

Miami Dade Community College
MAT 0024
College Preparatory Algebra

Course Description: This course introduces students to the basic concepts of algebra. Students will simplify or perform operations on signed numbers, radicals, polynomials, **and expressions containing exponents**; factor polynomials; solve and graph linear equations and inequalities in one variable; **solve related applications**.

Prerequisites: Satisfactory Completion of MAT 0002 or placement test scores.

Credits: 4 (6 contact hours lecture/lab)

Course Competencies:

Competency 1:

The Student will demonstrate knowledge of real numbers by:

- a. Performing operations of addition, subtraction, multiplication, and division on real numbers.
- b. Applying the order of operations agreement on real numbers.
- c. Recognizing and applying the commutative, associative, identity, inverse, and distributive properties of real numbers.
- d. Evaluating and interpreting absolute value

Competency 2:

The Student will demonstrate knowledge of algebraic expressions by:

- a. Evaluating algebraic expressions.
- b. Simplifying expressions.

Competency 3:

The Student will demonstrate knowledge of polynomial by:

- a. Using properties of exponents to simplify exponential expressions.
- b. Performing the operations of addition, subtraction, multiplication on polynomials.
- c. Dividing a polynomial by a monomial.

Competency 4:

The Student will demonstrate knowledge of scientific notation by:

- a. Converting decimal notation to scientific notation and scientific notation to decimal notation.
- b. Multiplying and dividing numbers that are in scientific notation.

Competency 5:

The Student will demonstrate knowledge of linear equations by:

- a. Solving linear equations in one variable.
- b. Solving linear equations with one variable that have no solution.
- c. Solving linear equations with one variable that have an infinite number of solutions.
- d. Solving applications involving linear equations including proportions.
- e. Solving literal equations.