I. **Course Title:** Finite Mathematics

II. **Course Prefix/Number:** MATH 104

III. **Credit Hours:** 3.0

IV. **Prerequisite(s):**
- MATH 099 minimum grade: S
- OR Math Placement Test minimum score: 23
- OR ACT Math minimum score: 19
- OR SAT Math minimum score: 440
- OR ACCUPLACER Elementary Algebra minimum score: 85

V. **Catalog Description:**
Topics covered include functions and their graphs, matrices, linear programming, probability, and descriptive statistics. Applications are presented from the areas of biology, business, behavioral science, economics, and the social sciences.

VI. **Curricular Relationships:**
This course satisfies the ASC General Education Quantitative Thinking requirement. The course is of interest to students in business and the social sciences, as well as to those students wanting to take a college mathematics course other than the science oriented pre-calculus course. It will be of interest to secondary education majors who may wish to sharpen their quantitative reasoning skills, or to learn how mathematics is applied in a variety of fields.

VII. **Student Learning Outcomes:**
- Students will be able to solve a variety of mathematical problems using techniques presented in the content outline.
- Students will be able to use mathematical methods in making everyday decisions.
- Students will use mathematics to interpret and analyze data.
- Students will demonstrate critical thinking skills appropriate to a college level mathematics class.

VIII. **Content Outline:**
- Models: For example, linear, polynomial, and exponential models, along with their applications.
- Matrices: Basic definitions and operations, inverses, linear systems, linear programming and applications.
- Probability and statistics: Sets, counting techniques, probability and conditional probability, expected value and decision making, descriptive statistical methods.
- Topics from Graph Theory, Mathematics of Finance, Theory of Games, Logic, or Difference Equations, as time permits.
IX. Course Procedures/Policies/Grading Scale:
- Homework assignments will comprise some portion of the course grade. Assignments are designed to develop a student's reading, writing, synthesis, and critical thinking skills.
- At least three examinations are given each term.
- A comprehensive final examination is given during finals week.
- Computer software may be used to solve realistic problems.

X. Required/Recommended Readings:
The course will use a standard finite mathematics text such as:


XI. Issues Unique to Course: None

XII. Additional Departmental Issues: None