

ASSESSMENT REPORT FOR

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

Spring 2004
Assessment Period Covered

29 June 2004
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 an 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:

To improve the biological science skills of students to prepare them for teaching, governmental employment or professional school.

Intended Educational (Student) Outcomes:

- 1.** Students will: Understand, explain and apply classical Mendelian principles, molecular gene regulation (Central Dogma) and microbial lateral gene transfer (Transformation, transduction and conjugation).
- 2.** Students will: show indepth 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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First Means of Assessment for Outcome Identified Above:

1a. Means of Program Assessment & Criteria for Success: Mean overall score of 70% on embedded questions in the comprehensive final in BIOL 3413- Genetics, Spring Semester.

1a. Summary of Assessment Data Collected: Students scored a mean of 67.4 on embedded questions on the comprehensive final exam.

1a. Use of Results to Improve Instructional Program: Additional problems are being assigned to strengthen student understanding of the Central Dogma.

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Students will: show indepth 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: Students will attain an overall mean score of 70% on embedded questions in the comprehensive final in BIOL 3410, Ecology, Spring Semester.

2a. Summary of Assessment Data Collected: On 9 embedded questions on the comprehensive final students averaged 69.4%. The mean for ecological succession was 68.7%, for predator-prey relationships 69% and for productivity 71%.

2a. Use of Results to Improve Instructional Program: This goal was met and no change is necessary for the 3 areas examined

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Students will: demonstrate basic comprehension of DNA structure, Mendelian genetics, cell structure and function, and enzyme activity.

First Means of Assessment for Outcome Identified Above:

3a. Means of Program Assessment & Criteria for Success: Students will attain a 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 embedded questions. The scores for each section were:

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: This assessment method showed that there was difficulty in that instructor used a variety of testing methods and some student's score were affected by the type of test administered. Nonetheless, scores in 3 of the areas were low and the scores in "Enzymes" were very low. Models of cell and DNA structure are being used in the lab and lecture. A lab exercise was added on "Enzymes" and a computer enzyme simulation exercise was added.

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First Means of Assessment for Outcome Identified Above:

4a. Means of Program Assessment & Criteria for Success: Students will present to a combined group of their peers, the results of their research projects. Projects will be evaluated by a jury of at least 3 departmental faculty utilizing a rubric designed by the department. Students will average 70%.

4a. Summary of Assessment Data Collected: Twenty-one research projects were presented. The overall mean was 68%.

4a. Use of Results to Improve Instructional Program: The overall mean was acceptable, however, results will be used by instructors in all courses to improve grammar, spelling and sentence structure.

SUPPORT DOCUMENTATION

Enter any document referenced above in this summary table. There are two examples listed below. If no documents are cited, please remove the two examples from the table.