



Quality Enhancement Plan

The Improvement of Mathematical Skills and Knowledge

Grambling State University's (GSU) Quality Enhancement Plan (QEP) stems from one of the university's biggest challenges, the need to strengthen the mathematics proficiency of students. After a comprehensive review of general education assessment data and feedback from a broad base of constituent groups, the university selected "The Improvement of Mathematical Skills and Knowledge" as its QEP topic. GSU has chosen to focus on improving mathematics instruction by adopting novel curricular, instructional, and assessment strategies in select general education courses. These courses include mathematics courses as well as courses in the social sciences. The intent is to improve the mathematical skills and knowledge of all students regardless of major. This Quality Enhancement Plan targets the entire student population.

Two goals have been identified in support of improving mathematical skills and knowledge:

1. To increase student knowledge and comprehension of general mathematical concepts.
2. To develop student ability to think analytically and to reason quantitatively in solving real world problems.

The first goal is tied to strengthening a student's foundation in mathematics theory. Six student learning outcomes are linked with this goal as listed below.

- Students will demonstrate proficiency in factual knowledge in algebra
- Students will demonstrate proficiency in conceptual knowledge in algebra
- Students will demonstrate proficiency in procedural knowledge in algebra
- Students will demonstrate proficiency in factual knowledge in trigonometry
- Students will demonstrate proficiency in conceptual knowledge in trigonometry
- Students will demonstrate proficiency in procedural knowledge in trigonometry

The second goal aims to enhance the student's problem solving skills through critical thinking. One learning outcome aligned with this goal focuses on ensuring that students are able to solve, interpret, and analyze real world problems of various complexities that are encountered in a variety of disciplines. To ensure this success, pedagogical methods that involve an interdisciplinary approach to teaching mathematics will be used. Professional development activities will be provided to faculty who assist in the implementation of innovative teaching strategies.

A comprehensive assessment plan has been identified. This plan includes using multiple assessment instruments and using an advisory board to assist in monitoring the plan. The advisory board will play a key role in making sure the assessment data are reviewed periodically to make continuous improvements that will ultimately ensure that the mathematical skills and knowledge of the Grambling State University student are improved.

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