

## Academic Learning Compact

***Degree Program: Chemistry (BS) (CIP Code 40.0501)***

Intended Program Student Learning Outcomes	Direct and Indirect Measures	
	Direct Method of Assessment	Indirect Method of Assessment
<p><b>Outcome 1: [Communication Skills]</b>                      The students will demonstrate the ability to retrieve information efficiently and effectively by searching the chemical literature and evaluate technical articles critically, and manage many types of chemical information.</p>	<p><b><u>Direct Measure(s)</u></b></p> <ul style="list-style-type: none"> <li>• Grading with criteria or rubric</li> <li>• Senior thesis or major capstone project</li> </ul>	<p><b><u>Indirect Measure(s)</u></b>                      Student Satisfaction survey</p>
<p><b>Outcome 2: [Communication Skills]</b>                      The students will demonstrate the ability to present information in a clear and organized manner, write well-organized and concise reports in a scientifically appropriate style, and use relevant technology to communicate.</p>	<p><b><u>Direct Measure(s)</u></b></p> <ul style="list-style-type: none"> <li>• Grading with criteria or rubric</li> <li>• Senior thesis or major capstone project</li> </ul>	<p><b><u>Indirect Measure(s)</u></b>                      Student Satisfaction survey</p>
<p><b>Outcome 3: [Critical Thinking Skills]</b>                      The students will apply their understanding of sub-disciplines (analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, physical chemistry) and use appropriate laboratory skills and instrumentation to solve problems.</p>	<p><b><u>Direct Measure(s)</u></b></p> <ul style="list-style-type: none"> <li>• Grading with criteria or rubric</li> <li>• Senior thesis or major capstone project</li> </ul>	<p><b><u>Indirect Measure(s)</u></b>                      Student Satisfaction survey</p>
<p><b>Outcome 4: [Critical Thinking Skills]</b>                      The students will apply the concepts of safe laboratory practices in their laboratory work.</p>	<p><b><u>Direct Measure(s)</u></b>                      Grading with criteria or rubric</p>	<p><b><u>Indirect Measure(s)</u></b>                      Student Satisfaction survey</p>
<p><b>Outcome 5: [Content/Discipline Knowledge and Skills]</b>                      The students will demonstrate the ability to interact effectively in a group to solve scientific problems and work productively with a diverse group of peers.</p>	<p><b><u>Direct Measure(s)</u></b>                      Grading with criteria or rubric</p>	<p><b><u>Indirect Measure(s)</u></b>                      Student Satisfaction survey</p>
<p><b>Outcome 6: [Content/Discipline Knowledge and Skills]</b>                      The students will demonstrate a proper understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.</p>	<p><b><u>Direct Measure(s)</u></b>                      Major capstone project</p>	<p><b><u>Indirect Measure(s)</u></b>                      Student Satisfaction survey</p>