

ASSESSMENT REPORT FOR

Bachelor of Arts with a major in Biology (BA)
Instructional Degree Program

Fall 2003

Assessment Period Covered

28 October 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 College of Arts and Sciences and the Department of Biology and Chemistry are committed to providing a scholarly environment in which students prepare for productive lives in a dynamic world and in a changing global and technologically advancing environment.

Intended Educational (Student) Outcomes:

- 1.** Students will understand, explain and, apply classical Mendelian principles, molecular gene regulation (Central Dogma) and microbial lateral gene transfer (Including transformation, transduction and conjugation).
- 2.** Students will show in-depth understanding of ecological succession, predator-prey relationships, and productivity.
- 3.** Students will demonstrate basic comprehension of DNA structure, Mendelian genetics, cell structure and function, and enzymes.
- 4.** Students will: Demonstrate the ability to plan and execute a research project then present the material in a logical manner.

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Intended Educational (Student) Outcome:

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1. Students will: Understand, explain and apply classical Mendelian principles, molecular gene regulation (Central Dogma) and microbial lateral gene transfer (Including transformation, transduction and conjugation).

First Means of Assessment for Outcome Identified Above:

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

Students will attain overall mean score of 70% on embedded questions in comprehensive final. BIOL 3413 (Genetics) is offered only in the Spring Semester.

1a. Summary of Assessment Data Collected:

Data will be collected during the Spring 2004 semester.

1a. Use of Results to Improve Instructional Program:

No use of results for this means of assessment until Spring 2004; at this time, program faculty members can make no recommendations for program changes.

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2. Students will: show in-depth understanding of ecological succession, predator-prey relationships, and productivity.

First Means of Assessment for Outcome Identified Above:

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

Data will be collected during Spring 2004.

2a. Summary of Assessment Data Collected:

Program faculty members will collect data during the Spring 2004 semester.

2a. Use of Results to Improve Instructional Program:

No use of results for this means of assessment until the Spring 2004 semester; at this time, program faculty members can make no recommendations for program changes.

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3. Students will: Demonstrate basic comprehension of DNA structure, Mendelian genetics, cell structure and function and enzymes.

First Means of Assessment for Outcome Identified Above:

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

Mean overall score of 70% on embedded questions in the common, comprehensive final in multiple sections of BIOL 1406 General Biology I-Unifying Concepts, Fall Semester.

3a. Summary of Assessment Data Collected:

A total of 40 students took the same comprehensive final exam containing the embedded questions. The scores for each section are:

DNA Structure	56.3
Mendelian Genetics	77.5
Cell Structure & Function	54.2
Enzymes	36.3
Mean	49.8

3a. Use of Results to Improve Instructional Program:

The low mean score was most severely affected by the scores on the "Enzymes" section of the exam. We will add a laboratory exercise on enzymes and acquire an enzyme simulation program to allow more hands on student learning for this section. The "DNA Structure" & "Cell Structure & Function" sections were also low, but will be addressed by more lecture time on these subjects using visual aids.

Second Means of Assessment for Outcome Identified Above:

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

Students will show increased knowledge (80%) on comprehensive exam on same topics in BIOL 4170 Biology Seminar, Spring Semester.

3b. Summary of Assessment Data Collected:

Program faculty members will collect data during the Spring 2004 semester.

3b. Use of Results to Improve Instructional Program:

No use of results for this means of assessment until the Spring 2004 semester; at this time, program faculty members can make no recommendations for program changes.

SUPPORT DOCUMENTATION

SOURCE	LOCATION/Special Instructions
California Critical Thinking Skills Test	
Graduate Survey	

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4. Students will: Demonstrate the ability to plan and execute a research project then present the material in a logical manner.

First Means of Assessment for Outcome Identified Above:

4a. Means of Program Assessment & Criteria for Success:

Enter text here

4a. Summary of Assessment Data Collected:

Enter text here

4a. Use of Results to Improve Instructional Program:

Enter text here

SUPPORT DOCUMENTATION

SOURCE	LOCATION/Special Instructions
Comprehensive Final Exam	