

CHE 591 – Thesis Preparation and Defense

Prerequisites

Completion of CHE 588, CHE 589, CHE 590

Course Description

- A. **Course Objectives:** To have each student demonstrate:
1. A comprehensive knowledge specific to the chosen area of research by preparing a written thesis and by defending the thesis results in an oral presentation.
 2. The necessary analytical skills to evaluate and present the results of the chemical research according to accepted professional styles by preparing a written summary of experimental procedures and experimental data.
 3. The necessary analytical skills to evaluate the progress the research has made to the field of study by preparing a written discussion of the experimental results in the form of a “discussion” section and an “abstract” that identifies the most important research results.
 4. The necessary analytical skills to synthesize additional future research that incorporates the thesis results and projects further specific research goals by assessing the success of the thesis research and preparing a written summary of future directions for study.
 5. Proficiency in the preparation of scientific documentation by preparing a thesis that adheres to the standards of the American Chemical Society and the School of Graduate Studies.

Evaluation of the thesis defense occurs during an oral presentation of the thesis results to the faculty (pass/fail) and other members of the academic community. The appropriate preparation of the thesis according to the SCSU Thesis Guidelines will be evaluated by the faculty advisor, second reader, Chairperson of the department, and the readers selected by the Dean of the School of Graduate Studies.

- B. **Course Outline:** This course will follow an independent study format involving regular meetings with the thesis advisor to ensure timely completion.

- C. **Modes of Instruction:**
The modes of instruction will include revisions to written documents and presentations including revisions to written drafts of the final document, revisions to the defense presentation and discussions regarding the appropriate styles for the specific field of study.

- D. **Evaluation:**

Student evaluation will involve assessment of appropriate research content (50%) and the ability to demonstrate proficiency in the specific research field in the form of the oral defense.(10%) Proficiency using style sheets, drawing programs, and adherence to thesis guidelines according to ACS styles and those recommended by the School of Graduate Studies in the preparation of the final thesis will also be evaluated (40%).

E. ***Bibliography:***

1. Ebel, H. F.; Bliefert, C.; Russey, W. E. *The Art of Scientific Writing*, 2nd Ed.; Wiley: New Jersey, 2003. ISBN 3-527-29829-0
2. Fieser, L.; Fieser, M. *Style Guide for Chemists*; Kreiger: Huntington, NY, 1972.
3. Schoenfeld, R. *The Chemist's English*, 3rd Ed.; VCH Publishers: Deerfield Beach, FL, 1989.
4. Perelman, L. C.; Barrett, E.; Paradis, J. *The Mayfield Handbook of Technical and Scientific Writing*, 1st Ed.; McGraw Hill: NY, 1997. ISBN 1559346477
5. Halliday, M. A. K. *Writing Science: Literacy and Discursive Power*; University of Pittsburgh Press: Pittsburgh, 1993.
6. Roze, M. *Technical Communication: The Practical Craft*, 3rd Ed.; Prentice Hall: Upper Saddle River, NJ, 1997.
7. Alley, M. *The Craft of Scientific Writing*, 3rd Ed.; Springer: NY, 1996.
8. Booth, V. *Communicating in Science: Writing a Scientific Paper and Speaking at Scientific Meetings*, 2nd Ed.; Cambridge University Press: Cambridge, 1993
9. Online resources are extensive and include sites from other university libraries and scientific writing courses as well as publications from scientific publishers. Searching GOOGLE[®] for “Scientific Writing Chemistry” provided over 8 million hits.