



# Earth & Environment

## Independent Research for Honors in Earth & Environment

The faculty of the Department of Earth & Environment are engaged in cutting-edge research in order to understand our changing Earth and its relationships with humankind, and to develop strategies for a sustainable future. This work covers the spectrum of environmental research from land surface processes, to couple human-natural systems, to geospatial sciences, to environmental policy. Many Earth & Environment students are equally passionate about these investigations and take the opportunity to work closely with faculty on their own independent research into the earth and environment. Honors affords seniors the most stimulating intellectual enterprise an undergraduate can undertake, demanding dedication and the ability to exercise independent judgment. Upon successful completion of the Honors program, your diploma will reflect the designation.

Recent theses receiving Department Honors have included:

- “Effects of Climate Change Across Seasons on Soil Nutrients Associated with Northern Hardwood Forest Saplings” (Eliza Puritz)
- “Ice-Block Lakes Amplify Paleoclimate Signals: Exploring Late Holocene Hydrologic and Biogeochemical Variability of Antarctic Lake Eggers” (Emelia Chamberlain)
- “Physiochemical Dimensions of Crack Morphology and Dynamics of Dessicating Clays” (Keita DeCarlo)
- “Evaluating Metamorphic Conditions in Phillipston, MA: Literature Review, Garnet Geochronology and Garnet Geothermometry” (Claire Ostwald)
- “Peak Oil and the Impact of Economic Policies on the Environmental Consequences of The Oil Market” (Shane Banerjee)

Independent Research for Honors in Earth & Environment carries four formal requirements:

1. enrollment in ES/GE 401 and 402 during the semesters spent on the work;
2. the composition of an original thesis based on original (approximately 25 pages including graphs and images and at least 25 works cited; consult with your advisor about the appropriate format);
3. the public presentation and defense of that thesis while enrolled in ES/GE 402;
4. attendance at four department-sponsored seminars, chosen in consultation with your advisor, during the year of your project.

## **Earth & Environment Independent Research for Honors Application Guidelines**

Students who maintain a minimum GPA of 3.0 by the end of their junior year are eligible to work toward honors in the major. Requirements include completion of the two-course sequence of independent study (ES or GE 401 and 402) and successful presentation and defense of a thesis as the primary means to graduate with honors in Earth & Environment. In appropriate circumstances, and with department approval, students may apply significant summer research or fieldwork toward the production of a senior thesis and completion of Department Honors. (401 and 402 may count as electives in the majors.)

With an advisor who is an Earth & Environment faculty member, and well in advance of deadlines noted below, applicants should identify a research project to propose for honors. With the research question identified, students and faculty advisors complete the application attached.

### **Applications Guidelines for Independent Research for Departmental Honors**

**For projects beginning in the fall semester: May 15**

**For projects beginning in the spring semester or summer: November 15**

Because research projects evolve, particularly as many past honors recipients begin and continue research in the summer between the junior and senior year, the true application deadline is *the last day to add courses* of the semester you begin the project. By then, the appropriate courses (ES or GE 401 and 402) will be added to the student's schedule.

Applications will not be considered prior to the student's fourth semester at BU or after time necessary to complete to 401 and 402.

NOTE: The CAS Honors Research Travel Award program funds grants of up to \$1,000 for travel to conduct research by advanced undergraduates pursuing the BA with honors in any College of Arts & Sciences major. Visit <https://www.bu.edu/cas/current-students/undergraduate/special-opportunities/cas-honors-research-travel-awards/> to review guidelines and application procedures. Applications are welcome throughout the year and will be reviewed on receipt by the College Honors Committee. However, students must in all cases apply at least one month before they are scheduled to depart. Deadlines are as follows. Travel support cannot be provided for travel that has already occurred.

- For fall semester travel: mid-September
- For travel during Winter Break: November 1
- For spring semester travel: January 6
- For summer travel: March 31

## Additional Information

### *Phi Beta Kappa:*

- Successful completion of Work for Departmental Honors with a grade of A- in each semester is one criterion for nomination to Phi Beta Kappa.

### *Study Abroad/BU Programs Outside of Charles River Campus:*

- The Departmental Honors project is designed for seniors to work on a two-semester independent study while on campus during their final two semesters. Both the faculty advisor and the student should be on campus while working on the project.
- If you will not be on campus during the first semester of your project and want to appeal this requirement for strong academic reasons, please contact the Academic Program Coordinator.

### *Part-time:*

- If a part-time status is approved by CAS, it is acceptable to be enrolled part-time for one of the semesters in which a student is registered for Departmental Honors work. If you are considering a part-time status as a senior student, please contact CAS Student Services.

## BU CAS Statement of Honors in the Major

Qualified CAS students may apply to pursue a course of study leading to graduation with honors in their chosen major or minor. Each department faculty has designed one or more honors options to reflect the challenges, opportunities, and measures of excellence most centrally associated with that academic discipline. All honors options require at least 8 credits of specially designated honors courses [ES/GE 401/402], seminars, and/or Directed Studies, including a substantial research project conducted under the supervision of a faculty member. *Required related activities foster connections among honors program students, with experts in the field, and with the world beyond academia.* In some relevant cases, preparation for honors projects can be undertaken through Study Abroad or summer fieldwork.

Specific criteria for admission to departmental honors programs vary by department, as do application processes and deadlines. In no case do students apply earlier than the second semester of their freshman year or later than as second-semester juniors. Interested students should consult the director of undergraduate studies or Honors Program director in their major department or program. Successful completion of a departmental honors program, as determined by the department faculty, signifies outstanding achievement in undergraduate scholarship. Graduation with honors in the major is a factor in election to Phi Beta Kappa and is noted on the student's transcript and diploma.

<https://www.bu.edu/cas/academics/undergraduate-education/special-academic-opportunities/honors-in-the-major/>

**\*\*\*Retain a copy of this information and the application for your records\*\*\***

**APPLICATION FOR INDEPENDENT WORK FOR DEPARTMENTAL HONORS**

Name: \_\_\_\_\_

BU ID: \_\_\_\_\_ Expected graduation (month/year): \_\_\_\_\_

Email: \_\_\_\_\_ Current GPA: \_\_\_\_\_

Faculty Advisor: \_\_\_\_\_

Additional Committee Members (*at least one must be from E&E*):

1. \_\_\_\_\_

2. \_\_\_\_\_

Title of project (*even if tentative*): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**Course Enrollment**

*Please note the semesters in which you will enroll in the following:*

ES/GE 401 Year: \_\_\_\_\_

- Fall
- Spring

ES/GE 402 Year: \_\_\_\_\_

- Fall
- Spring

**Thesis Defense**

*Please note the semester in which you will present and defend your thesis (same as 402 above):*

Year: \_\_\_\_\_

- Fall
- Spring

**Proposal Narrative**

Attach 4-5 page description of your intended project. Outline the significance of the proposed work, the method of investigation that will be employed, and the ways the result of the investigation will be analyzed. Include information about how you intend to share the results of the project. Explain how this project fits in with your academic and career goals. Include a bibliography of readings that are relevant to your work.

Student Signature \_\_\_\_\_ Date: \_\_\_\_\_

**To be completed by the faculty project advisor:**

Faculty Project Advisor Name: \_\_\_\_\_

Student Name: \_\_\_\_\_

How long and in what capacity have you known the student?

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Please evaluate the applicant's aptitude for independent research according to the criteria listed below. Please add any applicable comments.

	Exceptional	Good	Fair	Poor	Unable to judge
Native intellectual ability					
Breadth of knowledge in subject					
Written communication skills					
Ability to work independently					
Level of initiative					
Level of motivation					
Comments					

