

## The School of Earth and Space Exploration Senior Thesis Guidelines

The purpose of this document is to outline the School of Earth and Space Exploration (SESE) procedures for students completing a Senior Thesis in SESE. SESE Senior Thesis options include:

### **General SESE Senior/Barrett Thesis:**

This option is available to all SESE immersion majors who have applied to complete a Senior Thesis, or Barrett Thesis for Barrett students, in addition to all their regular degree requirements. This opportunity is available to the following majors: Earth and Environmental Studies and all Earth and Space Exploration majors/concentrations.

### **ESE Senior or Barrett Thesis in Lieu of the Capstone:**

This option is available to students with a minimum of a 3.25 GPA and in the following majors: ESE (no concentration), ESE (Astrophysics), ESE (Astrobiology/Biogeosciences) and ESE (Geo Sci) who have applied to complete a Senior or Barrett Thesis as a substitute for the regular capstone experience in their major. The thesis courses will satisfy SES 410/411 for ESE no concentration, Astrophysics and Astrobiology/Biogeosciences majors and GLG 451/452 for ESE Geo Sci majors.

Barrett students who are using their Barrett Honors Thesis as their ESE Senior Thesis must also follow all of the Barrett Thesis/Creative Project guidelines. More information about those can be found here: <https://barretthonors.asu.edu/thesis/gettingstarted> .

### **SESE Requirements for Completion of Senior Thesis**

To complete a SESE Senior/Barrett thesis and, if applicable, receive credit for the ESE senior/Barrett thesis in lieu of the normal capstone sequence, students must:

- Submit an application to pursue a Senior Thesis and have this approved (see Senior Thesis Application document and application form).
- Complete the proposed research project with guidance from the SESE faculty advisor and at least one other faculty member (who can be from another unit at ASU). With Associate Director approval, non-faculty such as researchers or post-doctoral candidates may serve on committees as a third member.
- Complete a write-up of the research project and results in the form of an undergraduate thesis of at least 30 pages in length. Students should use the [Graduate College format manual](#) for formatting guidelines.
- Submit the completed thesis report to the committee at least two weeks prior to the oral presentation.
- Give a final oral presentation/defense that is open to the public and moderated by the faculty advisor. The defense should be completed no later than a week before the last day of classes. The academic calendar can be found here: <https://students.asu.edu/academic-calendar> .
- Receive final approval of the written thesis report by the faculty advisor no later than the last day of finals in that semester. The advisor will indicate approval by signing section D of the Announcement and Report for Senior Thesis Defense form.
- Submit final copies of the thesis and the defense form to the [seseforms@asu.edu](mailto:seseforms@asu.edu) .

### Registration Requirements for Senior Thesis

SES 494 Undergraduate Thesis Preparation (3 credits) or SES 492 Honors Directed Study (3 credits, Barrett students only)

This course is intended as an independent study in which a student, under the supervision of a faculty member/thesis advisor, conducts research or creative work that is expected to lead to an undergraduate senior thesis. Students will register for the course selecting the faculty advisor as the instructor of record. Registration should be completed after the student receives approval for the senior thesis and well before the first day of classes for that semester.

SES 495 Undergraduate Thesis (3 credits) or SES 493 Honors Thesis (3 credits, Barrett students only)

This course is intended for supervised research that results in the completion of an undergraduate senior thesis. Students completing that SESE senior thesis must enroll in SES 495 Undergraduate Thesis or SES 493 Honors Thesis (Barrett students) during the semester of thesis completion. Students will register for the course selecting the faculty advisor as the instructor of record prior to the first day of classes for that semester.

SES 494 Undergraduate Thesis Preparation and SES 495 Undergraduate Thesis or SES 492 Honors Directed Study and SES 493 Honors Thesis are sequential. They may not be taken in the same semester and they must be completed in consecutive semesters. Students completing a senior thesis in lieu of the capstone will receive letter grades for these courses and it is up to the discretion of the faculty advisor to use a plus/minus grading scale. Students completing an SESE Senior/Barrett thesis that is in addition to completing the capstone courses, not in lieu of, may have a pass/fail grading option. Students should discuss the final grading option (letter or pass/fail) with their faculty advisor prior to registering in the research/thesis sequence.

Students completing a SESE Senior/Barrett thesis that is in addition to completing the capstone courses, may instead petition to have SES 492 or SES 494 replace an upper division major elective (not a Branch course). If approved, students will receive a letter grade for the course.

