

COCONINO COMMUNITY COLLEGE
COURSE OUTLINE

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Status: Permanent
Effective: Fall 2017

Spring 2013
January 7, 2015
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A. Course Identification:

1. Subject Area: Mathematics (MAT)
2. Course Number: 140
3. Course Title: College Mathematics with Algebra Review
4. Credit Hours: 5
5. Course Description: Students will examine finance, growth, probability, statistics, and common applications encountered in society. Review material will be taught just in time for when it is needed.
General Education: Mathematics. Prerequisite: MAT 091 or placement beyond prerequisite. Five lecture. Fall, Spring.

B. Course Goals: To build student awareness and develop a positive attitude, understanding and confidence in the content areas listed; to provide students with the skills necessary to apply mathematics to non-academic situations.

C. Course Outcomes

Upon successful completion of this course, student will:

1. solve applied financial problems;
2. understand the differences between linear, exponential, and logistic growth;
3. solve various types of growth problems;
4. utilize probability theory to solve applied probability problems;
5. understand the basic elements of the normal distribution;
6. create and interpret statistical graphs;
7. calculate and interpret numerical descriptive statistics;
8. solve problems involving optional topics;
9. and use various developmental algebraic techniques to solve problems.

D. Course Assessment will include a comprehensive final exam.

E. Course Content will include:

1. review:
 - a. evaluating formulas;
 - b. ratio, proportions, and variation;
 - c. using radicals to solve equations;
 - d. exponentials and logarithms;
 - e. graphing functions;
 - f. solving quadratic equations with the quadratic formula;
 - g. the Pythagorean Theorem;
2. finance, growth, probability, statistics;
3. two of the following optional topics are required:
 - a. graph theory;
 - b. set theory and logic;
 - c. voting systems;
 - d. fair division;
 - e. and/or geometrical symmetry and the golden ratio.