Program: Chemistry

Academic Program Assessment Plan (2017-2018)

1. Please review last year's assessment results (2016-2017) as well as the Academic Program Assessment Report with the faculty in your program. How does your program plan to take these results into consideration in future programmatic planning?

   The program reviews the results of past assessments and make the changes necessary to address any concerns mentioned in previous assessments.

2. Please review your program's Learning Outcomes. Do any of them need to be updated or clarified?

   a. Please provide brief indications of the kinds of assessment (e.g. course exams, term papers, course projects, senior seminar, senior interview, etc.) that might be used to assess each outcome. (The purpose here is to see that your program has considered ways it might measure each outcome.)

      The chemistry program has many different types of courses. We teach some courses that are lecture only, other courses that are laboratory only, most have both a lecture and lab component, and some are even writing emphasis courses. There are many potential assessments. For example, the standard assessment of course exams is certainly common. In laboratory type courses we can assess students ability to design an experiment to answer a particular questions and/or the lab technique used in that experiment. Writing emphasis in our upper level classes also provides term papers as an assessment of writing/communication skills as well. In addition to the methods above many courses will often have the students present a research or experimental technique topic in a class presentation which could be used as an assessment.

   b. Please compare your Learning Outcomes to the University's main learning objectives: interdisciplinary, problem-focused education; critical thinking; diversity; environmental sustainability; and engaged citizenship. (These objectives were identified in the MLLO Project, which may be found here: http://www.uwgb.edu/MLLO/.) Which programmatic outcomes match university mission outcomes?

      Chemistry is often called "The Central Science" because it is connected to many other fields of science. It is strongly connected to many other majors on campus, such as human biology, geoscience, and engineering to name a few. It is an intrinsically interdisciplinary field of study that develops critical thinking in our students so that they can become citizen that understand and care about the environment. We feel our learning outcomes align very strongly with the university's mission level learning outcomes.

3. Which outcome will you assess this year (2017-2018)?

This year the chemistry department will assess the following learning outcomes:

- Have knowledge of atomic and molecular structure, thermodynamics, kinetics, quantum mechanics and spectroscopy. Specifically, we will focus on the topic of kinetics

4. Which technique will you use to assess this outcome?

   Kinetics is a topics that is introduced to undergraduates in their second Principles of Chemistry course (CHEM 212). The assessment will be conducted by exam questions from both the first exam as well as the cumulative final exam.

5. Which course or group of students will you assess on the outcome chosen above and when?

   See above, Chem 212.