

## Syllabus: MA 103 College Algebra

- Objectives:**
1. To give the student a firm foundation in the fundamentals of algebra.
  2. To prepare the student for entry into MA 110 Precalculus

**Emphases:** Skill in manipulating algebraic expressions (polynomials, rational expressions, radical expressions), in solving equations and inequalities; basic concepts and computational skills in exponential and logarithmic functions, and in probability.

**Text:** **Algebra for College Students** by Gustafson and Frisk. Brooks/Cole Publishing Company

- Topics:**
1. Graphs, equations of lines, **basic concepts** of functions: rectangular coordinate system, graphs, slopes, equations of lines.
  2. Linear equations and inequalities: systems of equations; matrices, determinants; linear equalities in two variables, linear programming.
  3. Polynomials: arithmetic of polynomials; synthetic division, remainder theorem; factoring.
  4. Rational expressions: adding, subtracting, solving equations.
  5. Rational exponents, radicals.
  6. Quadratic equations and inequalities.
  7. Exponential and logarithmic functions.
  8. Selected topics: Binomial theorem; sigma notation; beginning probability.