To: Academic Senate

From: Emily Stoper, Chair, Committee on Instruction and Curriculum (CIC)

Subject: Proposal for Learning Outcomes in Quantitative Reasoning, General Education (G.E.) Area B4 (Math 1130, Math 1100 and Stat 1000)

Purpose: For Action by the Academic Senate

Action Requested: Approval by the Senate of the following Goal and Learning Outcomes:

Goal for Quantitative Reasoning Learning Outcomes: Students will demonstrate their ability, in homework and tests, to use college-level mathematical concepts and methods to understand, analyze, and explain issues in quantitative terms.

Learning Outcome 1: Quantitative Literacy: Students will demonstrate, in homework and on tests, their knowledge of formal mathematical concepts and formulae as appropriate to the course. They will be able to find sources for key mathematical ideas from the course.

Learning Outcome 2: Numeracy Skills (Reasoning): Students will demonstrate, in homework and on tests, the ability to manipulate and use theories appropriate to course content, to graphically display and interpret quantitative results, and to perform basic arithmetic skills.

Learning Outcome 3: Problem Solving (Thinking): In homework and on tests, students will identify and analyze real or potential problems, apply appropriate quantitative theories, evaluate appropriate quantitative measures, and explain or discuss results in quantitative terms.

Background Information:

All students must take 4 units of quantitative reasoning in G.E. These learning outcomes for the courses on this campus that meet this requirement were developed by the chairs of the Departments of Mathematics and Statistics, which offer the courses. They were approved unanimously, with minor modifications, by both CIC’s G.E. Subcommittee and CIC itself.