

MSU Departmental Assessment Update Spring 2007

Department: Chemistry and Biochemistry

Department Head: David Singel

Assessment Coordinator: Martin Teintze

Degrees/Majors/Options Offered by Department

B.S. in Chemistry

Chemistry (Professional) Option

Biochemistry Option

Teaching Option

Department of Chemistry & Biochemistry
Assessment updates 2005-2007

1. Discipline-Specific Knowledge

The plan to use the American Chemical Society standardized tests as an assessment tool was implemented for Biochemistry starting in the Spring of 2005. The test was given as a voluntary exercise in BCHM 444 that did not impact the students' grades. Average performance on this test among the Chemistry majors was very good, consistently exceeding the average score on the same test given to our incoming graduate students in August of each year. Our MSU undergrads have also turned in the top 3 scores on this test, outperforming all students who received their undergraduate education elsewhere. The ACS tests in Organic, Inorganic, and Physical Chemistry have not been used to date.

2. Communication and Problem-Solving Skills

All of our undergraduate majors participate in research projects and give a seminar in CHEM/BCHM 401 and present at least two posters, one at the Undergraduate Scholars Conference, and one at the Departmental Poster Session held each year. There is consensus among the faculty that these presentations are almost all of professional quality (the faculty mentors see to that). The students are graded for their presentations in 401, but no formal assessment of the posters has been implemented yet.

3. Overall Assessment

Department has started tracking its graduates. Out of 49 students graduating in 2005-2007, 15 have started Ph.D. programs in chemistry or a related discipline, 8 are attending medical or dental school, 15 are employed doing research in chemistry or a related discipline (4 at MSU and the others in the private sector), 2 are teaching at the secondary school level, and one is currently employed in a non-science occupation. Of those enrolled in graduate programs, all are at excellent schools, including MIT, Stanford, Duke, University of Colorado, University of Wisconsin, and University of California, Santa Barbara. Two are Ph.D. students at MSU, one in Biochemistry and one in Cell Biology.

We have not asked our students to provide GRE or MCAT scores as originally planned, nor have we asked them to complete exit surveys. These will be implemented with the class of 2008.

4. National Awards

During the past 3 years, our majors have been the recipients of 3 Goldwater Scholarships, 4 Beckman Scholarships, and one Amgen Research Scholarship.