CHEMISTRY, M.S.

The M.S. in Chemistry gives students the opportunity to develop and demonstrate their potential for work in biochemistry and attracts individuals who have been out of an academic environment for some time or who wish to bolster their undergraduate science experience. The successful candidate will be prepared for positions of responsibility in industry or government or for further study toward a doctoral degree.

The required 30 credit hours includes courses in the four major areas of chemistry (analytical, inorganic, organic, and physical), courses in other areas, and a research thesis based on original research carried out under the direction of a faculty advisor. In addition, the student gains experience in professional speaking by preparing and presenting two public seminars.

For information regarding deadlines and requirements for admission, please see the Guide to Graduate Admissions.

In addition to the application materials required by The Graduate School, applicants must submit a one-page personal statement by the appropriate deadline to be considered for Fall, Spring, or Summer admission.

Degree Program Requirements

Required: 30 credit hours

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CHE 691</td>
<td>Introduction to Graduate Research</td>
<td>3</td>
</tr>
<tr>
<td>CHE 680</td>
<td>Research Problems in Chemistry and Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHE 699</td>
<td>Thesis</td>
<td>3</td>
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Seminars (2 credits)

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>CHE 601</td>
<td>Graduate Seminar I</td>
<td>1</td>
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<tr>
<td>CHE 602</td>
<td>Graduate Seminar II</td>
<td>1</td>
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</tbody>
</table>

Electives (6 credits minimum)

Select 6 credits of electives

Total Credit Hours 26-33

NOTE: All students must complete 30 credit hours for the M.S. in Chemistry. The range of total credit hours that appears in the course list above reflects only a minimum-maximum sum of the credits listed for the program requirements.

Research Techniques

Students take CHE 691 Introduction to Graduate Research before beginning research. Students must carry out a research project under the supervision of a faculty member and write a thesis on the research (CHE 699 Thesis). Students may take additional research hours of CHE 680 Research Problems in Chemistry and Biochemistry and up to 6 credits of CHE 699 for a total of 12 credits.

Seminars

Students must present two seminars, the first on a literature topic (CHE 601 Graduate Seminar I) and the second on their thesis research (CHE 602 Graduate Seminar II), normally given during the last semester of study.

Electives

Up to 9 credits may be earned in chemistry or biochemistry or in approved (by Department Graduate Studies Committee and student’s research advisor) graduate courses in biology, mathematics or physics.

Comprehensive Examination

The comprehensive examination consists of a research proposal on the student’s thesis research, including a literature review. The proposal must be approved by the student's thesis committee before the student may enroll in CHE 699 Thesis.

Thesis Defense

Students must defend the completed thesis before the thesis committee.

Biochemistry Concentration

The concentration in biochemistry gives M.S. Chemistry students the opportunity to demonstrate and develop specialization for work in biochemistry. The successful candidate will be prepared for positions of responsibility in industry or government or for further study toward a doctoral or other professional degree.

The required 30 credit hours for this concentration include a specialized core of introductory and advanced biochemistry courses, courses in chemistry and other areas, and a research thesis based on original research carried out under the direction of a faculty advisor. In addition, the student gains experience in professional speaking by preparing and presenting two public seminars.

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The required 30 credit hours for this concentration include a specialized core of introductory and advanced biochemistry courses, courses in chemistry and other areas, and a research thesis based on original research carried out under the direction of a faculty advisor. In addition, the student gains experience in professional speaking by preparing and presenting two public seminars.

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Chemistry, M.S.

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**NOTE:** All students must complete 30 credit hours for the Biochemistry concentration, M.S. in Chemistry. The range of total credit hours that appears in the course list above reflects only a minimum-maximum sum of the credits listed for the program requirements.

* Indicates Capstone Experience

**Electives**
Additional courses needed to bring the total credits up to at least 30 should be chosen from graduate level chemistry and biochemistry courses offered by the department or from approved biochemistry-related courses.

**Research Techniques**
Students take CHE 691 Introduction to Graduate Research before beginning research. Students must carry out a research project under the supervision of a faculty member and write a thesis on the research (CHE 699 Thesis). Students may take additional research hours of CHE 680 and up to 6 credits of CHE 699 for a total of 12 credits.

**Seminars**
Students must present two seminars, the first on a literature topic (CHE 601 Graduate Seminar I) and the second on their thesis research (CHE 602 Graduate Seminar II), normally given during the last semester of study.

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