard.edu/
energy-environment

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**Advising**

Advising in the secondary is provided by the Program Administrator (Eric Simms) and the Head Tutor for Environmental Science and Public Policy (Paul Moorcroft).
The Standing Committee on Ethnicity, Migration, Rights (EMR) focuses on the closely linked areas of ethnicity, migration, indigeneity, and human rights to provide curricular and co-curricular enrichment for Harvard College students. The committee serves as a clearinghouse for courses giving attention to fluid group boundaries that emerge nationally and internationally within contexts of forced and voluntary migration. Questions of rights and specifically human rights—including political, legal, cultural, and economic rights—occupy an important position within studies of shifting ethnic landscapes.

EMR is charged with expanding offerings regarding ethnic communities within the United States, with particular attention to Asian American, Latino, and Native American topics. At the same time, many offerings listed by the committee are broadly comparative and international in their content.

Courses in EMR are taught by faculty from across the disciplines in FAS as well as at other Harvard schools and draw on materials from the social sciences and humanities. The Committee also offers a secondary concentration.

**Explore**

**Suggested gateway courses:**

Several designated courses serve as “Portal Courses” to the field of EMR. Portal Courses are taught by faculty with expertise in one or more areas across ethnicity, migration, and human rights. Portal Courses may be taken at any time in pursuit of the secondary field and are wonderful gateways to further study in EMR.

Portal Courses:
- English 68. Migrations: American Immigrant Literature
- Music 97c. Music in Cross-Cultural Perspective
- Societies of the World 44. Human Trafficking, Slavery and Abolition in the Modern World
- United States in the World 15. Is the American Racial Order Being Transformed?

For a complete listing of EMR courses, including additional courses in the Program on General Education, go to emr.fas.harvard.edu.

Students interested in EMR may also want to attend some of our public events. The Committee hosts a discussion series in the undergraduate houses called “Ask Big Questions.” These events are led by faculty who facilitate discussion around some of the “big questions” that students encounter through study in EMR. Additionally, EMR hosts lectures and outreach events throughout the year. Visit the EMR website for access to the events calendar or to sign up for the email list.

**Overview**

**Number of Required Courses: 5 half-courses**

Students must complete five half-courses from the approved course list, which can be found in the Courses of Instruction and on the EMR website.

One half-course must be chosen from a subset of courses designated as “Portal Courses.” These courses are meant to give students an overview of one or more of our core areas and should be taught by Harvard ladder faculty. Many Portal Courses are taught by EMR committee members. On occasion, a student may be granted permission to use another course from the list as a Portal Course. Students wishing to discuss this option should do so with the Secondary Field Academic Advisor.

Four additional half-courses must be taken, two of which must be above the introductory level.

Courses related to the fields of EMR from study abroad, Harvard Summer School, and other Harvard schools may count toward the secondary field with approval.

*For a complete listing of requirements, see the Handbook for Students*
EMR Alums

Alumni in EMR are equipped to work in a diverse, globalized, multicultural world. They understand how human groups often divide along lines of ethnicity. They also appreciate the impact of migration on ethnicity as well as its frequent connection to rights.

Former students have pursued a variety of interests after graduation. Some alumni have gone on to study international peace processes, to teach in developing areas of the world, and to work with Ameri-corps in underprivileged communities in the United States. Alumni have pursued roles in the business, legal, and financial sectors as well. Studies related to EMR also provide a broad, critical background for graduate studies across the disciplines.

EMR offers students a great amount of flexibility to tailor the program to fit their career and life goals.

FYI

More than 30 faculty are involved in EMR at Harvard, many of whom are invested in working with and mentoring students. Students interested in meeting with faculty mentors may contact an academic advisor to facilitate such connections.

EMR is a secondary field, which complements a wide range of fields of study. Students from disciplines as diverse as applied mathematics, neurobiology, social studies, and literature have pursued the secondary concentration in EMR.

The EMR course listing includes more than seventy courses from across the College and other Harvard schools. Some students have found that pursuing the EMR secondary concentration has helped them select a primary concentration or future plan for graduate study because the course list draws from many disciplinary perspectives.

EMR is newly renamed and was formerly known as Ethnic Studies. The new name reflects changes in the way that scholars and students are studying ethnicity, migration, and human rights.

More than a secondary field, EMR hosts events, awards grants, and builds community among students and faculty on campus. Students are encouraged to stay involved and to take leadership roles within the Committee.

Questions?

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Global Health & Health Policy (GHHP) (Secondary Field)

The incidence and meaning of disease and injury, the quality and cost of health care services to prevent and treat those diseases and injuries, the variable access of citizens to those services, the role of government and politics in the provision and regulation of health care – these fundamental issues and many more are central concerns of health policy both in the United States and abroad. Indeed, health care affects the life of every individual, whether through treatment of illness, financing of public and private health insurance, care of vulnerable populations, education about the health risks and benefits of behaviors that affect health, or adoption of regulations to reduce exposure to toxic environments.

A secondary field in Global Health and Health Policy could explore any of these topics within the United States or across the world, moving into such themes as: accountability and governance (the role of the state versus transnational organizations and corporations in global health); the relevance and morality of global socioeconomic inequality in health; the risk of pandemic diseases and their economic and psychological impact on populations; the consequences of political change in a country’s health; and the challenges resulting from complex emergencies and vulnerable populations in fragile states.

The natural sciences, the social sciences, and the humanities all contribute to the study of global health and health policy. Harvard offers many different perspectives and programs concerning health. Students may explore aspects of health care, health policy, and health science through many perspectives, approaches and subject matter.

GHHP Alums

Our alumni pursue a wide range of careers. Many go on to medical school or research positions, but others establish careers in public health, consulting, and politics, as well as in the financial, business, and legal fields. Some of our most recent graduates hold the following positions: fellow at a state department of public health AIDS initiative, fellow at CMS Center for Medicare and Medicaid Innovation, teacher at Teach for America, analyst at a biotech start-up, research coordinator for the epidemiology department of a major university, cofounder/CEO of a nonprofit dedicated to water security in Uganda, and senior analyst at a well-known healthcare consulting firm.

