



# JUMPSTART TO RESEARCH HANDBOOK

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HARVARD COLLEGE UNDERGRADUATE  
RESEARCH ASSOCIATION

## BROUGHT TO YOU BY THE HARVARD COLLEGE UNDERGRADUATE RESEARCH ASSOCIATION

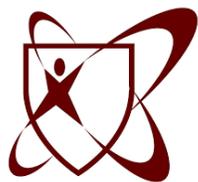
The Harvard College Undergraduate Research Association (HCURA, /hūra/) was founded in 2007 with the mission of making research accessible to all students, especially those who are underrepresented in research by:

1. Connecting students with research opportunities and making sure that opportunities for fields less commonly supported in research are accessible;
2. Promoting regular interactions between faculty and students through lively discussions and symposia;
3. Encouraging the exchange of ideas between students of different academic and research backgrounds.

Our goal to increase the scope and visibility of Harvard undergraduate research, combined with our commitment to increasing diversity of research fields and represented students is the focus of our many on-campus initiatives, including our HCURA Research Mentorship program, where graduate students and upperclassmen introduce freshmen to undergraduate research at Harvard (historically 160+ advisers and advisees); the Visitas Undergraduate Research Symposium, which showcases Harvard undergraduate research to prefrish (150 attendees); and new projects such as The Labs Database, a resource for undergraduates looking for research opportunities that catalogues over 100 Harvard labs, and Brevia, a publication for short research articles that presents a nontechnical treatment of cutting-edge research.

Every January, we host the National Collegiate Research Conference (NCRC) at Harvard as a continuation of our vision to provide the best platform for undergraduates from across the nation to share their research. NCRC features distinguished speakers, panelists, and student presenters. Student participants have the opportunity to present their research through poster and plenary sessions.

Our goal is to enrich the research experience of undergraduates by providing an opportunity to connect these motivated researchers with one another.



## *Want to Learn More?*

Below is a list of resources that were consulted in the preparation of this handbook:

<https://uraf.harvard.edu/introduction-to-research>

<https://uraf.harvard.edu/finding-opportunities>

<https://seo.harvard.edu/faculty-aide-program>

<https://seo.harvard.edu/using-jobs-database>

<https://uraf.harvard.edu/summer-residential-research-programs>

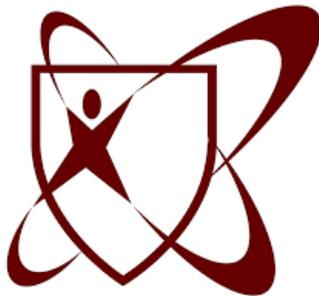
<https://uraf.harvard.edu/funding-considerations>

<https://uraf.harvard.edu/uraf-administered-programs>

<https://ocs.fas.harvard.edu/premedical-health-careers-advising>

## Final Words

1. Ask someone who has worked with the same professor before what type of work they did and what the work environment was like.
2. Ask upperclassmen about their research experiences and how they identified the best experiences.
3. Talk with the professor and researchers you will be working with. Only work on projects you are interested in.
4. Attend research fairs and talk with the presenters there.
5. Attend conferences, speaker events, and research panels.
6. Do not be afraid to email professors to set up one on one meetings.
7. Take advantage of classroom to table with your current professors.
8. Join clubs and organizations in fields related to your research.
9. Go to events hosted by companies in your field of study.
10. Interact with people who currently work in the field of research and see what their life is like outside work!



## What Does Research at Harvard Look Like?

There is no singular “Research at Harvard” experience — the process looks different for everyone who participates. Whatever you’re interested in pursuing, there are a variety of resources here for you at Harvard.

Getting involved at the undergraduate level is a great way to explore your interests. However, to understand if you want to commit yourself to this activity, it is a good idea to reach out to different advisers at Harvard to see if this is a good fit for you at this point in your undergraduate career.

