I. **Course Title:** College Algebra

II. **Course Prefix/Number:** MATH 106

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: 22
- OR SAT Math minimum score: 490
- OR ACCUPLACER Elementary Algebra minimum score: 109

V. **Catalog Description:**
An introduction to the basic techniques of algebra. Topics include functions (linear, quadratic, polynomial, root, rational, exponential, and logarithmic), systems of equations, matrix algebra, inequalities, and complex numbers. Optional topics include partial fractions, synthetic division, mathematical induction, sequences and series, and counting principles.

VI. **Curricular Relationships:**
This course satisfies the ASC General Education Quantitative Thinking requirement. It is of interest to students in the sciences and in other fields who want or need a course at a level lower than Calculus.

VII. **Student Learning Outcomes:**
- Students will be able to apply the fundamental concepts of analysis to solve problems: these concepts include the natural, rational, real, and complex number systems; algebra of polynomial, exponential, and logarithmic functions; matrix algebra; and graphing.
- Students will be able to think logically and to present material in a logical fashion.
- Students will be able to make productive use of technology to solve problems and to gain mathematical insights.

VIII. **Content Outline:**
- Functions: Polynomial, rational, logarithmic and exponential functions and their graphs.
- Sequences (Optional): Arithmetic and geometric sequences, series, mathematical induction or counting principles and elementary probability.
- Applications: Applications of mathematics to model physical phenomena.
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 college algebra and trigonometry, or precalculus text such as:


XI. Issues Unique to Course: None

XII. Additional Departmental Issues: None