

## **SENIOR THESIS GUIDELINES**

### **for BS in Geological Science or BS in Geophysics degrees programs**

Students who wish to finalize their Bachelor's degree in Geological Sciences or Geophysics with a Senior Thesis must follow the guidelines provided below. A passing grade in GEOL 699 will indicate successful completion of all Senior Thesis requirements. Your thesis becomes a permanent record of your independent research or creative effort. The best academic tradition and professional practice require the degree program to preserve and share your work with other scholars. To do that successfully, the program must maintain high standards concerning the form and appearance of your thesis, and must require that your work meet those standards.

A thesis must be based on original research that has been approved by the thesis advisor. The thesis must be presented in a public venue as described below. A written manuscript is required that is approved by the student's advisor and meets the formatting guidelines described below. The faculty recommend that theses be written following style guidelines for Geological Society of America publications (<http://www.geosociety.org/pubs/contrib.htm>).

**Style.** Students are responsible for providing manuscripts in which approved geological and other scientific terminology are used correctly and which have no grammar or spelling errors. Students must check their manuscripts for accuracy and consistency in use of capitalization, spelling, abbreviations, and dates. The project recommends that theses be written following general style and typography guidelines in the *Chicago Manual of Style*; geological usage and spelling should conform to the *Glossary of Geology*, fourth edition, American Geological Institute, Alexandria, Virginia, 1997.

**Abstract.** A brief and objective abstract of no more than 250 words should present in capsule form the paper's content and conclusions. A topic sentence should give the overall scope and should be followed by emphasis on new information. Omit references, figure or table callouts, and criticisms.

**Organization.** Precisely define the contribution at the outset and present it clearly in the fewest words possible (while avoiding jargon) so that the reader may get a maximum of facts and ideas in a minimum of time. State the purpose; give minimal background information, concisely present the data that led to the conclusions clearly differentiate fact and inference, and present justifiable conclusions and, perhaps, further implications of the conclusions. Provide complete descriptions of methods and laboratory techniques preferably as an Appendix. Do not describe standard methods in detail if references to the methods can be cited. Number figures and tables in the order that they appear in the text.

**Footnotes.** Avoid footnotes and parenthetical statements. Textual footnotes that are deemed necessary should be numbered consecutively with superscripts.

**Units of Measure.** Use the International System of units (metric) in captions, illustrations, and text; where English measurements are necessary, follow metric with English in parentheses.

**Captions.** Make captions precise and explain all symbols and abbreviations used. Captions should appear at the *bottom* of the figure, with the first line 2 spaces below the image. Captions should begin with the word 'Figure' followed by a number and a period.

**Tables** should replace text, not duplicate it. Tables should be numbered in the order discussed in the text. Titles should appear at the *top* of the table, with the bottom line of the title 2 spaces above the first line of the table. A table title may not consist of more than one sentence or phrase. Titles should begin with the word ‘Table’ followed by the number of the table, and a period.

**Appendixes.** Title all appendixes (for example, APPENDIX 1. SAMPLE DESCRIPTIONS). Place appendixes at the end of the text after the References Cited.

**Mathematical Expressions.** Define your use of symbols in the text the first time each appears. Mathematical expressions and equations in text follow this format:

The relations of displacement, uplift, and rotation for this model are

$$\sin \phi = H/L_0 \quad (1)$$

and

$$S = L_0 - L_0 \cos \phi = L_0(1 - \cos \phi), \quad (2)$$

where  $\phi$  is the angle of rotation,  $H$  is the amount of uplift,  $L_0$  is the limb length, and  $S$  is the amount of displacement

**References.** Manuscripts will contain proper citation of works by others, especially publications of the original hypotheses, ideas, and/or data upon which manuscript is based. All references mentioned in the text, figures, captions, tables, and appendixes must be listed in the References Cited section. Only references cited in the paper are to be listed. References in the text consist of the surname of the author(s) followed by the year of publication in parentheses. For references with two authors, list alphabetically by first author and then alphabetically by second author. For references with more than two authors, list alphabetically by first author and then chronologically, earliest year first. Do not abbreviate journal titles or book publishers in references. Include the city of publication for books. Please follow the following sample:

Author(s), Year of publication (in parentheses), Title of article, Name of journal, Volume number, and Page numbers.

**Figures.** It is recommended that figures be inserted in the text. Each Figure must be accompanied by a caption.

- **Lines and Labels in Graphs, Maps and Legends**

- Use clean black lines, no finer than 1 point and no greater than 2 points.

\_\_\_\_\_ 1 pt. Line

\_\_\_\_\_ 2 pt. Line

- On maps, please include latitude (°N, °S) and longitude (°W, °E), a north arrow, and a scale in kilometers.
- Graphs must have all axes and lines labeled.
- General titles of illustrations should appear in the figure caption, not in the figure itself.

- **Lettering**

- Use a clear, sans serif typeface (Helvetica or Arial).
- All lettering should be between 7 points and 12 points type size.

- Avoid making the lettering too large for the figure. This can result in a "cartoonish" appearance.
- Place a white background behind lettering that crosses a dark or textured area in a figure.

