COCONINO COMMUNITY COLLEGE
COURSE OUTLINE

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A. Identification:
   1. Subject Area: Math (MAT)
   2. Course Number: 091
   3. Course Title: Beginning Algebra
   4. Credit Hours: 4
   5. Course Description: Basic algebraic concepts including operations with signed numbers, exponents and radicals, linear equations and inequalities, polynomials, and graphing. Prerequisite: MAT 088 or placement. Four lecture.

B. Course Goals: To increase a students’ mastery of introductory algebra skills including solving equations, inequalities and graphing in one and two dimensions. Students will develop a proficiency and understanding of algebraic expressions and equations, and inequalities to enable them to enter intermediate algebra.

C. Course Outcomes: Upon completion of course, student will be able to:
   1. perform the four basic operations, absolute values, and exponents on rational numbers;
   2. simplify algebraic expressions;
   3. solve linear equations;
   4. verify solutions of algebraic equations;
   5. use interval notation to describe solutions of inequalities;
   6. solve and graph linear inequalities;
   7. graph linear equations in two dimensions;
   8. solve systems of equations graphically and algebraically;
   9. simplify exponential expressions;
   10. perform basic operations on polynomial expressions;
   11. factor polynomials by removing the greatest common factor;
   12. factor polynomials by grouping;
   13. factor trinomials by using various methods including special forms;
   14. solve quadratic equations by factoring;
   15. and solve application problems.

D. Course Assessment will include a comprehensive final exam.

E. Course Content will include:
   1. algebraic expressions:
      a. simplifying;
      b. evaluating;
   2. solving linear equations;
   3. solving and graphing linear inequalities on the number line;
   4. solving compound inequalities;
   5. solving absolute value equations;
6. the Cartesian coordinate system:
a. graphing linear equations;
b. slope of lines;
c. finding equations of lines;
7. solving systems of two linear equations;
8. addition, subtraction, multiplication, and division of polynomials;
9. factoring polynomials:
   a. greatest common factor;
   b. grouping;
   c. trinomials;
   d. special forms;
10. solving factorable quadratic equations with the Zero-Product Property;
11. and applications.