

## **Bucknell University Department of Geology**

### **Thesis Research Guidelines**

#### **STAGE 1 - PLANNING YOUR THESIS RESEARCH**

**Meet with faculty to investigate possible thesis topics.** Many times, the nature of a thesis project may differ from coursework you completed with faculty. So it's important to keep an open mind and meet with as many faculty as possible to learn the full range of opportunities. We recommend meeting with faculty in December.

**Consider submitting grant proposals to fund your research.** Many students apply for funding from the Bucknell University Program for Undergraduate Research or McKenna Foundation, who offer grants that include a summer stipend and on-campus summer housing for eight or ten weeks of research with a faculty member. The McKenna Foundation grants also provide some money for research materials. Students also apply for funding from the Geological Society of America, Sigma Xi, and Evolving Earth Foundation, among others. Deadlines are typically in February and March. Proposals are competitive. Development of a successful proposal typically involves close consultation between advisor and student. We recommend meeting with your research advisor prior to winter recess to discuss key papers to read during recess to aid proposal development.

**Conduct a thorough background literature review and deliver a 15-minute oral presentation to the Department of Geology on your proposed thesis research** by the last day of classes during the spring semester, as part of the GEOL 329 curriculum. Portions of this literature review will become part of the introduction to your thesis.

**Submit a PDF file with your thesis proposal,** including title page signed by the Department Chair and your advisor by the last day of classes during the spring semester, as part of the GEOL 329 curriculum. Follow formatting guidelines provided on the Honor's Council website. Consider submitting your proposal to the Honor's Council; the deadline is typically in early September.

#### **STAGE 2 – CARRYING OUT YOUR THESIS RESEARCH**

In addition to funding from outside resources, the Geology Department offers a range of resources to support undergraduate research. Shared instruments, equipment, and supplies are available by contacting individual faculty or Brad Jordan, Director of Laboratories. Requests can be made to the Department Chair to purchase or rent research equipment and supplies

that are not available. You may also request funds for analyses using instrumentation that isn't available on campus and for research-related travel such as field work.

### **STAGE 3 – ANALYSIS, INTERPRETATION, AND WRITING**

**Follow the GEOL 430 Syllabus.** Analyze, interpret, and write up your data according to your proposal and routine discussions with your advisor as part of the GEOL 430 curriculum. You may expect to write multiple drafts of each section of your thesis and be in frequent communication with your thesis advisor throughout this process.

**Submit a complete hard copy of your thesis to your advisor by the last day of final exams fall semester as part of the GEOL 430 curriculum.** Follow formatting guidelines provided on the Bucknell University Honor's Council website. Your advisor may allow you make minor edits or revisions during winter recess but a complete copy of the thesis with all text, figures, tables, references, and captions must be submitted by the last day of final exams.

### **STAGE 4 - DISSEMINATING YOUR THESIS RESEARCH**

**Submit a PDF file with your completed thesis, including title page signed by the Department Chair and your advisor prior to the first day of classes spring semester.** If you are accepted into the Honor's Program, you can make additional revisions during the spring semester and do not need to bind your thesis until the end of the spring semester. If you successfully defend an Honor's Thesis, submit a PDF of your completed thesis page signed by the Department Chair and your advisor, to the Department Chair by the last day of classes spring semester.

**The Department of Geology will coordinate binding of your thesis.** The Department will pay for three bound copies – one each for you, your advisor, and the department library. Additional copies may be purchased. Bound theses may not arrive until after you depart campus following graduation, so be sure to provide the Department with your contact information.

**Plan to present your research at the Kalman Symposium.** Invitations for student-authored talks and posters are typically sent by email from the Provost's Office in January-February. You will be asked to submit a presentation title and an abstract summarizing your research results.\*

**Consider presenting your research results at a national or regional conference,** such as the annual meetings of the Geological Society of America and American Geophysical Union. Apply for travel funds through the Department of Geology Marchand Fund and the Provost's Office.

*\* In order to graduate with a B.S. degree you must present your research to an audience, i.e. Kalman, GSA, or departmental seminar.*