The GHHP secondary field is flexible and allows you to tailor your program to your individual interests and goals. Our graduated students tell us that GHHP prepared them for cross-disciplinary thinking and critical analysis, and feel the research and application skills they gained translate well across professional fields and graduate study disciplines. If you would like to discuss how GHHP might fit in with your own career options, please come speak with us.
Number of Required Courses: 5 half-courses (1 foundational course, 3 distribution courses, 1 research course)

Tracks: None required, but two thematic areas: Health Policy, Science of Disease

Research Required: Yes

*For a complete listing of requirements, see the Handbook for Students

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Medieval Studies (Secondary Field)

Those who defined themselves as “modern” came to view the medieval period condescendingly, associating it with a small number of basic themes and images such as heroism and chivalry, courtly love, feudal society, religious fervor, and repression. Of course, all of these are stereotypes which tell us far more about “modernity” than they do about the period itself. Many medieval innovations, such as centralized state monarchy, the university, vernacular literature, artillery, and clock time, are essential parts of Western as well as global society as we know it today. Learning about the vast and varied period known as the Middle Ages, therefore, offers a unique and valuable perspective on modern history and culture. Just as importantly, however, it also teaches us how people who are so much like us in so many ways can nonetheless live in a world that is utterly different. Studying the Middle Ages thus will allow you to see the many different ways in which human societies function, invent, create, believe, and interact. From the viewpoint of its cultural descendants in the New World as well as the Old, the Middle Ages is both “us” and “not us,” at once part of our collective heritage and something very, very different.

The Committee on Medieval Studies is an interdisciplinary group of faculty whose teaching and research focus on the “Middle Ages”, a thousand-year-long period of European, Near Eastern, and North African history and culture spanning the period between “Antiquity” (c. 1000 BCE -500 CE) and “Modernity” (c. 1500 CE on). Medieval Studies is an exciting and wide-ranging area of study, and the secondary field is designed to immerse Harvard students in the richness, variety, and complexity of medieval societies. In addition to one foundational half-course, which can be taken in any discipline, students take four more advanced courses, which expose them to the various disciplines comprising Medieval Studies. While some of these courses teach or require specialist skills, most are intended to be accessible to any interested student, whatever his or her field of specialization.

Overview

Number of Required Courses: 5 half-courses

*For a complete listing of requirements, see the Handbook for Students

Explore

Suggested gateway courses:

Making the Middle Ages (Culture and Belief 51) offers a general introduction to the cultures and beliefs of medieval Europe through an object-centered study of medieval artifacts and cultural productions, inviting students to explore the interdisciplinary field of Medieval Studies and introducing them to how we might tease ideas out of the remnants of past societies.

Authority and Invention: Medieval Art and Architecture (Medieval Studies 107) investigates a series of masterworks of art and architecture in western Europe from the decline of Rome to the dawn of the Italian Renaissance, focusing on the creative tension between the impulse to originality and the authority of classical models in the search for new art forms.

From Type to Self in the Middle Ages (Literature 157) investigates the meaning of the poetic “I” in premodern literatures by analyzing medieval and early modern autobiographical writing, ranging from spiritual autobiographies (Augustine, Margery Kempe, Teresa of Ávila) to letter collections, maqama literature, troubadour lyric, Hispano-Jewish poetry, pilgrimage narratives, medieval allegories, and the picaresque novel.

Openings: The Illuminated Manuscript (Aesthetic and Interpretive Understandings 16) provides an in-depth introduction to to medieval books, their decoration and their readers in the Middle Ages, when the book as we have known it, along with allied institutions, such as the university itself, first came into being.

Knowledge on the Move: Cultures of Science in the Medieval World (History of Science 101) explores the development of scientific ideas and practices in the medieval Middle East and western Europe, focusing on the circulation of texts, people, and objects within a variety of religious, intellectual, social, and institutional contexts.

Questions?

Sean Gilsdorf
Program Administrator and Undergraduate Advisor

Daniel Lord Smail
Co-chair of the Committee on Medieval Studies

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Microbial sciences is an interdisciplinary approach to studying the impact of microbes at scales from global ecosystems down to single-celled microenvironments. The academic program emphasizes the joint study of species diversity, metabolic function, geochemical impact, and medical and pharmaceutical applications of microbial sciences. Faculty affiliated with the Microbial Sciences Initiative (MSI) include members from Molecular and Cellular Biology, Organismic and Evolutionary Biology, Earth and Planetary Sciences, Chemistry and Chemical Biology, the School of Engineering and Applied Sciences, Harvard Medical School, Harvard School of Public Health, and the Forsyth Institute.

Explore
- Check out the MSI website: msi.harvard.edu
- Join the MSI email list: msi.harvard.edu/misc/listserv.html
- Attend a Friday chalk-talk breakfast or Thursday seminar: msi.harvard.edu/events/events.html
- Apply for an MSI Summer Fellowship: msi.harvard.edu/undergraduates/undergrad_research_fellowship

FYI
- The MSI secondary field is intended to provide a strong foundation in interdisciplinary microbial sciences to students who have sufficient preparation in other natural sciences, mathematics, or engineering
- The MSI curriculum is intended to be interdisciplinary;
  - not be specifically biomedical; and
  - incorporate elements from physical sciences as well as life sciences
- An important aspect of the MSI secondary field is the laboratory component, which provides hands-on experiential learning to all students
- Students are encouraged to be active participants in the MSI community. Participating in MSI events and activities provides opportunities to connect with graduate students, post-docs, and members of the faculty

Overview

**Number of Required Courses: 5 half-courses**

- Two MSI cornerstone courses: Microbiology 210: A Microbial Planet and Life Sciences 100r (the microbial sciences laboratory project component). (Other research project courses may be allowed to substitute for Life Sciences 100r)
- One introductory half-course containing material relevant to providing a foundation in microbial sciences.

Two microbial half-courses at the 100-level or above.
Tutorials: non-credit. Students are encouraged, but not required, to attend the MSI chalk-talk series, which is offered every Friday from 8:45-9:30 am. The location is announced weekly at msi.harvard.edu/events/fridays.html.

*For a complete listing of requirements, see the Handbook for Students

Questions?