### Procedures for Senior Thesis

Prior to first semester of senior thesis research:

- By **March 1** the student will submit the required application materials to the undergraduate committee for review. Final decisions should be communicated to students by early April.
- Students should register for SES 494 Undergraduate Thesis Preparation or SES 492 Honors Directed Study (Barrett students only) as soon as possible upon receiving confirmation that they have been approved to proceed with a senior thesis project.

Fall Semester (first semester of senior thesis research):

- Student works with faculty advisor on the senior thesis research according to a contract that is established at the start of the research. The contract should include a timeline and

expectations for progress for the entire research project. Students must maintain adequate progress according to the expectations of the faculty advisor or the contract with the student may be terminated which would result in an E grade if the thesis credit is in lieu of a degree requirement as outlined above.

- Student reaches out to [seseforms@asu.edu](mailto:seseforms@asu.edu) for permission to sign up for SES 495 Undergraduate Thesis or SES 493 Honors Thesis (Barrett students only) for Spring. Barrett students should include their honors prospectus along with their request.
- By the end of the fall semester the student should identify their additional committee member(s) and report this to [seseforms@asu.edu](mailto:seseforms@asu.edu).

Spring Semester (semester of thesis completion):

- Student completes thesis research under supervision of faculty advisor and committee member(s) and according to the contract that was established in the previous semester.
- Student completes a write-up of the research project and results in the form of an undergraduate thesis of at least 30 pages in length. Students should use the [Graduate College format manual](#) for formatting guidelines.
- Student will hold a public defense of the thesis. These typically include a 30 minute presentation followed by one hour or more of questioning. The questioning will consist of an open forum for questions by the audience as well as a closed session for questions by the committee.

A minimum of two weeks before defense date students must:

- Work with their advisor and committee members to select a date and time for the defense. Thesis defenses should take place at least one week before the end of the student's final semester. The academic calendar can be found here: <https://students.asu.edu/academic-calendar>.
- Work with SESE front desk staff to schedule a room for the defense, if applicable. The SESE front desk is located in ISTB4 795 and can be reached at 480-965-5081.
- Submit the completed thesis in final format to the faculty advisor and committee members.
- Submit defense announcement information to [seseforms@asu.edu](mailto:seseforms@asu.edu) for distribution. This should include the defense date, location, time, name of the faculty advisor, names of committee members, the thesis/creative project title and abstract. Announcements should be no longer than one page.

To the defense, the student should bring a copy of the Announcement and Report for Senior Thesis/Creative Project Defense form, which is at the end of this document.

After the defense:

Students should submit a final copy of their defense form along with the final version of their thesis to [seseforms@asu.edu](mailto:seseforms@asu.edu).

### Announcement and Report for Senior Thesis Defense

#### SECTION A

"I verify that I have conducted this research and scholarship in accordance with ASU academic integrity, copyright and research on human and animal subjects' policies. I understand that failure to comply with these policies could lead to sanctions including revocation of my degree."

|                                   |                  |                 |
|-----------------------------------|------------------|-----------------|
| <b>STUDENT NAME and SIGNATURE</b> |                  |                 |
| <b>DEGREE</b>                     | <b>ASU ID NO</b> |                 |
| <b>DOCUMENT TITLE</b>             |                  |                 |
| <b>DATE OF DEFENSE</b>            | <b>TIME</b>      | <b>LOCATION</b> |

#### LEVEL OF PASS OR FAIL

- **Pass:** Only minor format corrections needs to be made (ex: typographic errors, pagination)
- **Pass with minor revisions:** Extensive format/editorial corrections and/or minor substantive changes need to be made (ex: rewrite some text, correct grammatical errors).
- **Pass with major revisions:** Extensive substantive changes need to be made (ex: chapter rewrite)
- **Fail:** The overall execution of the study is flawed or the candidate's performance in the oral examination is seriously deficient

#### SECTION B (To be completed by Thesis Advisor)

Defense Exam Results:  Pass     Pass (minor revisions)     Pass (major revisions)  
 Fail

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|--|
| <b>REVISIONS NEEDED (To be completed by Committee Chair)</b> |
|  |
|  |

| PASS | FAIL | NAME                  | SIGNATURE | PASS | FAIL | NAME                  | SIGNATURE |
|------|------|-----------------------|-----------|------|------|-----------------------|-----------|
|      |      | ADVISOR or CO-ADVISOR |           |      |      | ADVISOR or CO-ADVISOR |           |
|      |      | MEMBER                |           |      |      | MEMBER                |           |

**SECTION D (Final Approval of Document).** Faculty Advisor's signature below certifies that all revisions noted above have been completed and that all information on the form is correct.

|             |             |
|-------------|-------------|
| <b>NAME</b> | <b>DATE</b> |
|-------------|-------------|