

2006-2007 Assessment Report

- a. **Program Name** – Department of Chemistry
 - b. **Report prepared by** – Bill Feighery, Chair
 - c. **Who is the current assessment contact for your program?** Bill Feighery
 - d. **Should assessment information be sent to anyone else in your department?** No
- 1. What are the program's educational goals? (Please take goals directly from your program's assessment plan, and highlight any changes made this year.)**

A graduate in chemistry will:

1. demonstrate mastery of the fundamental principles of chemistry
2. demonstrate mastery of laboratory techniques and methods
3. have high-level cognitive skills of observation, analysis, and synthesis
4. possess good critical thinking and problem solving skills
5. have well developed written and oral communication skills

2. What assessment techniques did the program use? (Please take assessment techniques directly from your program's assessment plan and highlight any changes made this year.)

1. Three direct measures:
 - i. Review of graduating students' capstone work (C301) and overall curriculum records.
 - ii. Standardized Exams (from the American Chemical Society)
 - iii. Laboratory Practical Experiences and Exams
2. One indirect measure:
 - i. Graduate exit survey asking three questions:
 - a. How well did you achieve each of the departmental goals [using scale of exceeded expectations, met expectations, did not meet expectations].
 - b. What aspects of your education in this program helped with your learning and why were they helpful?

c. What might the program do differently that would help you learn more effectively, and why would these actions help?

3. What has your program done with assessment information this year? (i.e. communicated results to faculty, staff, alumni and students, made changes in the curriculum, made changes in the budget, added new courses. . .)

This past summer, the faculty met six times to review our curriculum and our capstone course in particular. For our capstone course this year, we assigned each student a faculty mentor, and required each student give a background presentation before the final presentation. The students received more feedback on both their oral and written presentations, and overall, performance in this class was improved.

To address the lack of elective options for our students, we have discussed the idea of offering one-credit elective courses on special topics. Both from a student and faculty perspective, these types of courses may be easier to schedule. We will offer our first topics course – Applied Mathematics for Chemists – this Fall.

Overall, based on in-class assessment, performance on standardized test, and our graduate survey, our students continue to perform well and are satisfied with our program.

4. What are two concerns about student learning you identified this year?

Two concerns that the faculty have regarding student learning also appeared in the graduate exit survey. Our program is particularly rigorous and sequence and scheduling, particularly with required courses in other departments, is an issue. We will continue to examine the course sequence and pre-requisites to ensure that students are prepared to take our courses. As an aside, both our students and faculty feel that a Fall break would also be useful. Secondly, the laboratory component of our courses is vital to our program; we need to continue to offer our students access to modern laboratory equipment in order to provide the best learning experience.