Ann Pearson
MSI Head Tutor
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Karen Lachmayr
MSI Executive Director
klachmay@fas.harvard.edu

Come Visit Us!

msi.harvard.edu

25 Francis Ave.
Vanserg Bldg., Rm. 118
Cambridge MA 02138

617-496-1008
Knowledge about mind, brain, and behavior has expanded exponentially in recent years. We have experienced a growing excitement about the possibility that complex domains of mental function and behavior will soon be susceptible to scientific elucidation. Important findings have arisen from traditional disciplines of inquiry, and indeed these traditional disciplines have proven remarkably successful at expanding knowledge. These successes, however, also bring into relief the limits of disciplinary inquiry, and the critical importance of interdisciplinary links and developments, bringing to the fore new technologies and theories. The Mind/Brain/Behavior Interfaculty Initiative (MBB) was established twenty years ago to help bring the perspectives of neuroscience into sustained and constructive dialogue with those of other natural sciences, the social sciences, and the humanities.

In its undergraduate programs, MBB brings together a diverse group of faculty from Harvard’s different schools and disciplines, and has taken advantage of the intellectual innovations possible in new combinations of these traditional disciplines. In addition to the MBB tracks that allow students to integrate the study of mind/brain/behavior with their concentration studies and pursue a research focus to their studies, MBB offers a secondary field for students from any concentration who may wish to integrate their MBB interests with their concentration but without a research focus, or who may wish to study mind/brain/behavior largely independently from their concentration. We welcome students from any concentration to our secondary field.

Explore
• Science of Living Systems 20: Psychological Science (recommended freshman year)
• MCB 80: Neurobiology of Behavior (recommended sophomore year)

*For a complete listing of requirements, see the Handbook for Students

We recommend that students take SLS 20, Psychological Science, in their first year. SLS 20 serves as an introduction to both psychology and mind/brain/behavior, and is also a requirement for the MBB secondary field. We realize that a number of students defer SLS 20 until their sophomore year. That is usually fine, and you’re welcome to check in with us if your schedule does not allow you to take an MBB-related course as a first-year. Beyond the classroom, we offer several ways to learn about and take part in MBB. See our website (mbb.harvard.edu) for information on all things MBB. We also email newsletters several times each semester with information about upcoming events, program updates, and research opportunities. You can join our emailing list on the front page of our website.

MBB holds several public events each year, including talks by distinguished Harvard and visiting lecturers. It holds an interdisciplinary symposium specifically for undergraduates early each year. And it works closely with the undergraduate student organization the Harvard Society for Mind/Brain/Behavior (HSMBB), which is very active and holds a large number of talks, informal conversations, and symposiums with faculty and researchers from a wide ranges of MBB areas. The HSMBB website is hcs.harvard.edu/~hsmmb and its facebook page is facebook.com/HSMBB; to join its email list, go to lists.hcs.harvard.edu/mailman/listinfo/hsmmb-list.

We very much welcome undergraduates to our large events and strongly encourage students exploring MBB to check out the great activities HSMBB offers.

Overview

Number of Required Courses: 5 half-courses

*For a complete listing of requirements, see the Handbook for Students
MBB Alums

MBB can be a strong component of a 21st century liberal arts education, and as such can help prepare students for any of the professions. MBB students usually pursue professions common to their home concentration. Medical and research careers are the most common, but other MBB students have gone into the other professions (for example, MBB secondary students who are economic concentrators often go into finance), and the first MBB graduate became a jazz musician. Your study of MBB need not relate to your career interests, but if you would like to discuss how MBB and your career options might relate, please come speak with us.

Shawn Harriman
MBB Education Program Coordinator
shawn_harriman@harvard.edu

MBB has a Board of Faculty Advisors available to talk about topics in mind/brain/behavior, research opportunities, and career options. Board membership changes each year; consult the advising page on the MBB website, mbb.harvard.edu/advising, for current membership and contact information.

Questions?

Come Visit Us!

mbb.harvard.edu
Mind Brain Behavior Interfaculty Initiative
275 William James Hall, 33 Kirkland St.
Cambridge, MA 02138
Regional Studies (Secondary Field) - Russia, Eastern Europe, & Central Asia (REECA)

The REECA secondary field is based at the Davis Center for Russian and Eurasian Studies, which marshals a rich and diverse array of resources to advance the interdisciplinary study of this world region. The Davis Center's thirty-eight faculty associates, representing nine disciplines at four Harvard schools, offer over 160 language and area studies courses each year. Outside the classroom, the Davis Center hosts a full schedule of seminars, conferences, and special events that engage a dynamic and collegial scholarly community, including visitors from the region. Each spring, the Davis Center hosts the Undergraduate Colloquium on Russian and Eurasian Studies, where students present their research findings. In addition to these academic and extracurricular resources, the Davis Center offers grants to support undergraduate thesis research, internships, and language study in the region.

Explore

*Suggested gateway courses:*

Browse regional course listings on the Davis Center’s website at [daviscenter.fas.harvard.edu/study/courses](http://daviscenter.fas.harvard.edu/study/courses) and find a Freshman Seminar or General Education course that appeals to you. 100-level and 1000-level departmental courses can also be great starting points. Don’t have room in your schedule for a class? Check out the Davis Center’s facebook page at [facebook.com/DCRES](http://facebook.com/DCRES) for more ideas.

FYI

You can design your field to offer a broad overview of the whole region, or you can focus your coursework on a particular country, theme, or problem.

Whether you want to satisfy a personal interest or prepare for a career in the region, REECA can take you there.

Questions?

Donna Griesenbeck
Student Programs Officer
617-495-1194
griesenb@fas.harvard.edu

Overview

**Number of Required Courses:**

- 5 half-courses
  - A minimum of 3 half-courses must be in the social sciences
  - A minimum of 3 half-courses must be taught by Davis Center faculty
  - A minimum of 3 half-courses must be regular departmental courses (not Gen Ed classes, Freshman Seminars, etc.)
  - Courses must be distributed across at least 2 different disciplines or departments

**Language Required:** No, but 1 half-course of relevant language study may be counted.

*For a complete listing of requirements, see the Handbook for Students*
General Education Categories

1. Aesthetic and Interpretive Understanding (AI)
   AI courses focus on the development of aesthetic responsiveness and the ability to interpret forms of cultural expression through the study of literary or religious texts, paintings, sculpture, architecture, music, film, dance, decorative arts, etc.... Courses in AI might explore the ability of art to effect positive social change; gender as performance; and ideas of power, westward expansion, and race in American musicals.

