

Texas A&M International University

Annual Institutional Effectiveness Review (AIER)

Date Submitted January 31, 2007

Assessment Period Covered (2006)

Academic Program/AES Unit Bachelor of Arts with a Major in Mathematics

Person(s) Preparing Review Dr. Terutake Abe

Provide summary of the last cycle's use of results and changes implemented

One graduate of the year 2005 took the Major Field Test and scored at 40th percentile nationally. While this is below the 50 % benchmark, it shows improvement over the previous year's (2004) graduates. Since the size of the data is too small for a valid analysis, we will continue to accumulate data in coming years.

Section I: Planning and Implementation

Institutional Mission

Texas A&M International University, a Member of The Texas A&M University System, prepares students for leadership roles in their chosen profession 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 embodies 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.

Academic Program or Administrative/Educational Support Unit Mission

The faculty and staff of the Department of Mathematical and Physical Sciences are committed to excellence in teaching, research, service and outreach. The Department provides a foundation in Mathematical and Physical Sciences for all undergraduate students as well as teacher certification programs for mathematics and physical sciences majors and graduate students. The programs within the Department lead to discovery, analysis and dissemination of mathematics, statistics and physics knowledge. Our goals are to equip the graduate with the tools necessary to fully participate in a technological society and competitive global environment. The Department is committed to:

1. Transmit mathematical and physical science ideas through teaching and related activities;
2. Contribute to the advancement of mathematics and physics through quality research;
3. Utilize the department's resources to aid the University and community in the allocations of mathematics and physics; and
4. To serve as a resource of mathematical and physical knowledge and pedagogy for the University and community.

Identify outcomes and the relationship to Strategic Plan

Outcome 1

Is this outcome related to writing (QEP)?

Students will demonstrate their mastery of formulating and solving problems in various areas of mathematics.

Identify Strategic Plan Goal related to Outcome 1

Goal 1 Academics

Identify Strategic Plan Objective related to Outcome 1

1.7 Establish and pursue student learning outcomes appropriate for each program with systematic assessment and use of results for continuous quality improvement.

Identify methods of assessment to be used

Graduating students will be required to take part in pilot study program towards the end of their final semester of studies by taking the Major Field Test in mathematics by ETS.

Indicate when assessment will take place

Annual

Criteria/Benchmark

50% of students taking the standardized examination will score at or above the national 50th percentile.

Outcome 2

Is this outcome related to writing (QEP)?

Students will be able to communicate mathematics in well-structured sentences.

Identify Strategic Plan Goal related to Outcome 2

Goal 1 Academics

Identify Strategic Plan Objective related to Outcome 2

1.4 Prepare students for success in their chosen careers.

Identify methods of assessment to be used

We have proposed a new course, Communication in Mathematics, MATH2371 (the proposal has been approved by University Curriculum Committee), and will use the data from this course for the assessment for the year 2007.

Indicate when assessment will take place

Annual

Criteria/Benchmark

Criteria will be established for assessment for the year 2007.

Outcome 3 **Is this outcome related to writing (QEP)?**

Students will be able to explore ideas in interdisciplinary areas, and develop correct mathematical arguments and proofs.

Identify Strategic Plan Goal related to Outcome 3

Goal 1 Academics

Identify Strategic Plan Objective related to Outcome 3

1.4 Prepare students for success in their chosen careers.

Identify methods of assessment to be used

Graduating students will be required to take part in pilot study program towards the end of their final semester of studies by taking the Major Field Test in mathematics by ETS.

Indicate when assessment will take place

Annual

Criteria/Benchmark

50% of students taking the standardized examination will score at or above the national 50th percentile.

Section II: Analysis of Results

When (term/date) was assessment conducted?

Outcome 1

Spring / Fall 2006

Outcome 2

The writing course that is the means of assessment has not been implemented. We will implement the course in the Fall 2007 semester and will start conducting assessment.

Outcome 3

Spring / Fall 2006

What were the results attained (raw data)?

Outcome 1

One student took the Major Field Test Mathematics. The score was at 35th percentile.

Outcome 2

No data has been obtained yet.

Outcome 3

One student took the Major Field Test Mathematics. The score was at 35th percentile.

Who (specify names) conducted analysis of data?

Outcome 1

Drs. Abe, Belkhouche, Chappa, Goonatilake, Khosraviyani, and Waters

Outcome 2

Enter text here

Outcome 3

Drs. Abe, Belkhouche, Chappa, Goonatilake, Khosraviyani, and Waters

When were the results and analysis shared and with whom (department chair, supervisor, staff, external stakeholders)? Submit minutes with data analysis to assessment@tamiu.edu (Please use Minutes Template located on the **Project INTEGRATE web page.)**

Results and analysis were shared among the departmental assessment committee members, departmental curriculum committee chair, and department chair.

NOTE: Submit all assessment documentation (i.e., surveys, rubrics, course exams with embedded questions, etc.) to the Office of Institutional Effectiveness and Planning.

Use of Results: Indicate whether criteria were met/not met and what changes, if any, have been identified based on the data collected?

Outcome 1

Met Not Met

Provide narrative: Student's score was at 35th percentile nationally. Lower than 50th percentile benchmark.

Outcome 2

Met Not Met

Provide narrative: n.a.

Outcome 3

Met Not Met

Provide narrative: Student's score was at 35th percentile nationally. Lower than 50th percentile benchmark.

How have these data-based changes improved your program/unit?

Data size is too small at this moment for us to identify changes to our programs. We will continue to accumulate the test score data in the coming years.

Section III: Programmatic Review

Are resources affected by the changes identified in Section II? Yes No

If so, specify the effect(s) using the chart below:

Funding	Physical	Other
<input type="checkbox"/> New resources required	<input type="checkbox"/> New or reallocated space	<input type="checkbox"/> Primarily faculty/staff time
<input type="checkbox"/> Reallocation of current funds		<input type="checkbox"/> University rule/procedure change only
		<input type="checkbox"/> Other: Enter text here

Provide a narrative description and justification for requested resources (include linkage to Strategic Plan)

Enter text here

Identify proposed outcomes for the next assessment cycle:
Continuation of present outcome(s) – (Indicate reason for continuation): Present outcomes adequately capture the program goals.
New Outcome(s) – (List outcomes below): Enter text here
Modification of present outcome(s) – (Indicate reason for modification): Enter text here

**** This section to be completed by dean/director/vice-president ****

Are resources requested a priority for the academic program/AES unit?

Yes No

Comments:

Enter text here

If funding, physical or other resources were requested, what is the impact of the budget decisions on the academic program/AES unit?

Enter text here