COCONINO COMMUNITY COLLEGE
COURSE OUTLINE

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Revised by: Kate Kozak	October 28, 1998
General Education Criteria Reviewed by: Kate Kozak	October 28, 1998
General Education Outcomes reviewed:	March 23, 2001
Revised by: Philip Martinez	November 4, 2014
Revised by: Jeff Jones	December 02, 2015

Status: Permanent
Effective: Fall 2016

A. Identification:
   1. Subject Area: Math (MAT)
   2. Course Number: 151 SUN # MAT 1151
   3. Course Title: College Algebra
   4. Credit Hours: 4
   5. Course Description: College level algebra, including equations, functions, matrices, inequalities, sequences and series, and fundamental algebra theorems will be studied. Prerequisite: MAT 121 (Recommended) or MAT 122 or placement. General Education: Mathematics. Four lecture. Fall.

B. Course Goals: To build student mastery of and confidence in the use of algebraic theorems, mathematical reasoning, and problem solving. In addition, students will be encouraged to develop a positive attitude towards mathematics by successfully completing course outcomes.

C. Course Outcomes: Students will:
   1. define functions and relations;
   2. solve various systems of equations with several methods including matrices and determinants;
   3. list and use the properties and operations of matrices;
   4. graph equations and functions using various methods including technology;
   5. solve linear, quadratic, rational, absolute value, polynomial, and radical equations;
   6. utilize logarithmic and exponential properties to solve related equations;
   7. identify features and general equations of the four types of conic sections;
   8. identify arithmetic and geometric sequences;
   9. calculate series;
   10. simplify expressions involving complex numbers;
   11. and solve application situations related to methods presented in this course.

D. Course Assessment will include:
   1. course grades determined by the instructor as outlined in the course syllabus;
   2. and comprehensive final exam.

E. Course Content will include:
   1. functions: linear, quadratic, rational, exponential, logarithmic, polynomial, absolute value;
   2. analysis of functions: graphing, combinations, composition, inverse, modeling;
   3. equations and inequalities: systems, linear, quadratic, rational, exponential, logarithmic, radical, conics, polynomial, absolute value;
   4. matrix operations;
   5. complex numbers;
   6. methods for finding roots of polynomials;
   7. sequences and series;
   8. and applications.