2. Culture and Belief (CB)
   CB courses aim to develop an understanding of and appreciation for the ways that social, political, religious, economic, and historical conditions shape the production and reception of ideas and works of art, either within or across cultural boundaries. Courses in CB address such topics as the concept of authorship (its significance for claims about plagiarism or copyright), censorship, conflicting interpretations of religious and other texts, institutional mediation of aesthetic experience (art museums, the music industry, the church), and violence and its representation.

3. Empirical and Mathematical Reasoning (EMR)
   Courses in EMR teach the conceptual and theoretical tools used in reasoning and problem solving, such as statistics, probability, mathematics, logic, and decision theory. Students develop the ability to apply abstract principles and theories to concrete problems. They also learn how to make decisions and draw inferences that involve the evaluation of data and evidence, and how to recognize when an issue cannot be settled on the basis of the available evidence. Students might explore issues of health, disease, and systems for delivering health care; or consider politics in terms of rational behavior.

4. Ethical Reasoning (ER)
   Courses in ER teach students to reason in a principled way about moral and political beliefs and practices, and to deliberate and assess claims for themselves about ethical issues. Students in these courses may encounter a value system very different from their own that calls attention to their own ethical assumptions. ER courses promote the students’ personal development and build the capacities for argument and deliberation essential for effective civic agency. Topics might include human rights and globalization, human rights and “security”, and medical ethics.

5. Science of Living Systems (SLS)
   SLS courses explore a range of topics relating to understanding life -- its origins, the way it adapts to and changes the environment, and the ways in which human interventions can affect its trajectory. These courses provide students with the tools to evaluate scientific claims, consider alternative accounts for empirical findings, and appreciate the ambiguity that often surrounds such findings. Scientific knowledge of the living world will provide material essential to understanding the ethical dimension of many issues and decisions that students will face in the years after college, e.g., the legality of embryonic stem-cell research and the ethics of human cloning.

6. Science of the Physical Universe (SPU)
   Courses in SPU explore discoveries, inventions, and concepts in the physical sciences that have led to or underlie issues affecting societies across the globe including reliance on fossil fuels, the exploration of space, the proliferation of nuclear weapons, climate change, and privacy in an age of digital communication. An understanding of key facts and theories about, and concepts pertaining to, the physical universe is essential if students are to be prepared to adapt to change and to function as aware citizens.

7. Societies of the World (SW)
   Courses in SW provide students with an international perspective by acquainting them with values, customs, and institutions that differ from their own, and help students to understand how different beliefs, behaviors, and ways of organizing society come into being. These courses may focus primarily on a single society or region, or they may address topics that transcend national boundaries, analyzing the flow and transformation of money, goods, people, resources, information, or ideas between and among different societies. Topics might include immigration policy, ethnic identity and statehood, religion and government, and global markets.

8. United States in the World (US/W)
   Courses in US/W examine American social, political, legal, cultural, and economic practices, institutions, and behaviors from contemporary, historical, and analytical perspectives. Students will come to understand this country as a heterogeneous and multifaceted nation situated within an international framework by examining ideas about what it means to be an American, about the persistence and diversity of American values, and about the relations among different groups within the US and between the US and the rest of the world. These courses prepare students for civic agency by providing critical tools to understand such issues as income disparity, health care and the state, affirmative action, immigration, election law, and zoning and urban sprawl.
Below you will find two lists of departmental courses that also satisfy a General Education requirement. The first list is sorted by course title, and the second list is sorted by General Education category. Some of these courses may have prerequisites or assume familiarity with the subject matter.

**Courses marked with an asterisk(*) require the instructor's permission. Courses in square brackets are not offered in 2014-15 but are expected to be offered in 2015-16.**

**AIU**  
AAAS 179. Jazz, Freedom, and Culture  
[AAAS 182. From R & B to Neo Soul: Black Popular Music and Cultural Transformation]  
*East Asian Film and Media Studies 140. Anime as Global Popular Culture*  
English 111. Epic: From Homer to Star Wars  
English 115b. Chaucer: The Canterbury Tales  
English 151. The 19th-Century Novel  
English 154. Literature and Sexuality  
English 157. The Classic Phase of the Novel  
English 158a. A History of Western Drama  
English 178x. The American Novel: Dreiser to the Present  
English 192. Political Theatre and the Structure of Drama  
[*Folk & Myth 128. Fairy Tale, Myth, and Fantasy Literature*]  
HAA 10. The Western Tradition: Art Since the Renaissance  
[HAA 11. Landmarks of World Architecture]  
HAA 161v. Rome: Eternal City  
[Literature 133. Shakespeare Shakes the Globe]  
[Literature 147. "Why the Jews?:" The Modern Jewish Experience in Literature - (New Course)]  
Medieval Studies 107. Authority and Invention: Medieval Art and Architecture  
Music 1. 1000 Years of Listening - (New Course)  
Music 190gew. Music in Islamic Contexts - (New Course)  
[Music 190gw. South Indian Music]  
[Music 1a. Introduction to Western Music from the Middle Ages to Mozart]  
[Music 1b. Introduction to Western Music from Beethoven to the Present]  
Music 2. Foundations of Tonal Music I  
*Music 51a. Theory Ia*  
*Music 51b. Theory Ib*  
Scandinavian 150r. The Vikings and the Nordic Heroic Tradition  
[Slavic 148. Strange Russian Writers]  
[WGSS 1237. LGBT Literature]  
VES 70. The Art of Film  
[AAAS 182. From R & B to Neo Soul: Black Popular Music and Cultural Transformation]  
Anth 1795. The Politics of Language and Identity in Latin America  
[Classics: Classical Studies 165. Medicine in the Greco-Roman World]  
[CS 105. Privacy and Technology]  
Econ 1776. Religion and the Rise of Capitalism  
[*Folk & Myth 114. Embodied Expression/Expressive Body: Dance in Cultural Context*]  
[*Folk & Myth 128. Fairy Tale, Myth, and Fantasy Literature*]  
[German 146. The Ethics of Atheism: Marx, Nietzsche, Freud]  
[Hist 1144. The Renaissance in Florence]  
[Hist 1301. Western Intellectual History II: The Prehistory of Modern Thought]  
[Hist 1318. History of the Book and of Reading]  
Hist 1445. Science and Religion in American History  
Hist 1462. History of Sexuality in the Modern West  
Hist Sci 100. Knowing the World: An Introduction to the History of Science  
Hist Sci 108. Bodies, Sexualities, and Medicine in the Medieval Middle East
Departmental courses that satisfy Gen Ed requirements (by category)

