

## **CHEMISTRY CHE 591 – Research Thesis**

**Southern Connecticut State University**

**Fall/Spring/Summer Semester 20xx**

**Scheduled meetings with research adviser to be determined.**

**Pre-requisite:** CHE 590

### **Course Overview and Requirements**

This is a 3 credit graduate course for the graduate thesis in consultation with the research adviser. The guidelines for the proposal are described in the Graduate Student Handbook. The thesis must conform to all styles set forth by the Department of Chemistry and the SCSU Graduate Thesis Proposal guidelines. The main body of the document should adhere to ACS style preferences.

The student and faculty research adviser will schedule meetings as appropriate for the completion of the thesis by the deadline. The student must submit the thesis to the Department and Thesis Committee two weeks prior to the oral thesis defense. The members of the Thesis Committee will return the thesis with the evaluations (written thesis) and comments at the oral defense. A copy placed on display for all other department members should also have comments from each of the additional faculty readers and will be available to the student at the defense. All suggested changes/recommendations must be addressed prior to submission the School of Graduate Studies for approval. A signature sheet for faculty who are not Thesis Committee members should be included as the first page of the copy on display in the Chemistry office.

The student must also give a scheduled 30-minute presentation of the thesis and the results obtained during the period of research. This should be in a Powerpoint® presentation format and should be of high quality containing appropriate ChemDraw® figures, etc. This will be followed by an open question and discussion period where the student is expected to answer questions related to the literature background as well as the results obtained during the research.

It is the responsibility of the student and research adviser to ensure the deadlines are met. No extensions or special considerations will be made regarding the deadlines imposed.

## Course Description

<b>Expected Student Learning Activity</b>	<b>Weekly Hours for Course*</b>	<b>Total Hours for Course (14 week semester)</b>	<b>Term Credits Earned</b>
Contact Hours	3	42	
Reading and Study Time	4	56	
Reports	4	56	
Presentations	4	56	
<b>Total Hours</b>	<b>15</b>	<b>210</b>	<b>3</b>

\* Please note that these times are only estimates based on the Department of Education's definition of a credit hour and adjustments for the specific course by the Chemistry Department and do not guarantee a specific grade in the course. Students may find that they require more or less time to succeed in the course.

### **Learner Outcomes**

Upon completion of this course a student will be able to:

1. Complete a search the scientific literature using online and bound hardcopy resources for the proposed research area. The student will be required to complete a thorough search of the scientific area using online tools such as SciFinder®, STNEasy®, Google®, etc., consistent with the scope of the area of study and the scope of the proposed research project. The references accumulated and discussion of the relevance of the materials toward the area will serve as the assessment tool.
2. Apply the concepts taught in CHE 588 as they apply to the current research topic. The student will be required to analyze the reference materials accumulated and assess the importance of the materials in terms of the contribution each cited work makes to the field in general, as well as the narrower scope of the proposed research that is being generated from the study. This will be assessed through a short presentation and the written summary that serves as the background for the proposal. Suitable material should also be presented where it is directly relevant to the specific research reactions proposed.

**Evaluation:** There are two components for evaluation. The written thesis will account for 75% of the final grade and the oral defense will count for 25% of the final grade. The evaluation of each component is described below.

The evaluation of the written thesis is completed by the members of the Departmental Thesis Committee. The evaluation involves a pass or conditional pass or fail grade to various components of the written thesis as outlined in the faculty evaluation document included below. Each committee member will assign a letter grade after reviewing the final thesis document and the final grade for the course will be the average of the letter grades assigned by the committee (25%) and the faculty research adviser (75%).

The oral thesis defense will be evaluated by all full time faculty members in the department. The evaluation involves a pass or conditional pass or fail grade to various

components of the oral thesis defense as outlined in the faculty evaluation document included below. Each committee member will assign a letter grade after the oral thesis defense and the final grade for the course will be the average of the letter grades assigned by the full time faculty (25%) and the faculty research adviser (75%).

The research adviser may petition for a revision to the grade with the full-time faculty members if he/she feels an unwarranted grade has been awarded.

