

## Course Objective Development Form

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**Course Number:** MAT 1033

**Course Title:** Intermediate Algebra

**Initiator(s) of Course Objectives:** Bob Hervey

**Date:** 1/2002

**Signature(s):**

**Cluster 3**

**Date of Cluster Approval:** 1/6/2005

**Typed Name and Signature of Cluster Chair:** Greg Henderson

**Course Objectives:**

1. FACTORING
  - a. Factor quadratic expressions
  - b. Factor sums and differences of cubes.
  - c. Factor polynomials with common factors
2. ALGEBRAIC FRACTIONS & RATIONAL EXPONENTS
  - a. Determine values for which an algebraic fraction is undefined
  - b. Perform operations and express in simplest form.
  - c. Solve rational equations.
3. RADICALS & RATIONAL EXPONENTS
  - a. Express in simplest radical or rational exponent form.
  - b. Perform operations.
  - c. Rationalize denominators.
  - d. Solve rational equations.
4. COMPLEX NUMBERS
  - a. Define complex numbers.
  - b. Perform operations.

5. QUADRATIC EQUATIONS

- a. Solve by factoring, taking roots, completing the square, quadratic formula.
- b. Use the discriminant to determine the nature of the roots.

6. LINEAR EQUATIONS & INEQUALITIES IN 2 VARIABLES

- a. Graph the solution sets.
- b. Find the equation given various criteria.
- c. Express the equation in various forms.

7. SYSTEMS OF LINEAR EQUATIONS AND INEQUALITIES IN 2 VARIABLES

- a. Solve systems of equations graphically and algebraically.
- b. Solve systems of inequalities graphically.

8. INTRODUCTION TO FUNCTIONS

- a. Define function.
- b. Express functions numerically, symbolically, and graphically.
- c. Find domain, range, and function values.

9. ABSOLUTE VALUE EQUATIONS & INEQUALITIES IN 1 VARIABLE

- a. Solve and express solutions graphically and using interval notation.

10. APPLICATIONS OF THE ABOVE TOPICS