

## Assessment and Evaluation Plan for the BA Chemistry Program

| <b>Program Objective</b>   | <b>Performance Criteria</b>   | <b>Evaluation Method</b>  |
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| <p><i>What are the program objectives? What should our students know and be able to do?</i><br/> <b>[Mission Goals]</b></p>  | <p><i>How will we know that the objectives have been met? What level of performance meets each objective?</i></p>   | <p><i>What assessment methods will be use to collect data? How will we interpret and evaluate data?</i></p>   |
| <p>I. Competence in the basic content of organic, inorganic, physical, analytical chemistry and biochemistry.<br/>                     [Goals: 1, 2, 3]</p>        | <p>The students will score within a standard deviation of the national average on the ACS exams given.</p>  | <p>ACS exams to be assessed &amp; interpreted annually. Stats are available relative to national standard by question, subject area, and overall score.</p>   |
| <p>II. The ability to carry out experimental protocols, and analyze and interpret data.<br/>                     [Goals: 2 and 3]</p>                              | <p>Submission of laboratory reports in various areas of chemistry. Maintenance of laboratory notebooks. Ability to work independently in a laboratory setting. Students will demonstrate their skills on laboratory exams.</p>  | <p>Continuous assessment during experimentation and on lab reports in order to improve lab procedures and other lab skills.</p>   |
| <p>III. The ability to communicate effectively in both oral and written presentations.<br/>                     [Goals: 2 – 5]</p>                                 | <p>Students must pass with a C, DSW classes. Oral exams will be used to assess the students' understanding of scientific principles in the capstone lab course.</p>   | <p>Continuous feedback during oral exams and on all written reports will be provided to help students improve oral and written communication skills.</p>  |
| <p>IV. Proficiency in the use of appropriate computer applications and information technology as applied to chemistry.<br/>                     [Goals: 2 – 5]</p> | <p>Modern molecular modeling software (Chemdraw, Spartan, etc) will be used by all majors. Library database searches will be required. Basic computer programs (Word, Excel) will be required. Majors will use information technology tools such as the Internet and computer-based literature searches as well as printed literature resources to locate and retrieve scientific information including safety information (MSDS)</p> | <p>Continuous assessment and feedback during oral exams, written reports and research papers will be provided to help students improve computer and technology skills. Students will demonstrate their skills on laboratory reports and papers.</p> |
| <p>V. Aptitude in advanced laboratory techniques<br/>                     [Goals: 2 – 5]</p>   | <p>Learning techniques in quantification, isolation analysis, and spectroscopy as appropriate</p>   | <p>Continuous assessment via lab reports.</p>   |

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|   | to the specific research project.   |   |
| VI. Adequate preparation to compete successfully in a professional school or a science-related career.<br>[Goals: 1, 2, 4, 5 and 7]                   | 50 % of our students will be accepted to professional or graduate school. The rest will be employed in a science-related job. | Survey of graduates.<br>Acceptance rates at graduate/professional schools.        |
| VII. Students will indicate they are satisfied with their general experience, specific skills and knowledge learned in the program.<br>[Goals: 1 – 9] | 90% of Chemistry majors will indicate they were “satisfied” or “very satisfied” on the student survey                         | Data will be collected and compiled from each student during their last semester. |