Some students partake in term-time research, either through research-based courses at Harvard such as tutorials and *91r Supervised Reading and Research* courses in your concentration, work as a paid Research Assistant or volunteer, or study abroad programs with research components. If you’re interested in finding funding for your work, check the Student Employment Office website at <http://seo.harvard.edu/>, or look into Office of Undergraduate Research and Fellowships (URAF) programs and Research Experiences for Undergraduates (REUs). It’s important to note that if your work is for academic credit, with some exceptions for incidental expenses, you cannot receive funding for it.

Other students choose to explore research during the summer, through Research Assistants (RAships), research internships, summer research programs, summer study abroad programs, thesis research, and independent research projects. The Office of Career Services at <http://www.ocs.fas.harvard.edu/> has further information about research internships, and the Office of International Education website at <http://oie.fas.harvard.edu/> has further resources pertaining to research-oriented study abroad programs.

**If you want to learn more, you can find much of the information consolidated in this handbook and more on the Office of Undergraduate Research and Fellowships (URAF) website at <https://uraf.harvard.edu/>.**

## Advising

### General

Harvard College Undergraduate Research Association (HCURA) will host study breaks with panels of advisors in all fields for students to ask questions.

The Office of Undergraduate Research and Fellowships provides advising for students seeking research opportunities in all fields. Drop-In Advising Hours are Monday-Friday 2:00-4:00pm (or by appointment).

### Premedical, Life Sciences, and Health Careers Advising

**Before Start of Term:** The Harvard Office of Career Services (OCS) offers services to guide students through the process of preparation to pursue health-related careers. Start-of-Term Office Hours are held before Study Card day — Sign up for these ten-minute advising sessions through Crimson Careers.

**After Study Card Day:** After Study Card day, drop in on Thursday between 3-4pm and Friday from 11am-12pm for ten-minute advising sessions about quick premed and pre-health-specific questions. Make sure to first attend a Pre-Health 101 orientation workshop before attending these Drop-Ins!

**For More Help:** If you want more in-depth help, schedule a 30-minute in-person, individual appointment through Crimson Careers. First years are also required to first attend a Pre-Health 101 orientation workshop before scheduling 30 minute appointments with premed/prehealth advisers. Find your own research position and apply to the program separately while others require you to solely apply to the program as you will be placed on a pre-designed project.

**Undergraduate Education in Life Sciences** also provides advising for students seeking research in the life sciences.

## URAF Programming on Campus

**Introduction to Research at Harvard:** September 18, 7:00-8:00pm, Science Center, Hall B — *A broad overview of what you should know to conduct research while you are at Harvard.*

**Goldwater Fellowship Information Session:** September 25, 4:00-5:00pm, Harvard Hall 102 — *An overview to applying for the Goldwater Fellowship, a prestigious national award to identify promising young scientists and to support graduate study learning to a research career in mathematics, natural sciences, or engineering.*

**NSF Graduate Research Fellowship Information Session:** September 27, 4:00-5:00pm, Sever Hall 102 — *An introduction to writing grant proposals for the National Science Foundation.*

**Head Start: The Herchel Smith Harvard Undergraduate Research Program for Students:** November 6, 4:00-5:00pm, Harvard Hall 102 — *This is an important introductory meeting to the Herchel Smith program, which provides generous funding to talented and promising undergraduate scientists who are likely to head toward doctoral study.*

### Research Week at Harvard

**Info Session: Harvard-Amgen Scholars Program in Biotechnology:** November 27, 4:00-5:00pm, Harvard Hall 102 — *Learn more about Harvard's Amgen Scholars Program, a national summer residential research program, which is open to rising juniors and seniors.*

**Info Session: Mellon Mays Undergraduate Fellowship Program (MMUF):** November 27, 4:00-5:00pm, Harvard Hall 102 — *The Mellon Mays Undergraduate Fellowship selects ten students in their sophomore year to join a tightly-knit research community during junior and senior years to conduct independent research in close collaboration with a faculty member.*