CB Hist Sci 108. Bodies, Sexualities, and Medicine in the Medieval Middle East
CB [Literature 133. Shakespeare Shakes the Globe]
CB Music 157gew. South Indian Music Theory & Practice CB Music 190gew. Music in Islamic Contexts - (New Course)
CB NELC: Islamic Civilizations 178. Muslim Societies in South Asia: Religion, Culture, and Identity
CB NELC: The Modern Middle East 111. Culture and Society in Contemporary Iran
CB Religion 1802. Introduction to Islamic Mysticism: The Sufi Tradition
CB Religion 40. Incarnation and Desire: An Introduction to Christianity
CB Religion 46. The Letters of Paul: Ethnicity, Sex, Ethics, and the End of the World
CB [Slavic 148. Strange Russian Writers]
CB [WGSS 1258. Friends with Benefits?]
CB *WGSS 1424. American Fetish: Consumer Culture Encounters the Other
EMR Anth 1010. The Fundamentals of Archaeological Methods & Reasoning
EMR Appl Math 101. Statistical Inference for Scientists and Engineers
EMR Appl Math 21a. Mathematical Methods in the Sciences
EMR Appl Math 21b. Mathematical Methods in the Sciences
EMR CS 1. Great Ideas in Computer Science
EMR CS 171. Visualization
EMR CS 20. Discrete Mathematics for Computer Science
EMR CS 50 (Letter Grade). Introduction to Computer Science I
EMR Econ 1010a1. Microeconomic Theory
EMR Econ 1010a2. Microeconomic Theory
EMR Econ 1010b. Macroeconomic Theory
EMR Econ 1011a. Microeconomic Theory
EMR Econ 1011b. Macroeconomic Theory
EMR Econ 10a. Principles of Economics
EMR Econ 10b. Principles of Economics
EMR Econ 1123a1. Introduction to Econometrics
EMR [Eng Sci 1. Introduction to Engineering Sciences]
EMR Eng Sci 50. Introduction to Electrical Engineering
EMR Gov 50. Introduction to Political Science Research Methods
EMR HEB 1590. Ancient Biomolecules - (New Course)
EMR Math 101. Sets, Groups and Topology
EMR Math 154. Probability Theory
EMR Math 18. Multivariable Calculus for Social Sciences
EMR Math 19a. Modeling and Differential Equations for the Life Sciences
EMR Math 19b. Linear Algebra, Probability, and Statistics for the Life Sciences
EMR Math 1a. Introduction to Calculus
EMR Math 1b. Calculus, Series, and Differential Equations
EMR Math 21a. Multivariable Calculus
EMR Math 21b. Linear Algebra and Differential Equations
EMR Math 23a. Linear Algebra and Real Analysis I
EMR Math 23b. Linear Algebra and Real Analysis II
EMR Math 25a. Honors Linear Algebra and Real Analysis I
EMR Math 25b. Honors Linear Algebra and Real Analysis II
EMR *Math 55a. Honors Abstract Algebra
EMR *Math 55b. Honors Real and Complex Analysis
EMR Math Ma. Introduction to Functions and Calculus I
EMR Math Mb. Introduction to Functions and Calculus II
EMR Phys 15a. Introductory Mechanics and Relativity
EMR Phys 15b. Introductory Electromagnetism
EMR Phys 15c. Wave Phenomena
EMR Phys 16. Mechanics and Special Relativity
EMR Psych 1900. Introduction to Statistics for the Behavioral Sciences
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<tr>
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<th>Course Code</th>
<th>Course Title</th>
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<td>Sociology 156</td>
<td>Quantitative Methods in Sociology</td>
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<tr>
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<td>Stat 100</td>
<td>Introduction to Quantitative Methods for the Social Sciences and Humanities</td>
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<td>Stat 101</td>
<td>Introduction to Quantitative Methods for Psychology and the Behavioral Sciences</td>
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<td>Ethics, Biotechnology, and the Future of Human Nature</td>
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<td>Central Europe, 1789-1918: Empires, Nations, States</td>
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<td>English 111.</td>
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<td>English 151.</td>
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<td>English 157.</td>
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<td>English 158.</td>
<td>A History of Western Drama</td>
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<td>English 178x.</td>
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<td>*Folk &amp; Myth 114.</td>
<td>Embodied Expression/Expressive Body: Dance in Cultural Context</td>
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<td>*Folk &amp; Myth 128. Fairy Tale, Myth, and Fantasy Literature</td>
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<td>[HAA 11. Landmarks of World Architecture]</td>
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<td>[Hist 1144. The Renaissance in Florence]</td>
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<td>[Hist 1266. Central Europe, 1789-1918: Empires, Nations, States]</td>
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<td>[Hist 1281. The End of Communism]</td>
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<td>[Hist 1300. Western Intellectual History: Greco-Roman Antiquity]</td>
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<td>[Hist 1301. Western Intellectual History II: The Prehistory of Modern Thought]</td>
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<td>Hist 1020. A Global History of Modern Times</td>
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<td>Hist 1035. Byzantine Civilization</td>
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<td>Hist 1462. History of Sexuality in the Modern West</td>
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<td>HAA 10. The Western Tradition: Art Since the Renaissance</td>
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<td>Hist Sci 100. Knowing the World: An Introduction to the History of Science</td>
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<td>LS 1a. An Integrated Introduction to the Life Sciences: Chemistry, Molecular Biology, and Cell Biology</td>
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<td>LS 1b. An Integrated Introduction to the Life Sciences: Genetics, Genomics, and Evolution</td>
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<td>[Literature 133. Shakespeare Shakes the Globe]</td>
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<td>Literature 147. &quot;Why the Jews?: The Modern Jewish Experience in Literature - (New Course)</td>
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### Departmental courses that satisfy Gen Ed requirements (by course title)

