<table>
<thead>
<tr>
<th>Content/Discipline Knowledge Skills</th>
<th>Direct Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates will demonstrate competency in the subject knowledge of Chemistry in the areas of Physical Chemistry, Organic Chemistry, Inorganic Chemistry, Analytical Chemistry and Biochemistry.</td>
<td>Procedure: The Major Field Test for Chemistry, developed by the Educational Testing Service and administered nationally will be given in the capstone course for this program, Senior Seminar (CHM 4930). This exam provides a national norm for assessing student performance.</td>
</tr>
<tr>
<td><strong>Sampling:</strong></td>
<td>All B.A. majors are required to take CHM 4930 in their senior year, and all of them will take the exam. Students will be expected to score at the 35th percentile or higher.</td>
</tr>
<tr>
<td><strong>Minimum Criteria for Success:</strong></td>
<td>At least 50% of students will be expected to score at the 35th percentile or higher.</td>
</tr>
<tr>
<td>Critical Thinking Skills</td>
<td>Direct Measures</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------</td>
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<tr>
<td>B.A. graduates will demonstrate their ability to think critically in terms of identifying and summarizing a problem or question, analyzing and examining ideas and research findings, assessing the influence of context, and constructing and interpreting information within Chemistry.</td>
<td>A four member faculty panel will evaluate the 4 indicators of critical thinking (5 point rating scale; 20 point maximum) to assess the research paper required in the capstone course. Two faculty members will assess the work of half of the students, and the other two faculty members will assess the work of the other half of the students. A mean score for each student will be obtained from the faculty ratings.</td>
</tr>
</tbody>
</table>

**Sampling:**
A sample of 10% of graduating students or a minimum of 10 students (whichever is higher) will be assessed in the department’s capstone course, CHM 4930 (Senior Seminar).

**Minimum Criteria for Success:**
Graduates will attain an average minimum score of 12 on the critical thinking rubric.

<table>
<thead>
<tr>
<th>Communication Skills</th>
<th>Direct Measures</th>
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</thead>
<tbody>
<tr>
<td>Graduates will demonstrate competency in using technology to present ideas by using PowerPoint and other multimedia tools.</td>
<td>A four member faculty panel will use the attached rubric describing 4 indicators of technology skills (5 point rating scale; 20 point maximum) to assess the research talk required in the capstone course. Two faculty members will assess the work of half of the students, and the other two faculty members will assess the work of the other half of the students. A mean score for each student will be obtained from the faculty ratings.</td>
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**Sampling:**
A sample of 10% of graduating students or a minimum of 10 students (whichever is higher) will be assessed in the department's capstone course, CHM 4930 (Senior Seminar).

**Minimum Criteria for Success:**
Graduates will attain an average minimum of 12 points on the technology skills rubric.
<table>
<thead>
<tr>
<th>B.A. graduates will demonstrate effective oral communication skills through their subject knowledge of chemistry, organization of ideas, adequate connection to an audience, and efficient delivery.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Procedure:</strong></td>
</tr>
<tr>
<td>A four member faculty panel will use a rubric describing 5 indicators of oral communication (5 point rating scale; 25 point maximum) to assess the oral presentation required in the capstone course. Two of the faculty will assess the work of half of the students, and the other two faculty will assess the work of the other half of the students. A mean score for each student will be obtained from the faculty ratings.</td>
</tr>
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<td><strong>Sampling:</strong></td>
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<tr>
<td>A sample of 10% of graduating students or a minimum of 10 students (whichever is higher) will be assessed in the department’s capstone course, CHM 4930 (Senior Seminar).</td>
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<tr>
<td><strong>Minimum Criteria for Success:</strong></td>
</tr>
<tr>
<td>Graduates will attain an average minimum of 15 points on the oral communication rubric.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>B.A. graduates will demonstrate effective written communication skills in chemistry by explaining content and developing ideas, effectively organizing information, demonstrating a command of the written language, and using the conventions of language and documentation appropriately.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Procedure:</strong></td>
</tr>
<tr>
<td>A four member faculty panel will use the attached rubric describing 4 indicators of written communication skills (5 point rating scale; 20 point maximum) to assess the research paper required in the capstone course. Two faculty members will assess the work of half of the students, and the other two faculty members will assess the work of the other half of the students. A mean score for each student will be obtained from the faculty ratings.</td>
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<tr>
<td><strong>Sampling:</strong></td>
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<tr>
<td>A sample of 10% of graduating students or a minimum of 10 students (whichever is higher) will be assessed in the department’s capstone course, CHM 4930 (Senior Seminar).</td>
</tr>
<tr>
<td><strong>Minimum Criteria for Success:</strong></td>
</tr>
<tr>
<td>Graduates will attain an average minimum score of 12 points on the written communication rubric.</td>
</tr>
</tbody>
</table>