

July 18, 2013

1. College: **Science and Mathematics**
2. Department: **Mathematics and Statistics**
3. Course status: **existing; does not require modification**
4. Course prefix and number: **MTH 143**
5. Course title: **Finite Mathematics**
6. Course catalog description: **Mathematical functions and graphs, linear systems of equations, matrices, linear programming, mathematics of finance; applications.**
7. Number of semester credit hours: **3**
8. Estimated total course enrollment per year: **300**
9. Course prerequisites and/or required qualifications for enrolling in the class: **ACT Math score 21 or higher, SAT Math score 500 or higher, THEA score 250 or higher, or Grade of C or higher in MTH 099 excluding MTH 110, 127, 129**
10. Course **is not/will not be** available online.
11. Foundational Component Area: **Mathematics**
12. Explain why this course fits into this foundation component area: **Students will practice with and apply tools of algebra and geometry to make logical conclusions about functions, systems of equations, and matrices that model real world phenomena, especially basic financial and economic concepts and models.**
13. Core Objectives
 - Critical Thinking - Students will be instructed on using tools of algebra and geometry to evaluate the form and behavior of a function and interpret the meaning of these quantities in terms of the phenomenon being modeled by the function. Students will apply critical thinking skills by reading the text and completing problem sets in which they characterize the behavior of a function by synthesizing information derived from the algebraic patterns and important graphical characteristics. Additionally, students will need to assess how reasonable their conclusions are in the context of constrained resources. IN the course requirements (assignments: homework, quizzes, and exams), students will use creative and innovative thinking as they sort through an arsenal of mathematical tools to see which is most appropriate to solve a given problem.
 - Communication Skills - Students will be instructed as to how mathematical information should be communicated to be sure that the meaning is clear. This instruction will include how to use complete and correct notation, how to visually organize sequential mathematical information and how to provide supporting justification for conclusions. In the course requirements (assignments: homework, quizzes, and exams), the students will demonstrate written and visual communication skills by constructing tables, graphs and sequential arguments to support conclusions.
 - Empirical and Quantitative Skills - Students will be instructed on using empirical and quantitative skills to draw conclusions about important features of functions based on data from tables, graphs, or descriptions, about the behavior of a system based on a quantitative description, and about computing relevant information for economic value based on commonly known information. In the course requirements (assignments: homework, quizzes, and exams), the students will

practice and apply empirical and quantitative skills to manipulate and analyze the data derived from application of these patterns to reach sound decisions based quantitative and algebraic methods.

Contact person for questions about this submission:

- a. Nick Long
- b. 936.468.1822
- c. longne@sfasu.edu