MASTER OF SCIENCE IN CHEMISTRY: CONCENTRATION IN BIOCHEMISTRY

Admission to Program

Students must meet these criteria:

• Satisfy the University's admission requirements.
• Have completed an undergraduate major in chemistry or biochemistry. If this criterion is not met, the student may be admitted, but additional course work will be required.
• Have a GPA of at least 3.0 in chemistry and related courses.
• Report GRE scores of the general (not subject) exams.
• Applicants are required to fill out the department application form. Department application procedures are described at [www.chembiochem.sfsu.edu/graduate_app_proc](http://www.chembiochem.sfsu.edu/graduate_app_proc).
• Submit three letters of recommendation from individuals familiar with previous academic work and/or potential for graduate work in chemistry. These letters should be sent to the graduate advisor, Department of Chemistry and Biochemistry.

Written English Proficiency Requirement

Level One

Applicants are required to satisfy the entry-level written English proficiency requirement by a score of 4 or above on the GRE Analytical Writing section. Applicants who do not meet the GRE AWA score, but meet all other requirements, may be admitted on a conditional basis. The conditional status will be removed upon successful completion of a writing-based entrance exam. Admitted students who do not pass the writing-based entrance exam will take SCI 614 or an equivalent writing course by the end of the second semester.

Level Two

Students will demonstrate an advanced level of proficiency in written and spoken English by successfully completing CHEM 880, a thesis (CHEM 898) or written manuscript (CHEM 895), and an oral defense of the research project.

Advancement to Candidacy

In order to advance to candidacy, students must:

• Pass any three of the American Chemical Society (ACS) graduate entrance examinations: analytical, biochemistry, inorganic, organic, or physical chemistry. These examinations cover mainly undergraduate level material.
• Satisfy Level One of the written English proficiency requirement.
• Satisfy all course deficiencies stipulated upon entrance into the program.
• File an Advancement to Candidacy (ATC) form.

Note: After initiating a research project, a graduate student must enroll each semester in CHEM 897 while actively engaged in research for the M.S. degree. A maximum of 9 units of CHEM 897 may be included on the Advancement to Candidacy.

Chemistry (M.S.): Concentration

Biochemistry – minimum 30 units

Program (9 units)

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CHEM 834</td>
<td>Organic Spectroscopic Methods</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 880</td>
<td>Seminar</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 850</td>
<td>Valency and Spectroscopy (select on advisement of advisor)</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM 851</td>
<td>Biochemical Spectroscopy</td>
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Research Requirements (6 – 9 units)

Research project in biochemistry, bioorganic, bioanalytical, biophysical, bioinorganic, biomedical or biochemical education subdiscipline required.

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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CHEM 897</td>
<td>Research</td>
<td>1-3</td>
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</table>

Culminating Experience (3 units)

One of the following culminating experience courses selected with prior consultation with culminating experience committee:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CHEM 898</td>
<td>Master’s Thesis</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM 895</td>
<td>Research Project</td>
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Oral Defense of Culminating Experience

Related Study (9 – 12 units)

Graduate courses in biochemistry, chemistry, physics, mathematics or biology on advisement of graduate major advisor. Upper division courses may be used with permission of graduate major advisor.