**Research 101 for First Year Students:** November 28, 4:00-5:30pm, Lamont Library Forum Room — *A comprehensive research presentation identifying opportunities, funding sources, proposal preparation, and support services to launch the summer 2019 research opportunity application cycle.*

**Research House Meetings:** November 27 & 28, 7:00pm, House Location TBA — *House meetings to explore the full range of opportunities to conduct scientific research at Harvard, other domestic locations, and around the world.*

**Introduction to Harvard Residential Research Program:** November 29, 4:00-5:00pm, Sever Hall 102 — *An overview of the Harvard Summer Undergraduate Research Village and application process.*

**OCS Summer Funding & Programs Fair:** December 7, 1:00-4:00pm, SOCH — *URAF and other research enterprises will have tables at this fair.*

Descriptions for these events are taken from URAF's Fall 2018 research programming handouts.

## Research Opportunities at Harvard

### Structured Programs

There are a variety of structured ways to get involved to gain research experience at Harvard. Many of the below programs are browsable in CARAT, the central funding database for research at Harvard (found at <https://carat.fas.harvard.edu/about/index>). Typically these programs have annual application dates, and offer different forms of support. Check out some of Harvard's structured programs below, and learn more at <https://uraf.harvard.edu/finding-opportunities>.

- Dumbarton Oaks Humanities Research Center
- FAS Center for Systems Biology Undergraduate Summer Research Internships
- Harvard Center for the Environment
- Harvard Forest Summer Program in Ecology
- Harvard Global Health Institute, Summer Undergraduate Research in Global Health (SURGH)
- Harvard Global Health Institute, International Summer Undergraduate Research in Global Health (I-SURGH)
- Harvard Stem Cell Institute Internship Program
- Houghton Library Undergraduate Research Fellowship
- Institute for Quantitative Social Science Undergraduate Research Scholars Program
- Program for Evolutionary Dynamics, Research Opportunities in Mathematical Evolution (ROME)
- The Center for Ethics at Harvard
- Edmond J. Safra Undergraduate Fellowships in Ethics Program
- The Harvard Business School/Harvard College Program for Research in Markets and Organizations (PRIMO)
- The Harvard College Behavioral Laboratory in the Social Sciences (BLISS)
- The Harvard College Program for Research in Science and Engineering (PRISE)
- The Harvard College Summer Humanities and Arts Research Program (SHARP)
- Harvard-Amgen Scholars Program in Biotechnology
- The Harvard-Smithsonian Center for Astrophysics, Smithsonian Astrophysical Observatory Summer Intern Program REU
- Radcliffe Research Partnerships
- SEAS Research Experience for Undergraduates

### Other Ways to Get Involved

Each department usually lists research assistant opportunities on the department website, and many departments fund their own research.

Clubs and student organizations in your field of interests usually have email lists that post research opportunities.

## Research Opportunities at Harvard

### Research Village

The Office of Undergraduate Research and Fellowships (URAF) sponsors the research village every summer, a community of researchers in one of Harvard's upperclassmen houses. Along with conducting research during the day, activities such as socials, outings, and lectures by distinguished speakers will be held. Some of the programs require you to find your own research position and apply to the program separately, while others require you to solely apply to the program as you will be placed on a pre-designed project. For application information, please refer to the note about the CARAT system in the "How to Apply" section on the following page.

**Amgen Scholars Program:** 10-week faculty mentored program for undergraduates interested in biotechnology.

**BLISS:** 10-week social science research experience led by Harvard faculty in pre-designed research projects.

**PCER:** 10-week experience in conducting a pre-designed, community oriented project led by a Harvard faculty. Projects will focus on local communities.

**PRIMO:** 10-week program for students interested in business spanning the fields of finance, psychology, Economics, and Sociology in pre-designed, faculty led projects.

**PRISE:** 10-week program in the field of life, physical/natural, engineering, and applied sciences. Students must find their own research position and apply to the PRISE program separately.

