

Department of Chemistry & Biochemistry
Assessment Plan
January 15, 2001

Institutional Goals

1. To ensure that students **read**, write and speak effectively.
2. To ensure through a strong core curriculum that students acquire a basic knowledge in humanities, **mathematics**, the **natural sciences** and the social sciences.
3. **To train students in methods of scholarly inquiry, scientific research and problem solving.**

Departmental Goals And Objectives

Goal 1: To offer an introductory course sequence (CHEM 111/112 lecture & laboratory) that emphasizes theoretical aspects in chemistry for students taking more than one year of chemistry.

- Objectives 1: To determine if the course achieves the following objectives: (as expressed in the 1998 GenEd report):
- C Afford students an improved understanding of the physical world.
 - C Afford students an appreciation of scientific methodology
 - C Afford students an appreciation of the role of science in society.
 - C Afford students an appreciation of the practical significance of science.
 - C Afford students the ability to respond to current issues of scientific importance.

Assessment Measurement & Criteria

- 1a. Write a test (based upon selected readings with follow up multiple-choice questions) and have it peer reviewed by non-chemistry science and non-science faculty for its validity as a measure to address the stated goals.
- 1b. Criteria: Peer review acceptance of the test instrument.
- 2a. Offer the written test.
- 2b. Criteria: Compare answers on test questions offered on first day of class and on final exam to see if students demonstrate change if any.
- 3a. Ask instructors before they teach the course to explain how they set out to accomplish the goals (listed in column II).
- 3b. Criteria: That everyone has thought about these goals in designing their course.
- 4a. Ask the instructors to examine the test after they teach the course to see if what the instructor was trying to accomplish was measurable by the test.
- 4b. Criteria: That the instructors concur on the validity of the test design, and if not, to suggest changes.
- 5a. Survey both students and instructors for subjective opinions about the effect of the course on scientific literacy and the value or increased scientific literacy.
- 5b. Criteria: Subjective opinions agree with the test results.
- 6a. Survey both students and instructors for subjective opinions about the percent of time spent in the course on scientific literacy and the value or increased scientific literacy.
- 6b. Criteria: Level of agreement between instructors and students.

Goal 2: To offer an introductory course (CHEM 101/102 lecture & laboratory) designed to meet the needs of both non-science majors and the students entering allied health fields. Emphasis is placed on basic chemistry concepts, giving the student a strong background on a variety of topics in order to appreciate the role of science and particularly chemistry in modern day life.

4. To ensure that students **read**, write and speak effectively.
5. To ensure through a strong core curriculum that students acquire a basic knowledge in humanities, **mathematics**, the **natural sciences** and the social sciences.
6. **To train students in methods of scholarly inquiry, scientific research and problem solving.**

Objectives 2: To determine if the course achieves the following objectives: (as expressed in the 1998 GenEd report):

- C Afford students an improved understanding of the physical world.
- C Afford students an appreciation of scientific methodology
- C Afford students an appreciation of the role of science in society.
- C Afford students an appreciation of the practical significance of science.
- C Afford students the ability to respond to current issues of scientific importance.

- 1a. Write a test (based upon selected readings with follow up multiple-choice questions) and have it peer reviewed by non-chemistry science and non-science faculty for its validity as a measure to address the stated goals.
- 1b. Criteria: Peer review acceptance of the test instrument.
- 2c. Offer the written test.
- 2d. Criteria: Compare answers on test questions offered on first day of class and on final exam to see if students demonstrate change if any.
- 3c. Ask instructors before they teach the course to explain how they set out to accomplish the goals (listed in column II).
- 3d. Criteria: That everyone has thought about these goals in designing their course.
- 4c. Ask the instructors to examine the test after they teach the course to see if what the instructor was trying to accomplish was measurable by the test.
- 4d. Criteria: That the instructors concur on the validity of the test design, and if not, to suggest changes.
- 5c. Survey both students and instructors for subjective opinions about the effect of the course on scientific literacy and the value or increased scientific literacy.
- 5d. Criteria: Subjective opinions agree with the test results.
- 6c. Survey both students and instructors for subjective opinions about the percent of time spent in the course on scientific literacy and the value or increased scientific literacy.
- 6d. Criteria: Level of agreement between instructors and students.