Undergraduate Degree Program
Program - CASE Chemistry SLO (BA)

Mission Statement
The B.A. in chemistry prepares students for careers in medicine, pharmacy, dentistry, environmental studies, veterinary medicine, patent law, forensic science, and in secondary school teaching.

Chemistry and Biochemistry

Outcomes
FIU graduates should be able to achieve the following:

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<th>Content Knowledge and Skills (including Technology)</th>
<th>Direct Measures</th>
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| Graduates will demonstrate competence in Chemistry in the areas of Physical Chemistry, Organic Chemistry, Inorganic Chemistry, Analytical Chemistry and Biochemistry. | **Assessment Instrument:** Closed-ended Exam  
**Assessment Method:** The DUCK (Diagnostic of Undergraduate Chemistry Knowledge) exam will be given in the capstone course for this program, Senior Seminar (CHM 4930). This exam provides a national norm for assessing student performance. All B.S. majors are required to take CHM 4930 in their senior year, and all of them will take the exam.  
**Course Assessed:** CHM 4930  
**Sampling:** All B.A. majors in CHM 4930.  
**Minimum Criteria for Success:** Students will score above the national average. |

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<th>Critical Thinking</th>
<th>Direct Measures</th>
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| B. A. graduates will be able to identify and summarize a problem or question, analyze and examine ideas and research findings, assess the influence of context, and construct and interpret information within Chemistry. | **Assessment Instrument:** Rubric  
**Assessment Method:** 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.  
**Course Assessed:** CHM 4930  
**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 14 on the critical thinking rubric. |

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<th>Communication (Oral or Written)</th>
<th>Direct Measures</th>
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| B.A. graduates will be able to demonstrate their subject knowledge of Chemistry, organization of ideas, adequate connection to an audience, efficient delivery, and appropriate use of technology. | **Assessment Instrument:** Rubric  
**Assessment Method:** 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.

**Course Assessed:** CHM 4930  
**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 15 points on the oral communication rubric.

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<th>Communication Skills - Written</th>
<th>Procedure</th>
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| B.A. graduates will be able to, in writing explain content and develop ideas, effectively organize information, demonstrate a command of the written language, and use the conventions of language and documentation appropriately. | **Assessment Instrument:** Rubric  
**Assessment Method:** A four-member faculty panel will use a 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.  
**Course Assessed:** CHM 4930  
**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 14 points on the written communication rubric. |