

June 6, 2017

Assessment Plan for General Education in Mathematics

A. Goals

Mathematics: Students should be able to analyze quantitative information in order to solve problems and understand the world.

B. Objectives/Outcomes

Students should be able to:

B.1. Use mathematical methods and models to solve quantitative problems and to communicate solutions effectively.

B.2. Analyze and critically evaluate numerical and graphical data to draw reasonable and valid conclusions about real-world solutions.

C. Instruments/Measures of Evaluation

Mathematics General Education Courses:

To satisfy UL's Core General Education Requirements for Mathematics, students must complete 6 credit hours of mathematics and/or statistics.

Three credit hours must come from the following courses:

Math 102, Math 103&104, Math 105, Math 109, or Math 143.

Three credit hours must come from the following courses:

Math 110 or any Mathematics course at the 200 level or higher or any Statistics course at the 200 level or higher.

Courses Assessed:

From Fall 2011 to present, the Math Department assessed Math 103&104 and Math 105 every fall and spring semester.

Beginning Fall 2017, the Math Department will assess all sections of Math 103&104 and Math 105 every Fall semester.

Beginning Spring 2018, the Math Department will assess all sections of Stat 214 every Spring semester.

Rubric for Evaluation:

The College Algebra Committee and the Statistics Committee create Course Embedded Assessment questions to be included in every College Algebra and Statistics final exam.

Evaluation Process:

The questions created by each committee are embedded into all final exams of the appropriate course.

All Instructors and Teaching Assistants receive the scoring rubric to report the results of their section to the Director of Freshman Mathematics.

D. Criterion of Success

An overall satisfactory performance by a student on the embedded questions is when a student scores an overall score of 60% or higher.

Outcomes B.1. and B.2. will be considered successful or achieved if at least 70% of the students score satisfactory.

Goal	Objectives (Students should be able to ...)	Instruments/Measures	Criterion of Success
Mathematical / Analytical Reasoning: Students should be able to analyze quantitative information in order to solve problems and understand the world.	Use mathematical methods and models to solve quantitative problems and to communicate solutions effectively.	CEA evaluation in Math 103&104, Math 105, and Stat 214	70% of students taking the final exam score 60% or higher on the CEA
	Analyze and critically evaluate numerical and graphical data to draw reasonable and valid conclusions about “real-world” solutions.	CEA evaluation in Math 103&104, Math 105, and Stat 214	70% of students taking the final exam score 60% or higher on the CEA

D. Findings

Common questions were embedded into the final exam of every section of Math 103/104 and Math 105. Each instructor was given a common rubric with which to follow and grade the questions. The results are as follows:

Fall 2016 Semester			
	Math 103/104	Math 105	All sections of Math 103/104 & 105
% of students scoring 60% or higher	31%	45%	39%

Spring 2017 Semester			
	Math 103/104	Math 105	All sections of Math 103/104 & 105
% of students scoring 60% or higher	24%	57%	40%

D.1. Fall 2016 Summary

We collected a total of 774 responses to the embedded questions. Math 103/104 had 318 responses and Math 105 had 456 responses. The percentage of students scoring 60% or higher was lower for Math 103/104 than for Math 105. However, neither category nor the total met the criteria for success.

D.2. Spring 2017 Summary

We collected a total of 365 responses to the embedded questions. Math 103/104 had 194 responses and Math 105 had 171 responses. The percentage of students scoring 60% or higher was lower for Math 103/104 than for Math 105. However, neither category nor the total met the criteria for success.

E. Improvement Narrative

Although the findings did not meet the criteria for success and are consistent with past findings, the Math Department will maintain the same criteria of success for these courses. Our immediate focus will be informing students about the resources that are currently available to them to increase their success in these courses. Over the past several semesters, the Math Department has created, improved, or modified resources for these courses; however, it is evident that not all students are utilizing these resources or are waiting until too late in the semester.