

# Thesis Guidelines for Undergraduate Students

Department of Geosciences  
Oregon State University



A strategy for developing an undergraduate thesis project is outlined below. These guidelines cover the procedures, goals, and responsibilities of students and faculty mentors involved in thesis research. These guidelines may also serve as a framework for undergraduate research projects not culminating in a senior thesis.

Students involved in senior thesis should enroll for research (GEO 401) and thesis (GEO 403) credits. Four credits of senior thesis (GEO 403) may potentially be used as an upper-level elective in the departmental undergraduate degree programs – check with the head advisor for the respective program. Students doing an undergraduate research project not culminating in a senior thesis should not take thesis credits (GEO 403).

## Project Proposal

- A. A written "Project Proposal" is required to initiate a thesis and is due before the completion of 3 (GEO 401) research credits; in other words, during the first term in which the student enrolls for research credits.
- B. The Project Proposal is a description of the research to be conducted by the student and is normally 2-4 pages in length. The proposal is a written statement of intent for what is to be researched, investigated, and pursued. The proposal establishes a clear focus by framing a research question. These range from empirical research questions or hypotheses to a statement of intent. The proposal establishes the principal question to address, establishes a context for that question, and outlines what steps will be taken to answer the question. The goals or objectives should be clear to anyone reading the proposal. The Project Proposal is not a contract; instead its function is to help you identify a problem to be investigated and to outline the direction of your research.
- C. Students should expect to revise several iterations of their project proposal in response to comments from their mentor. Once accepted and signed by the mentor, the student will forward copies of the Project Proposal to the department's Undergraduate Research Coordinator and the student's Undergraduate Program Advisor.
- D. The Project Proposal is not intended to be rigid but rather a document that evolves as the research proceeds during subsequent terms in response to unanticipated results, problems, or emerging directions. If major revisions should become necessary to the Project Proposal during the course of the research, a revised Project Proposal should be forwarded to the department's Undergraduate Research Coordinator and Undergraduate Program Advisor.

## Research

- A. The plan for completing the research as described in the Project Proposal should envision approximately 3 hours per week of work per credit (including work in the laboratory, field, library, etc. i.e. about 100 hours total per quarter for 3 credits of research – GEO 401).
- B. Ideally, fieldwork, laboratory studies, and/or other data collection should be completed early in the term before the student plans to graduate (e.g. early in winter term if the student plans to graduate at the end of spring term).
- C. Students intending to use thesis credits (GEO 403) to satisfy degree requirements (if allowed by their degree program) should discuss their progress on the research project with their undergraduate degree advisor during registration each term.
- D. Students who receive a departmental research scholarship or award are required to briefly report on the progress of their research each term that they receive financial support. This can take the form of a short letter to the scholarship or award donor. A copy should also be sent to the undergraduate research coordinator.

## Writing the Thesis

- A. Normally, the student will have finished at least 6-9 credits of research (Geo401) before they are ready to enroll for the final part of the series, 4 credits of thesis (Geo403) – normally taken during his/her last term. This is to allow the student adequate time to structure, write, edit and prepare the final copy of the thesis, and present the thesis work.
- B. Mentors need to keep in mind that the student will be carrying a full load of upper-division courses (10-12 credits) as well as writing his/her thesis.
- C. The format of the thesis will be that of a manuscript to be submitted to a particular journal appropriate to the research area. The mentor will choose the model journal and help the student write a paper with the appropriate format. There are

no specific page requirements. Although the structure of the paper will follow the style of a peer-reviewed journal, the final copy of the thesis should adhere to the departmental thesis formatting guidelines, which addresses formatting issues such as margins, spacing, etc. As the thesis begins to take its final shape, the student should obtain a copy of the departmental thesis formatting guidelines from the undergraduate research coordinator.

- D. Students should submit the first draft of the thesis to their mentor as early in the term as possible to allow adequate time for revisions and editing, and should expect to submit multiple working drafts to their mentor. Working drafts are an iterative process and allow you to improve your written communication skills, learn the nuances of science writing, and to refine the interpretations of your results.

### Finishing

- A. As the thesis approaches its final form, as determined by the mentor, the student will schedule a presentation of the thesis to the department. The thesis “defense” should be scheduled far enough in advance of the end of the term to allow time for any revisions that may be necessary, prepare the final, bound copy of the thesis and submit it for the Department Chair’s signature by 5pm Friday of “dead week” in which the student plans to graduate.
- B. The student will submit an examination copy of the thesis to the mentor and one or two secondary advisors at least one week before the scheduled presentation. The examination copy should conform to the departmental thesis format requirements for margins, spacing, etc.; obtain a copy of the [format requirements](#) from the Undergraduate Research Coordinator before preparing the examination copy. The student should also submit the examination copy of the thesis to the Undergraduate Research Coordinator who will check that the format conforms to departmental thesis guidelines.
- C. Your thesis defense will be a 30-minute public exposition followed by a short closed period of questioning (the thesis examination) by the mentor and secondary advisors. At the end of the closed examination, the mentor and secondary advisors may choose to: 1. Accept the thesis in its present form 2. Grant conditional acceptance pending minor revisions (this is most common). 3. Require major revisions and/or re-examination of the thesis. Mentors should not consent to scheduling of the presentation if it is apparent that major revisions to the thesis may still be needed.
- D. Once the thesis has been accepted in its final form, the student should prepare the final, bound copy of the thesis. The student will obtain original signatures (mentor and program head or advisor) and deliver the final copy to the Department Office for the Chair’s signature by 5 pm Friday of “Dead Week” of the term in which the student plans to finish. This is a firm deadline and NO EXCEPTIONS are possible. Earlier submissions are acceptable, of course.
- E. Students unable to finish their theses and present them during their last term will receive an incomplete grade for GEO 403. Incomplete grades must be addressed according to university policies.

### Student Responsibilities for Research and Thesis

1. Complete a 2-4 page Project Proposal before completion of 3 GEO 401 research credits. Send a copy of the Project Proposal, signed by the faculty mentor, to the Undergraduate Research Coordinator.
2. Do the research. Work on the project regularly each term that you enroll for research credits (GEO 401).
3. If you receive a department research scholarship or award, keep the coordinator and donor updated on your progress each term that you receive financial support. This can be by letter.
4. Begin writing your thesis no later than the start of the term(s) during which you enroll for thesis credits (Geo403). Revise your working drafts with the help of your mentor.
5. Upon agreement between you and your mentor, schedule a defense of the thesis in the department when your thesis is near its final form.
6. Submit examination copy of thesis to mentor and secondary advisor(s) at least one week prior to the scheduled presentation. Provide an examination copy of thesis to the Undergraduate Research Coordinator who will check the thesis for compliance with senior thesis guidelines.
7. Hold a thesis defense consisting of a public presentation and a closed examination. The mentor and secondary advisors may require revisions of your thesis before final acceptance.
8. Deliver final copy of the thesis with mentor and secondary signatures to the Department Office for the Chair’s signature no later than Friday at 5:00 PM during “Dead Week”.