

ASSESSMENT REPORT FOR

Bachelor of Science with a major in Chemistry (BS)
Instructional Degree Program

Spring 2003
Assessment Period Covered

May 8, 2003
Date Submitted

Expanded Statement of Institutional Purpose Linkage:

Institutional Mission Reference:

Texas A&M International University, a Member of The Texas A&M University System, is committed to the preparation of students for leadership roles in their chosen profession and in increasingly complex, culturally diverse state, national, and global society ... Through instruction, faculty and student research, and public service, Texas A&M International University is a strategic point of delivery for well-defined programs and services that improve the quality of life for citizens of the border region, the State of Texas, and national and international communities.

College/University Goal(s) Supported:

The faculty and administrators of the Department of Mathematical and Physical Sciences are committed to providing a scholarly environment, which prepares students for productive lives in a dynamic world and in a changing global and technologically advancing environment. To this end faculty encourage students for the following: 1) Developing the ability to think critically and communicate effectively. 2) Pursuing a broad base of knowledge through course offerings in other departments, 3) Collaborating with faculty through research, scholarship, and professional endeavors to expand the knowledge base of a specialized discipline, and 4) Contributing to appropriate community-based activities as beginning professionals. To assist in meeting these goals, faculty recognize the need for, and are committed to, on-going professional development through education, practice, community service, research, and scholarly publications.

Intended Educational (Student) Outcomes:

- 1.** Students will have the ability to design and conduct experiments.
- 2.** Students will have adequate knowledge of the main areas of chemistry (analytical, inorganic, organic, and physical chemistry).
- 3.** Students will acquire the skills to write and present a research communication.

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Intended Educational (Student) Outcome:

NOTE: There should be one form for each intended outcome listed. The intended outcome should be restated in the box immediately below and the intended outcome number entered in the blank spaces.

1. Students will have the ability to design and conduct experiments.

First Means of Assessment for Outcome Identified Above:

1a. Means of Program Assessment & Criteria for Success:

At the end of the Junior year, the student will write an outline and a flow chart describing the design of a chemical experiment. A committee consisting of a minimum of three chemistry faculty members will evaluate the plan as pass/fail. Desired outcome: 70% pass rate.

1a. Summary of Assessment Data Collected:

Not implemented yet.

1a. Use of Results to Improve Instructional Program:

Not implemented yet.

Second Means of Assessment for Outcome Identified Above:

1b. Means of Program Assessment & Criteria for Success:

The student will submit a report summarizing the experimental results and their appropriate interpretation. The committee from 1a will evaluate and provide constructive criticism of the student's work. Desired outcome 70% pass rate.

1b. Summary of Assessment Data Collected:

Not implemented yet.

1b. Use of Results to Improve Instructional Program:

Not implemented yet.

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2. Students will have adequate knowledge of the main areas of chemistry (analytical, inorganic, organic, and physical chemistry).

First Means of Assessment for Outcome Identified Above:

2a. Means of Program Assessment & Criteria for Success:

Chemistry faculty will administer a locally-developed chemistry examination to all chemistry seniors. Expected outcome: minimum 70% pass rate.

2a. Summary of Assessment Data Collected:

Exam was administered to one graduating student.

2a. Use of Results to Improve Instructional Program:

Results pending.

Second Means of Assessment for Outcome Identified Above:

2b. Means of Program Assessment & Criteria for Success:

As part of CHEM 4120 Senior Seminar students will read and present a recent research paper published in a peer-reviewed journal. The student will be evaluated by his or her peers and by the chemistry faculty. Expected outcome: minimum 70% pass rate.

2b. Summary of Assessment Data Collected:

Data insufficient to make recommendation.

2b. Use of Results to Improve Instructional Program:

Not implemented yet.

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Intended Educational (Student) Outcome:

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3. Students will acquire the skills to write and present a research communication.

First Means of Assessment for Outcome Identified Above:

3a. Means of Program Assessment & Criteria for Success:

The student is expected to submit an abstract to a regional scientific conference, such as the Texas Academy of Science Annual Conference. Acceptance of the abstract by the organizing committee (for poster or oral presentation) will be an indicator of success. We expect a minimum acceptance rate 80%.

3a. Summary of Assessment Data Collected:

Not yet implemented.

3a. Use of Results to Improve Instructional Program:

Not yet implemented.

Second Means of Assessment for Outcome Identified Above:

3b. Means of Program Assessment & Criteria for Success:

All undergraduate research students will write a short paper based on laboratory or literature research.

We expect a success rate of at least 80%.

3b. Summary of Assessment Data Collected:

Not yet implemented.

3b. Use of Results to Improve Instructional Program:

Not yet implemented.

SUPPORT DOCUMENTATION

SOURCE	LOCATION/Special Instructions
Locally-developed Chemistry Examination	