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<td>Math 25b. Honors Linear Algebra and Real Analysis II</td>
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<tr>
<td>Math Ma. Introduction to Functions and Calculus I</td>
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<tr>
<td>Math Mb. Introduction to Functions and Calculus II</td>
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<tr>
<td>*MCB 52. Molecular Biology</td>
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<td>MCB 80. Neurobiology of Behavior</td>
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<td>Medieval Studies 107. Authority and Invention: Medieval Art and Architecture</td>
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<td>Music 1. 1000 Years of Listening - (New Course)</td>
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<td>Music 157gew. South Indian Music Theory &amp; Practice</td>
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<td>[Music 1a. Introduction to Western Music from the Middle Ages to Mozart]</td>
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<tr>
<td>*Music 51b. Theory Ib</td>
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<td>NELC: Islamic Civilizations 178. Muslim Societies in South Asia: Religion, Culture, and Identity</td>
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<td>NELC: The Modern Middle East 111. Culture and Society in Contemporary Iran</td>
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<td>OEB 10. Foundations of Biological Diversity</td>
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<td>[Phil 168. Kant’s Ethical Theory]</td>
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<td>[Phil 172. The History of Modern Moral Philosophy]</td>
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<td>Phil 173. Metaethics</td>
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<td>Phil 178a. Equality and Liberty</td>
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<td>PS 1. Chemical Bonding, Energy, and Reactivity: An Introduction to the Physical Sciences</td>
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<td>PS 10. Quantum and Statistical Foundations of Chemistry</td>
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<td>PS 11. Foundations and Frontiers of Modern Chemistry: A Molecular and Global Perspective</td>
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<td>PS 12a. Mechanics from an Analytic, Numerical and Experimental Perspective</td>
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<td>PS 12b. Electromagnetism and Statistical Physics from an Analytic, Numerical and Experimental Perspective</td>
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<tr>
<td>PS 2. Mechanics, Elasticity, Fluids, and Diffusion</td>
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<td>PS 3. Electromagnetism, Circuits, Waves, Optics, and Imaging</td>
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<td>Phys 123. Laboratory Electronics</td>
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<td>Phys 125. Widely Applied Physics</td>
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<td>Phys 15a. Introductory Mechanics and Relativity</td>
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<td>Phys 15b. Introductory Electromagnetism</td>
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<td>Phys 15c. Wave Phenomena</td>
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<td>Phys 16. Mechanics and Special Relativity</td>
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<td>Religion 1802. Introduction to Islamic Mysticism: The Sufi Tradition</td>
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<td>Religion 40. Incarnation and Desire: An Introduction to Christianity</td>
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<td>Religion 46. The Letters of Paul: Ethnicity, Sex, Ethics, and the End of the World</td>
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<td>Religion 57. Faith and Authenticity: Religion, Existentialism and the Human Condition</td>
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<td>[SAS 190. Religious Nationalism and Ethnic Conflict in Modern South Asia]</td>
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<td>Scandinavian 150r. The Vikings and the Nordic Heroic Tradition</td>
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<td>SCRB 10. Human Developmental and Regenerative Biology</td>
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<td>*SCRB 187. Brains, Identity, and Moral Agency</td>
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<td>[Slavic 148. Strange Russian Writers]</td>
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<td>*Sociology 156. Quantitative Methods in Sociology</td>
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<tr>
<td>Sociology 27. Introduction to Social Movements</td>
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<td>[Stat 101. Introduction to Quantitative Methods for Psychology and the Behavioral Sciences]</td>
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<tr>
<td>Stat 100. Introduction to Quantitative Methods for the Social Sciences and Humanities</td>
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Departmental courses that satisfy Gen Ed requirements (by course title)

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<th>Course Title</th>
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<tr>
<td>Stat 102. Introduction to Statistics for Life Sciences</td>
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<td>Stat 104. Introduction to Quantitative Methods for Economics</td>
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<td>VES 70. The Art of Film</td>
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<td>[*WGSS 1237. LGBT Literature]</td>
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<td>[WGSS 1258. Friends with Benefits?]</td>
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<td>*WGSS 1424. American Fetish: Consumer Culture Encounters the Other</td>
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</table>
Below you will find two lists of the courses in General Education that also satisfy a concentration requirement. The first list is sorted by General Education category, and the second list is sorted by concentration.

Courses marked with an asterisk (*) require the instructor’s permission. Courses in square brackets are not offered in 2014-15 but are expected to be offered in 2015-16.

<table>
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<tr>
<th>AAAS-Afr Am Track</th>
<th>AIU 13. Cultural Agents</th>
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<td>[AIU 23. Interracial Literature]</td>
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<td>AAAS-Afr Am Track</td>
<td>[AIU 26. Race, Gender, and Performance]</td>
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<td>[CB 49. American Protest Literature from Tom Paine to Tupac]</td>
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<td>SW 34. The Caribbean: Globalization, Socio-Economic Development &amp; Cultural Adaptation</td>
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<td>US/W 15. Is the American Racial Order Being Transformed?</td>
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<td>US/W 33. Religion and Social Change</td>
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<td>[US/W 34. The Civil War from Nat Turner to Birth of a Nation]</td>
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<td>[AIU 54. For the Love of God and His Prophet: Religion, Literature, and the Arts in Muslim Cultures]</td>
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<td>CB 19. Understanding Islam and Contemporary Muslim Societies</td>
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<tr>
<td>AAAS-Afr Track</td>
<td>SW 34. The Caribbean: Globalization, Socio-Economic Development &amp; Cultural Adaptation</td>
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<tr>
<th>Anthro-Arch</th>
<th>CB 21. Pathways through the Andes—Culture, History, and Beliefs in Andean South America</th>
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<tbody>
<tr>
<td>Anthro-Arch</td>
<td>SW 30. Moctezuma’s Mexico: Then and Now (2012)!</td>
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<td>Anthro-Arch</td>
<td>SW 38. Pyramid Schemes: The Archaeological History of Ancient Egypt</td>
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<td>[SW 40. The Incas: The Last Great Empire of Pre-Columbian South America]</td>
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<td>[CB 58. Case Studies in the Medical Humanities: Interdisciplinary Perspectives on the Experience of Illness and Healing]</td>
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<td>SW 25. Case Studies in Global Health: Biosocial Perspectives</td>
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<td>SW 30. Moctezuma’s Mexico: Then and Now (2012)!</td>
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<td>[SW 46. The Anthropology of Arabia]</td>
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<td>[AIU 36. Buddhism and Japanese Culture]</td>
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<td>EALC</td>
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<td>CB 25. Studying Buddhism, Across Place and Time</td>
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<td>[CB 57. Animated Spirituality: Japanese Religion in Anime, Manga, and Film]</td>
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Gen Ed courses that satisfy concentration requirements (by concentration)