**Formatting.** The following is the standard format for a Senior Thesis in the Geological Sciences or Geophysics degree program:

**Title Page** (signed)  
 Acknowledgements  
 Dedication (optional)  
 Introduction  
 Background (optional)  
 Methods (optional)  
 Results  
 Conclusions  
 References Cited  
 Appendices (optional)

- **Margins.** On all pages, margins should be one inch at the top, bottom, and right and one and a half inch on the left.
- **Page Numbering.** Use lowercase Roman numerals (e.g. i, ii, iii, iv...) to number your introductory pages (title page, acknowledgements, dedication, etc.) with the title page bearing no number but included in the sequence. Arabic numerals (e.g. 1, 2, 3...) are to be used to number the remaining pages of the text, including appendices, beginning with the first page of the first chapter. Placement of page numbers must be consistent (bottom-center) and always one-half inch from the edge of the page (i.e. in the "footer" of the page).
- **Typefaces and Color.** Use a black color for all text in the body of the thesis. Any of the following standard 12-point fonts are acceptable: Arial, Calibri, Courier New, Palatino, Tahoma, Times New Roman. Do not use running headers or footers, and please use boldface sparingly.

**Submission.** The student must submit the final text of the Senior Thesis to the SEOE Undergraduate Student Services office (PSC 108) on a CD-ROM or other electronic format as requested by the office. The disk version must correspond exactly to the paper copy and include a copy of the title sheet, signed by advisor [and second reader\*].

**The Senior Thesis Presentation.**

Two weeks prior to the presentation, the student will submit one copy of a complete draft of the thesis, to the advisor [and to the second reader\*].

Senior thesis presentation is a public event. The presentation should be announced a week or more in advance through an email to students and faculty in the School of the Earth, Ocean and Environment, including the location and time/date of the event. The student may take the initiative to post signs advertising the Senior Thesis presentation. As a minimum, the advisor [and Second reader\*] must attend the presentation.

The length of a presentation usually ranges from about thirty minutes to an hour. The advisor [and second reader \*] determines the format, but the usual procedure is for the student to make a 30-40-minute presentation of the thesis research and then respond to questions. Suggestions for revisions may be made both during and after the presentation. The advisor may choose to delay assigning a grade until after the revisions have been made to the thesis. Arrangements are also made for delivery of the final thesis to the advisor [and second reader\*] to acquire their signatures on the title page.

\* Additional requirements for Graduation with Distinction in the major.

(A SAMPLE THESIS TITLE WHICH IS IN SMALL CAPS)

By:

(Student's Name)

Submitted in Fulfillment of the Requirements for a Senior Thesis  
for a Bachelor of Science degree in (Geological Science, Geophysics)  
School of the Earth, Ocean and Environment  
College of Arts and Sciences

University of South Carolina

Year

Approved:

(Advisor's Name), Advisor

(Advisor's Signature)

*For Graduation with Distinction only*

*(Second Reader's Name), Reader*

*(Second Reader's Signature)*

***Degree with Distinction/Written Sponsorship Agreement Form***

To be completed and returned to Undergraduate Student Services office (PSC 108).

Student's Name (Print)

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

Student VIP or USC ID  Major (Print)

Senior Thesis Topic or  
Title of GEOL 699 (Print)

Supervising Faculty Name (Print)

Supervising Faculty Signature: \_\_\_\_\_

Date: \_\_\_\_\_

\*\*\*\*\*OFFICE USE ONLY\*\*\*\*\*

***Date Senior Thesis submitted to SEOE UG office*** \_\_\_\_\_

**Students seeking a Degree with Distinction in Geological Sciences must meet the criteria below:**

***Requirements:***

- Minimum GPA of 3.5 in the major and 3.3 overall
- Written sponsorship agreement from the faculty mentor on file in the SEOE Undergraduate Student Services Office (PSC 108).
- 3 courses in addition to the general major requirements, including:
  - GEOL 498 or 499- Undergraduate Research (3), preparing for the Senior Thesis;
  - GEOL 699- Senior Thesis (3-6);
  - A minimum of one GEOL 500 level course appropriate to the research.
- A public presentation of the Senior Thesis research accompanied by a written document approved by the faculty mentor and a second reader that follows the Senior Thesis guidelines for the degree.
- Submission of final text of Senior Thesis on CD ROM in PDF format or in an electronic format approved by the SEOE Undergraduate Director.

**Students seeking a Degree with Distinction in Geophysics must meet the criteria below:**

***Requirements:***

- A minimum GPA of 3.5 in the major and 3.3 overall.
- Written sponsorship agreement from the faculty mentor on file in the SEOE Undergraduate Student Services office.
- 2 courses in addition to the Geophysics major requirements:
  - GEOL 498 or 499- Undergraduate Research (3), preparing for the Senior Thesis;
  - GEOL 699- Senior Thesis (3-6);
- A public presentation of the Senior Thesis research accompanied by a written document approved by the faculty mentor and a second reader that follows the guidelines of the degree.
- Submission of text of senior thesis in PDF format on CD ROM or in an electronic format approved by SEOE Undergraduate Director.