

Chemistry MS

College of Arts & Sciences, Department of Chemistry

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The mission of the graduate program in chemistry may be summarized as follows:

1. To provide an ongoing program of study that prepares graduates to successfully pursue scientific careers in industry or to continue their education in a doctoral program or professional school.
2. To provide students with opportunities to reinforce their background and expand their knowledge in areas integrated with their undergraduate coursework, with course offerings in the five major branches of chemistry.
3. To provide an ongoing, stimulating and intellectual atmosphere conducive to the learning process of both students and faculty through low student-to-faculty ratios.
4. To provide the facilities and professional mentorship enabling students to propose, conduct, evaluate, and report in a systemic way on original research and thereby add to the knowledge of humanity.
5. To provide opportunities for students to refine both oral and written communication skills.

The graduate curriculum is designed to acquaint students with the current ideas in the five major areas of chemistry (organic, inorganic, physical, analytical, and biochemistry). The thesis project affords the student practical experience in the methods used to obtain new knowledge and to develop the skills necessary to understand and relate this knowledge. Special topics courses allow individual professors to present specialized material in their area of expertise. The faculty maintains a wide variety of research programs, giving each student an opportunity to conduct, evaluate, and report on original research.

Students should learn to research the background of a topic through use of the scientific literature (peer-reviewed) with little assistance. This should include electronic database searches such as SciFinder Scholar and other such accessible platforms.

Evaluation is made through the use of the Graduate Advisory Committee Thesis Assessment Form which is completed by each committee member following the successful defense of the students master's degree.

The Criteria for success is that 75% of the MS graduates score a 3.33 out of 4 on this assessment.

Student 1	3.33	2.67
Student 2	4.00	4.00
Student 3	3.50	3.50
Student 4	2.67	3.00

Seventy-five percent of the students scored a 3.33 or above in Background Information gathering and 50% exceeded the threshold in citing literature (documentation). However, the average of all students did meet the threshold.

Faculty mentors were encouraged to inform graduate students that they have immediate access

graduate students, they should make significant progress in this area compared to their ability as an undergraduate.

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Student 1	3.33	2.33	2.67
Student 2			

Science must be communicated in both written and oral forms. Students receiving an MS degree in chemistry should do so effectively.

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The Criteria for success is that 75% of the MS graduates score a 3.33 out of 4 on this assessment.

Student 1	2.00	3.00
Student 2	3.00	4.00
Student 3	3.00	3.50
Student 4	2.67	2.67

tenure, especially if English is not their native language. Both faculty mentors and students share these actions.

Seminars presented by graduate students did not receive adequate feedback from faculty and students the past year which limits their opportunity for targeted improvement.

This year, a rubric will be provided to faculty and students in the audience in order to grade and provide feedback to the student giving the seminar.

Appendix 1: Curriculum Map, Chemistry MS

Appendix 2: Graduate Advisory Committee Thesis Assessment

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Thesis/Problem/Information	Analysis	Written Synthesis	Documentation	Oral Synthesis	Critical Thinking
<p>State the problem and objectives and methods</p> <p>State the main results and conclusions</p> <p>State the main conclusions and implications</p>	<p>State the main results and conclusions</p> <p>State the main conclusions and implications</p> <p>State the main conclusions and implications</p>	<p>State the main results and conclusions</p> <p>State the main conclusions and implications</p> <p>State the main conclusions and implications</p>	<p>State the main results and conclusions</p> <p>State the main conclusions and implications</p> <p>State the main conclusions and implications</p>	<p>State the main results and conclusions</p> <p>State the main conclusions and implications</p> <p>State the main conclusions and implications</p>	<p>State the main results and conclusions</p> <p>State the main conclusions and implications</p> <p>State the main conclusions and implications</p>
<p>Comments</p> <p>Use red for errors in each column with a checkmark if all requirements were met.</p> <p>Use green for areas of strength or possible points to be addressed, which have been reflected in the final report.</p>					
<p>Graduate Advisory Committee Members</p>					