**Late/Missed Work:** There is no mechanism for late submission.

**Accommodating Students With Disabilities:** As a student with a disability, before you receive course accommodations, you will need to make an appointment with the Disability Resource Center located in EN C-105A to arrange for approved accommodations. No accommodation regarding the deadline will be permitted.

**Academic Dishonesty:** Unfortunately, the question of academic dishonesty occasionally becomes an issue between an instructor and a student. **Plagiarism** is a serious example of academic dishonesty especially when it pertains to thesis exercises and this will not be tolerated. The penalty for plagiarism will be a grade of zero and if the Departmental Thesis Committee deems the extent of plagiarism to be extensive, removal from the program will result.

## Departmental Thesis Review

### Written Thesis Evaluation

The Department of Chemistry at SCSU has outlined several components for the acceptance of thesis research in the undergraduate and graduate programs. The following items were evaluated by a member of the Departmental Thesis Committee and graded as pass, conditional pass, or fail. A letter grade considering all of the areas for assessment is included at the end of the document.

1. The literature review was thorough and appropriate for the study that was conducted and was updated for any material published while the research was being conducted.

Pass                       Conditional Pass                       Fail

2. There is a clear statement of the completed research and how the results advance the current body of knowledge.

Pass                       Conditional Pass                       Fail

3. The thesis adheres to current American Chemical Society standards including those pertaining to the suggested styles for written documentation.

Pass                       Conditional Pass                       Fail

4. Citations follow the current American Chemical Society standards.

Pass                       Conditional Pass                       Fail

5. Figures and schemes were presented in a suitable format using ChemDraw® software or proper permission was obtained and included to reproduce figures, etc.

Pass                       Conditional Pass                       Fail

6. The organization of the body of the report is consistent with current standards in the Department of Chemistry.

Pass                       Conditional Pass                       Fail

7. The thesis document reflects an appropriate effort in terms of the scope and limitations of the research conducted.

Pass                       Conditional Pass                       Fail

8. The overall quality of the thesis reflects the standards set forth by the Department of Chemistry.

Pass

Conditional Pass

Fail

**Additional Comments:**

Reviewed by: \_\_\_\_\_ (Print Name) Date: \_\_\_\_\_

\_\_\_\_\_  
Faculty Signature

\_\_\_\_\_  
Recommended Letter Grade

## Departmental Thesis Review

### Oral Thesis Defense Evaluation

The Department of Chemistry at SCSU has outlined several components for the acceptance of thesis research in the undergraduate and graduate programs. The following items were evaluated by a full-time departmental member and graded as pass, conditional pass, or fail pertaining to the oral defense of the research conducted. A letter grade considering all of the areas for assessment is included at the end of the document.

1. Key aspects of the current literature and relevance to the work conducted were presented.  
Pass                       Conditional Pass                       Fail
2. There was a clear statement of the completed research and in general, a clear description of how the results advance the current body of knowledge.  
Pass                       Conditional Pass                       Fail
3. The student demonstrated that he/she had attained a thorough knowledge of the field of study and this was apparent in the quality of the presentation.  
Pass                       Conditional Pass                       Fail
4. The student demonstrated that he/she had attained a thorough knowledge of the field of study and this was apparent in the quality of the answers in the question period following the defense.  
Pass                       Conditional Pass                       Fail
5. Appropriate citations (ACS style) were included in the presentation materials.  
Pass                       Conditional Pass                       Fail
6. Appropriate figures, schemes, tables, etc., were included in the presentation materials.  
Pass                       Conditional Pass                       Fail
7. The presentation was consistent with the allotted time allocated for the thesis defense.  
Pass                       Conditional Pass                       Fail

8. The student gave a clear presentation and did not just read the slides presented.

Pass

Conditional Pass

Fail

**Additional Comments: (please attach a separate page if more space is required)**

Reviewed by: \_\_\_\_\_ (Print Name) Date: \_\_\_\_\_

\_\_\_\_\_  
Faculty Signature

\_\_\_\_\_  
Recommended Letter Grade