

# HONORS PROGRAM IN GEOLOGY

## PURPOSE

The purpose of the Honors Program in Geology is to promote and recognize independent scholarship through direct, sustained engagement with significant geological research during a student's senior year. Participants in the Honors Program will also gain experience in diverse aspects of completing a substantive research project, including writing and public presentation. The Geology Department at Bowdoin has traditionally sponsored a high level of involvement in Honors projects, and we encourage qualified students to participate.

## ELIGIBILITY

Admittance to the Honors Program in Geology is based upon two criteria:

- (1) **Academic performance in previous geology courses.** Candidates for Honors will have demonstrated in previous geology courses potential for significant academic achievement, including the ability, independence and maturity to plan and carry out a substantive research project. At a minimum, candidates normally will have maintained an average grade of no less than B- in geology courses, with no grades lower than a C-. This criterion applies to all geology courses, exclusive of independent studies, taken through the candidate's junior year, both at Bowdoin and at approved off-campus programs. Students who do not qualify for the Honors Program are still eligible to undertake senior-research projects, subject to identifying a suitable topic and faculty advisor.
- (2) **Identification of a significant research topic and faculty advisor.** Candidates for Honors are responsible for proposing a well-defined research project that is geologically significant and which can be completed with available facilities and budget within the specified time (normally one year). A member of the Geology faculty at Bowdoin must agree to serve as primary advisor for the project. Initiative for Honors projects should come from the students, who are encouraged to consult with departmental faculty about possible topics no later than Fall Semester of their junior year. Note that students whose grades qualify them for the Honors Program are not "automatically" entitled to participate, because of potential limitations on faculty time or expertise.

## APPLICATION

Students interested in undertaking Honors should submit a written application to the Departmental Chair at least one week before registration for Fall Semester of their senior year, i.e., *during April of their junior year*. The proposal should include project title and a brief description and must be approved by the project's faculty advisor. Students who are participating in off-campus study or are otherwise on leave are responsible for making arrangements to meet this deadline. The Department will normally notify students of their acceptance in the Honors program by the beginning of registration the following week. Students are advised that some possible sources of

funding have deadlines earlier in the junior year (Bowdoin research fellowships late February/early March) and should consult their advisor about competing for such funds.

## **COMMITTEE**

Normally, the advisory committee for Honors projects will include all three members of the Geology faculty at Bowdoin. In consultation with their project advisor, Honors candidates may also include faculty from other departments at Bowdoin, or faculty or other professionals from organizations beyond Bowdoin. The role of committee members outside of the Bowdoin Geology faculty will normally include review of progress reports and thesis drafts.

## **COMPLETION OF THE HONORS PROGRAM**

The points summarized below outline the normal expectations for Honors projects. Deviations from these expectations or deadlines must be approved in advance by written consent of the Honors project committee. Failure to complete work by the announced deadlines may be grounds for being dropped as an Honors candidate.

- **Summer work.** An Honors project in Geology will commonly include significant work during the summer prior to the candidate's senior year. The nature and schedule of this work should be clearly stated on the Honors proposal form submitted during the Spring Semester of the junior year.
- **Enrollment in independent study.** Honors projects will normally comprise two semesters of advanced independent study (Geology 401 and 402) during the student's senior year. Students are expected to have regular meetings with their project advisor.
- **Beginning-of-senior-year proposal.** Two days before the fall semester add deadline, Honors candidates will submit to their committee a proposal that indicates the significance of the project, the methods to be used, and a work plan for fall semester.
- **Mid-year presentation and report.** During reading period at the end of Fall Semester, Honors candidates will summarize their progress in an oral presentation to their committee and interested students. The presentation will be ten- to fifteen-minutes long, allowing up to fifteen minutes following for questions and comments. Honors candidates are expected to demonstrate familiarity with the primary scientific literature that relates to their project. At the time of their presentation, candidates also will submit to their committee members a report in thesis format that includes a literature review/background research/previous work section, a methods section, and a references section. The report and presentation will form one component of the Fall Semester independent-study grade, and will be used by the committee to determine whether the candidate is eligible to continue progress towards Honors during their Spring Semester.

- **Presentation at geological conferences.** One expectation of Honors projects is that the research will be of interest and use to the broader geological community. Honors candidates are therefore required to present their work as a talk and/or poster session at a recognized conference. For example, undergraduate-research symposia are sponsored by the Northeastern Section of the Geological Society of America at its annual meeting, usually in late march, and by the Geological Society of Maine at its spring meeting, usually in early April. Such presentations usually require submitting a formal abstract of your work, typically in late November or early December for the GSA meeting and in February or March for the GSM meeting. Other possible venues include meetings of the National Council of Undergraduate Research, the Geological Association of Canada/Mineralogical Association of Canada, and New England Estuarine Research Society. Candidates should consult with their advisor about possible venues for presentation during Fall Semester of their senior year. Candidates should apply to external organizations of travel funds to the meetings; limited departmental or Coastal Studies Center support may be available after other possible sources of funding are exhausted.
- **Committee draft of Honors thesis.** Honors candidates must submit a draft of their thesis to their advisor one week (the second Monday) after returning from spring vacation. After revisions, a complete first draft of the Honors thesis—including data tables, references and figures—should be submitted to each member of the Honors committee no later than the four weeks (the fifth Monday) after returning from Spring Vacation. The Honors committee will normally return written comments on this draft no later than the time of the student’s final presentation at Bowdoin.
- **Final public presentation at Bowdoin.** Honors candidates will present a public summary of their project during Druckenmiller Honors Presentation day (typically the Friday of Spring Semester reading period). The presentations will normally comprise a twenty-minute talk, followed by questions from members of the project committee and the general audience.
- **Final copies of Honors thesis.** A final copy of the Honors thesis, revised in accordance with written and verbal comments from the committee members, is usually due to the main library by their deadline (mid-May). In addition to the main-library copy, Honors candidates will submit to the Geology Department one additional copy of their thesis, including photographs, maps, and ancillary material. These copies should be submitted on acid-free paper. The cost of reproducing the thesis and enclosed figures will normally be assumed by the Honors candidate rather than by departmental funds.
- **Copies of project data.** In addition to hard copies of the Honors thesis, candidates must submit to the Geology Department *by the library deadline*, an electronic archive copy of the final thesis, final presentation, and relevant project

data. Candidates may also be requested to deposit a copy of their field notes with their project advisor.

- **Publication of research.** Honors candidates are strongly encouraged to submit all or part of their project to a suitable journal for publication and should consult their advisor for guidance. Alternatively, some Honors results will form parts of larger projects, typically submitted as a joint manuscript co-authored by students and their advisor. Faculty publications that utilize data or results of Honors projects should clearly acknowledge the contributions of the Honors students.

## **EVALUATION OF THE HONORS PROJECT**

- **Levels of honors.** The Geology Department awards a single level of honors. Honors will be awarded upon the recommendation of the student's advisory committee, based on evidence for independent work, scientific soundness, originality, completeness, and written and oral presentations.
- **Independent-study grades.** The Department will normally assign separate grades to Honors candidates for the Fall- and Spring-semester independent studies (Geology 401 and 402). These grades will reflect the progress and quality of work undertaken in each semester. Awarding of Honors does not necessarily connote that a student will receive the grade of A for one or both semesters of their independent studies.