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.