EALC   [SW 37. The Chinese Overseas]
EALC   SW 43. Japan's Samurai Revolution
EALC   SW 45. Beyond the Great Wall: China and the Nomadic Frontier
Economics EMR 20. The Business and Politics of Health
Eng Sci SW 47. Contemporary South Asia: Entrepreneurial Solutions to Intractable Social & Economic Problems
English AIU 14. Putting Modernism Together
English AIU 20. Poems, Poets, Poetry
English AIU 38. The English Language as Literature
English AIU 55. Shakespeare, The Early Plays
English CB 45. The History of the English Language
English CB 51. Making the Middle Ages
English CB 55. The Enlightenment
English ER 37. Adam & Eve
Folk & Myth AIU 33. Ancient Fictions: The Ancient Novel in Context
Folk & Myth AIU 36. Buddhism and Japanese Culture
Folk & Myth AIU 39. Reinventing Literary China: Old Tales Retold in Modern Times
Folk & Myth CB 11. Medicine and the Body in East Asia and in Europe
Folk & Myth CB 21. Pathways through the Andes–Culture, History, and Beliefs in Andean South America
Folk & Myth CB 22. The Ancient Greek Hero
Folk & Myth CB 28. Hindu Worlds of Art and Culture
Folk & Myth CB 32. Back Roads to Far Places: Literature of Journey and Quest
Folk & Myth CB 35. Classical Mythology
Folk & Myth CB 38. Apocalypse Then! Forging the Culture of Medieval Rus’
Folk & Myth CB 40. Popular Culture and Modern China
Folk & Myth CB 48. God, Justice, and the Book of Job
Folk & Myth CB 57. Animated Spirituality: Japanese Religion in Anime, Manga, and Film
Germanic AIU 52. Repression and Expression: Sexuality, Gender, and Language in Fin-de-siècle Literature and Art
Germanic AIU 57. American Dreams from Scarface to Easy Rider
Germanic CB 16. Performance, Tradition and Cultural Studies: An Introduction to Folklore and Mythology
Germanic CB 53. Sacred and Secular Poetry
Germanic ER 12. Political Justice and Political Trials
Germanic ER 32. Security: Carefree or Careless
Germanic ER 37. Adam & Eve
Government EMR 13. Analyzing Politics
Government ER 11. Human Rights: A Philosophical Introduction
Government ER 30. The Just World
Government ER 34. Liberty
Government US/W 15. Is the American Racial Order Being Transformed?
Government [US/W 18. Thinking About the Constitution]
Government US/W 40. New World Orders? From the Cold War to Contemporary International Relations
HAA AIU 40. Monuments of Islamic Architecture
HAA AIU 43. Visual Culture of the Ottoman Empire Between East and West (15th - 17th Centuries)
HAA CB 21. Pathways through the Andes–Culture, History, and Beliefs in Andean South America
HAA [CB 30. Seeing is Believing: A History of Photography]
HAA ER 37. Adam & Eve
HEB SLS 16. Human Evolution and Human Health
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Gen Ed courses that satisfy concentration requirements (by concentration)

NELC [AIU 29. Modern Jewish Literature]
NELC [AIU 54. For the Love of God and His Prophet: Religion, Literature, and the Arts in Muslim Cultures]
NELC [CB 13. The Contested Bible: The Sacred-Secular Dance]
NELC CB 19. Understanding Islam and Contemporary Muslim Societies
NELC CB 23. From the Hebrew Bible to Judaism, From the Old Testament to Christianity
NELC CB 27. Among the Nations: Jewish History in Pagan, Christian and Muslim Context
NELC [CB 41. Gender, Islam, and Nation in the Middle East and North Africa]
NELC CB 48. God, Justice, and the Book of Job
NELC ER 15. “If There is No God, All is Permitted:” Theism and Moral Reasoning
NELC [SW 35. Conditional Equality: The Case of the Jews of Europe in Modern Times]
NELC SW 38. Pyramid Schemes: The Archaeological History of Ancient Egypt
NELC [SW 46. The Anthropology of Arabia]

Philosophy CB 31. Saints, Heretics, and Atheists: An Historical Introduction to the Philosophy of Religion
Philosophy EMR 17. Deductive Logic
Philosophy [ER 13. Self, Freedom, and Existence]

Physics SPU 18. Time
Physics SPU 20. What is Life? From Quarks to Consciousness
Physics SPU 22. The Unity of Science: From the Big Bang to the Brontosaurus and Beyond

Psychology SLS 15. Developmental Psychology: Origins of Knowledge
Psychology SLS 20. Psychological Science

Religion [AIU 29. Modern Jewish Literature]
Religion [AIU 30. Love In A Dead Language: Classical Indian Literature and Its Theorists]
Religion [AIU 36. Buddhism and Japanese Culture]
Religion [AIU 54. For the Love of God and His Prophet: Religion, Literature, and the Arts in Muslim Cultures]
Religion [CB 13. The Contested Bible: The Sacred-Secular Dance]
Religion [CB 14. Human Being and the Sacred in the History of the West]
Religion CB 16. Performance, Tradition and Cultural Studies: An Introduction to Folklore and Mythology
Religion CB 19. Understanding Islam and Contemporary Muslim Societies
Religion [CB 20. Reason and Faith in the West]
Religion CB 22. The Ancient Greek Hero
Religion CB 23. From the Hebrew Bible to Judaism, From the Old Testament to Christianity
Religion CB 25. Studying Buddhism, Across Place and Time
Religion CB 27. Among the Nations: Jewish History in Pagan, Christian and Muslim Context
Religion [CB 28. Hindu Worlds of Art and Culture]
Religion CB 31. Saints, Heretics, and Atheists: An Historical Introduction to the Philosophy of Religion
Religion [CB 32. Back Roads to Far Places: Literature of Journey and Quest]
Religion CB 33. Introduction to the Study of East Asian Religions
Religion CB 38. Apocalypse Then! Forging the Culture of Medieval Rus’
Religion CB 39. The Hebrew Bible
Religion CB 48. God, Justice, and the Book of Job
Religion [CB 52. The American Evangelical Tradition from Jonathan Edwards to Jerry Falwell]
Religion [CB 57. Animated Spirituality: Japanese Religion in Anime, Manga, and Film]
Religion CB 60. Religion in India: Texts and Traditions in a Complex Society - (New Course)
Religion ER 15. “If There is No God, All is Permitted:” Theism and Moral Reasoning
Religion ER 17. Ethics, Religion, and Violence in Comparative Perspective
Religion ER 18. Classical Chinese Ethical and Political Theory
Religion [ER 20. Self, Serenity, and Vulnerability: West and East]
Religion SW 12. China
Religion [SW 13. Japan in Asia and the World]
### Gen Ed courses that satisfy concentration requirements (by concentration)

