

Effective: 8/93

## MAJOR FIELD ASSESSMENT PLAN

Degree Program: **B. S. CHEMISTRY**

Purpose:

***Mission Statement:***

A. Southeastern's primary focus is high quality and comprehensive undergraduate instruction in the arts and sciences.

***Goal Statements:***

B. Southeastern's working goals are to develop and maintain:

1. Quality educational programs.
2. A positive environment for students' overall development.
3. Appropriate standards for the assurance of graduates competencies in mathematics, written English, computer literacy, and a major field of study.

Expected Outcomes:

1. Graduating seniors should have an adequate knowledge of inorganic, analytical, instrumental, organic, and physical chemistry.

Assessment Procedures:

- a. The ETS's MFAT in chemistry will be given to all chemistry majors late in the spring. Annual testing is expected to show individual improvement. By the spring semester of their senior year, 75% of seniors should improve their score by 25 percentile points.

Administration of Assessment Procedures:

Students are administered the test annually in the spring semester. Faculty assist the Office of Testing in proctoring the exam and arrange to offer the test at three different times to accommodate students other obligations. When the test scores are returned to the Department, they are evaluated by the faculty. Initially, there are no freshman scores on individual students. Thus, the average FR scores will also be compared to the average SR scores.

## B. S. Chemistry (Continued)

### Use of Results:

Test results, overall GPA, and coursework completed (grades included) are compiled and studied by the faculty. Information obtained from this evaluation will be used in (a) advising and (b) course and curriculum development.

### Documentation can be found:

A folder containing the results of all assessment procedures will be maintained in the office of the Department of Chemistry and Physics. One faculty from chemistry and one from physics will be responsible for submitting materials to keep the folder current.

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### Expected Outcomes:

2. Graduating seniors should:
  - a. Have problem solving skills.
  - b. Be competent in mathematics and the use of computers.
  - c. Be competent in laboratory methods.
  - d. Be able to communicate effectively both verbally and in writing in the field of science.

#### Assessment Procedures:

- a. The ETS's MFAT in chemistry will be given to all chemistry majors late in the spring semester. Annual testing is expected to reveal the student's improvement. By the spring semester of their senior year 75% of seniors should improve their scores by 25 percentile points. This test is a partial evaluation of problem solving skills.
- b. Although the MFAT and Southeastern's Mathematics Proficiency Exam will be taken into account as indicators of competence in mathematics, the primary measure of competence in both mathematics and computer usage will be the expectation that the student maintain at least a 2.0 grade point average in their mathematics and computer sciences courses.
- c. Eighty percent of students will score satisfactory or better on a departmental assessment of skills as demonstrated by their performance in 200 - 400 level courses. An evaluation instrument has been devised by the department and a minimum of 1/2 the chemistry faculty must complete each students evaluation.

#### Administration of Assessment Procedures:

During the fall semester of a senior student's coursework, faculty will be asked to complete the departmental instrument. The results of the evaluation may be discussed in a group meeting, but only after each faculty member has independently evaluated each student. At that time, students who are not yet seniors will also be discussed with the intention of making any necessary suggestions for improvement prior to their senior year. Such suggestions will be made either by the students academic advisor or the Department Head. The Departmental Office will monitor grades in computer science and mathematics to ensure proficiency.

#### Use of Results:

The results of the evaluation will be used to help students grow stronger in any areas where they are weak and also to commend them for those areas where they are strong. If communication skills, either written or verbal, are evaluated as less than acceptable, the student will be advised to take an additional course in either english or communication skills.

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A folder containing the results of assessment procedures will be maintained in the office of the Department of Chemistry and Physics.

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#### Expected Outcomes:

3. Majors should feel that:
  - a. They have been given every reasonable opportunity to learn and grow as a chemist.
  - b. The chemistry faculty were concerned about their progress and performance and made themselves available to offer assistance.

#### Assessment Procedures:

a. An instrument will be developed within the Department to assess students attitudes toward the faculty and the curriculum. *dept. attitude survey*

b. 80% of the graduates will rate the Department as satisfactory or better on a survey of graduates. *exit survey*

c. 80% of the employees/graduate schools will rate graduates of the chemistry degree program as satisfactory or better in follow-up surveys and/or informal conversations.

## B. S. Chemistry (Continued)

### Administration of Assessment Procedures:

The assessment instrument has been developed and will be administered to students in the last semester of their senior year. In addition, the University has an assessment questionnaire which is administered to all graduates by the Office of Institutional Research. Student responses will be compiled and made available to all faculty.

### Use of Results:

If any problem areas arise from the administration of the instrument, faculty will encourage changes intended to alleviate those problem areas. Subsequent evaluations will be used to determine if those changes resulted in improvement.

### Documentation can be found:

A folder containing all assessment materials will be maintained in the office of the Department of Chemistry and Physics.