**SHARP:** 10-week program in the arts and humanities working on a pre-designed project with a Harvard faculty member.

**SURGH:** 10-week program for students interested in global health. Students are selected to work on a pre-designed research project.

#### 2019 Deadlines:

Program	2019 Deadline
Amgen Scholars Program	February 1, 2019
BLISS	February 12, 2019
PCER	March 1, 2019
PRIMO	February 12, 2019
PRISE	February 12, 2019
SHARP	February 12, 2019

## Research Opportunities at Harvard and Beyond

**Harvard College Research Program (HCRP):** Provides research funding for all fields of research for students working with Harvard faculty during the semester or the summer.

**Herchel Smith:** Funding for exceptional researchers during the summer. Students must propose their own research projects which can be undertaken anywhere in the world.

**Faculty Aide Program:** Run by the Student Employment Office (SEO), this program partially subsidizes the cost of undergraduate research assistants for professors. To partake, students usually connect with professors or apply to research assistantships in the SEO Jobs Database at <https://seo-harvard-csm.symplicity.com/>.

**Mellon Mays Undergraduate Fellowship:** For high potential sophomores who are committed to research to receive funding for their junior and senior years.

**Mindich Research and Community Engagement (RCE):** For students conducting an independent summer research project with involvement in community service.

### 2019 Deadlines:

Program	2019 Deadline
Harvard College Research Program	March 26, 2019
Herchel Smith	February 7, 2019
Mellon Mays Undergraduate Fellowship	To be announced, likely mid-February 2019
Mindich Research and Community Engagement	March 26, 2019

### How to Apply:

Every program has its own requirements, but most applications for Harvard-affiliated funds are submitted through CARAT (<https://carat.fas.harvard.edu/about/index>), the central funding database for research at Harvard. There, students can filter and browse opportunities based on academic areas, class years, locations, and more. Most programs will need recommendation letters so make sure to ask prospective recommenders at least one month in advance for a letter of support. Some programs may ask you to submit a budget along with your application.

If applying for non-Harvard affiliated funds, such as through PIVOT ([http://pivot.cos.com/funding\\_main](http://pivot.cos.com/funding_main)), keep in mind that deadlines for these funds may be much earlier than for Harvard-affiliated funds.

## Term-Time Research

Some students partake in term-time research, either through research-based courses at Harvard such as tutorials and *91r Supervised Reading and Research* courses in your concentration, work as a paid Research Assistant or volunteer, or study abroad programs with research components.

Harvard offers many courses that have bases in research. 91r courses allow you to work under a faculty member, and are available to be taken multiple times for credit. Research undertaken in a 91r course requires prior approval by either the head tutor or Director of Undergraduate Studies, and the structure may vary depending on which academic department you conduct your research in. MIT also offers courses with strong research components for which students can cross-register.

If you are interested in writing a thesis, 9Xr courses, known as tutorials, prepare students for that process. Unlike 91r courses, these courses may be designed with specific course years in mind. Again, research in 9Xr courses requires prior approval before it can be conducted.

If you'd rather create your own research class, Independent Study courses allow students to design their own plans of study which they would not otherwise be able to pursue through already offered classes in their departments. Conducting research in this manner requires a petition signed by the Resident Dean and a faculty member or concentration official.

Finding a Research Assistantship at Harvard or another local institution is another way to pursue research during the school year. Some positions conducting research are unpaid, although it is possible to find other ways to fund your work. Once again, it's important to note that you cannot receive academic credit for research for which you receive funding (barring some exceptions for incidental costs).

Reach out to the Office of International Education, which has office hours Monday-Friday between 9:00am-5:00pm and drop in hours Monday-Friday 2:30pm-5:00pm to learn more about study abroad programs with research components. Or, check their calendar at <https://oie.fas.harvard.edu/calendar/> to find upcoming information sessions.