<p>| Religion | [SW 22. Asia in the Making of the Modern World] |
| Religion | SW 30. Moctezuma’s Mexico: Then and Now (2012)! |
| Religion | [SW 35. Conditional Equality: The Case of the Jews of Europe in Modern Times] |
| Religion | <em>US/W 32. The World’s Religions in Multicultural America: Case Studies in Religious Pluralism</em> |
| Religion | US/W 33. Religion and Social Change |
| RLL | AIU 13. Cultural Agents |
| RLL | AIU 51. The Cosmos of the Comedy |
| Slavic | AIU 11. Poetry Without Borders |
| Slavic | AIU 41. How and What Russia Learned to Read: The Rise of Russian Literary Culture |
| Slavic | [AIU 45. Art and Politics in Russia and Eastern Europe] |
| Slavic | [AIU 60. Literature and Art in an Era of Crisis and Oppression: Modernism in Eastern Europe] |
| Slavic | CB 38. Apocalypse Then! Forging the Culture of Medieval Rus’ |
| Slavic | [CB 42. Communism and the Politics of Culture: Czechoslovakia from the Prague Spring to the Velvet Revolution] |
| Slavic | [ER 28. Moral Inquiry in the Novels of Tolstoy and Dostoevsky] |
| Slavic | [SW 52. The Phoenix and the Firebird: Russia in Global Perspective] |
| Sociology | SW 21. China’s Two Social Revolutions |
| Sociology | SW 34. The Caribbean: Globalization, Socio-Economic Development &amp; Cultural Adaptation |
| Sociology | SW 44. Human Trafficking, Slavery and Abolition in the Modern World |
| Sociology | US/W 31. American Society and Public Policy |
| SAS | [AIU 30. Love In A Dead Language: Classical Indian Literature and Its Theorists] |
| SAS | [AIU 54. For the Love of God and His Prophet: Religion, Literature, and the Arts in Muslim Cultures] |
| SAS | CB 19. Understanding Islam and Contemporary Muslim Societies |
| SAS | [CB 28. Hindu Worlds of Art and Culture] |
| SAS | [CB 46. Music, Debate, and Islam] |
| SAS | CB 60. Religion in India: Texts and Traditions in a Complex Society - (New Course) |
| SAS | [SW 36. Modern India and South Asia] |
| SAS | SW 47. Contemporary South Asia: Entrepreneurial Solutions to Intractable Social &amp; Economic Problems |
| SAS | <em>US/W 32. The World’s Religions in Multicultural America: Case Studies in Religious Pluralism</em> |</p>
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<td>Love In A Dead Language: Classical Indian Literature and Its Theorists</td>
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<td>American Musicals and American Culture</td>
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<td>Ancient Fictions: The Ancient Novel in Context</td>
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<td>Reinventing Literary China: Old Tales Retold in Modern Times</td>
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<td>Repression and Expression: Sexuality, Gender, and Language in Fin-de-siècle Literature and Art</td>
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Gen Ed courses that satisfy concentration requirements (by category)

[CB 46. Music, Debate, and Islam] SAS
[CB 47. The Darwinian Revolution] Hist Sci
[CB 49. American Protest Literature from Tom Paine to Tupac] AAAS-Afr Am Track
[CB 50. The European Postwar: Literature, Film, Politics] History
[CB 51. Making the Middle Ages] English
[CB 52. The American Evangelical Tradition from Jonathan Edwards to Jerry Falwell] History, Religion
[CB 53. Sacred and Secular Poetry] Germanic
[CB 55. The Enlightenment] English

[CB 60. Religion in India: Texts and Traditions in a Complex Society - (New Course)] Religion, SAS
[EMR 17. Deductive Logic] Philosophy
[EMR 18. What are the odds?] MCB
[ER 13. Self, Freedom, and Existence] Philosophy
[ER 15. “If There is No God, All is Permitted:“ Theism and Moral Reasoning] NELC, Religion
[ER 17. Ethics, Religion, and Violence in Comparative Perspective] Religion
[ER 18. Classical Chinese Ethical and Political Theory] EALC, Religion
[ER 20. Self, Serenity, and Vulnerability: West and East] EALC, Religion
[ER 28. Moral Inquiry in the Novels of Tolstoy and Dostoevsky] Slavic
[ER 29. Social Theory, the Humanities, and Philosophy Now] EALC
[ER 30. The Just World] Gov
[ER 32. Security: Carefree or Careless] Germanic
[ER 33. Medical Ethics and History] Hist Sci
[ER 34. Liberty] Gov, History
[ER 35. Nature] History
[ER 37. Adam & Eve] English, Germanic, HAA
[ELR 15. Developmental Psychology: Origins of Knowledge] Psychology
[ELR 16. Human Evolution and Human Health] HEB
[ELR 20. Psychological Science] Psychology
[SPU 17. The Einstein Revolution] Hist Sci
[SPU 18. Time] Physics
[SPU 20. What is Life? From Quarks to Consciousness] Physics
[SPU 22. The Unity of Science: From the Big Bang to the Brontosaurus and Beyond] Physics
[SW 14. The British Empire] History
[SW 18. Europe on Trial: Retribution, Renewal and Reconciliation Since 1945] History
[SW 19. Western Ascendancy: The Mainsprings of Global Power from 1400 to the Present] History
[SW 21. China’s Two Social Revolutions] Sociology
### Gen Ed courses that satisfy concentration requirements (by category)

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