

# MATH092C : Introduction to Algebra

A stand-alone preparatory course. Topics include expressions, linear equations and inequalities, linear functions, slope, word problems, systems of linear equations, radicals, polynomials and factoring techniques, rational expressions, quadratic equations, and exponents. Calculator use is allowed in the course. The institutional credits awarded for this course do not count toward graduation requirements but are calculated into GPA. Completion of this course requires a grade of C or higher to advance to a college-level mathematics course. For institutional credit only.

**Credits** 4

**Lab/Practicum/Clinical Hours** 0

**Lecture Hours** 4

## **Prerequisites**

*Students are required to pass prerequisite courses with a grade of C or higher. Exceptions apply; please consult your department chair.*

Permission of academic advisor

## **Learning Outcomes**

- Apply the properties of real numbers to simplify algebraic expressions.
- Solve algebraic equations in one variable, including formulas and proportions.
- Solve algebraic inequalities in one variable, including single and compound inequalities, and show solutions in interval notation and on a number line.
- Graph points and lines on a coordinate plane.
- Write linear equations from information given about the line.
- Graph and define functions using function notation.
- Solve and graph systems of linear equations, including applications of systems.
- Apply the rules of exponents in simplifying algebraic expressions.
- Perform operations on polynomials.
- Demonstrate the techniques of factoring polynomials.
- Perform operations on rational expressions and express in simplest terms.
- Perform operations on radical expressions and express in simplest terms.
- Solve and graph quadratic equations, including applications of quadratic equations.