Description

The M.S. program provides students with the opportunity to develop a high degree of proficiency in a specialized research area. The program serves as a stepping stone to jobs in industry, graduate school, professional school, teaching careers, or for those who would like to strengthen their Chemistry knowledge. All students take coursework, carry out original research with a faculty mentor, and submit a thesis. The program has a focus on developing strong writing and oral communication skills. Financial support is typically available through a teaching assistantship.

Requirements

M.S. Degree Requirements

• Demonstration of a broad understanding of undergraduate chemistry by passing a series of basic examinations or satisfactory performance in approved courses.
• Student must present a total of 30 credits for completion of the MS program. These 30 credits are as follows:
  • 20+ course credits, at least 8 credits of which must be in courses numbered 900 or above.
  • Satisfactory performance in at least three path-specific (analytical, inorganic, organic, or physical) courses, which is a portion of the 20+ course credits required.
  • 6 to 10 credits of CHEM 899 Thesis/Problems research credits.
• Mandatory attendance at Department Seminars and Research Lunch Talks.
• Satisfactory presentation of a Research Progress Report in the second year of residence.
• Preparation, public presentation, and oral defense of a written thesis.
• Student must maintain a GPA of 3.0 to graduate from the MS program.

Thesis Mentor and Committee

Students select a thesis mentor during the first semester in the program after interviewing at least three faculty members. During each semester thereafter, students conduct independent research under the supervision of this faculty member. In the second year of residence and before the Research Progress Report a committee is selected. This committee evaluates the student’s Research Progress Report and Thesis defense.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHEM 800</td>
<td>Chemistry Teaching Seminar</td>
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<td>CHEM 802</td>
<td>Critical and Creative Thinking for Chemists</td>
<td>1</td>
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<tr>
<td>CHEM 899</td>
<td>Thesis/Problems</td>
<td>1-10</td>
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<td>CHEM 991</td>
<td>Graduate Presentation Portfolio</td>
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<td>CHEM 992</td>
<td>Graduate Writing Portfolio</td>
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<td>CHEM 997</td>
<td>Seminar</td>
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Analytical Program Requirements

Select 3 from the following:

- CHEM 930 Advanced Optical Methods 3
- CHEM 933 Chemical Separations 3
- CHEM 934 Chemical Equilibria 3
- CHEM 935 Advanced Analytical Chemistry 3

Inorganic Program Requirements

Select 3 from the following:

- CHEM 903 Advanced Inorganic Chemistry I 3
- CHEM 904 Advanced Inorganic Chemistry II 3
- CHEM 947 Inorganic Biochemistry 3

Organic Program Requirements

Select 3 from the following:

- CHEM 808 Spectroscopic Investigations of Organic Molecules 3
- CHEM 855 Advanced Organic Chemistry 3
- CHEM 902 Theoretical Organic Chemistry II 3
- CHEM 911 Synthetic Organic Chemistry I 4

Physical Program Requirements

Select 3 from the following:

- CHEM 905 Advanced Physical Chemistry I 3
- CHEM 925 Surface Chemistry 3
- CHEM 926 Physical Chemistry of Condensed Phases 3
- CHEM 927 Chemical Kinetics and Reaction Dynamics 3
- CHEM 995 Colloquium 1-4