

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: MTH 5

Credits: 5

Course Title: Algebra Revisited

Course Description (including lecture hours, lab hours, total contacts)

Reviews topics in Algebra II necessary for entry into occupational/technical or transfer mathematics courses. Credits not applicable toward graduation. Lecture 5 hours per week.

General Course Purpose

Review of mathematics necessary to prepare students for higher level mathematics courses such as MTH 163 or MTH 166.

Course Prerequisites/Corequisites (*Entry-level competencies required for enrollment*)

Prerequisites: a placement recommendation for MTH 5 and Algebra I and Algebra II or equivalent.

Course Objectives (Each item should complete the following sentence.)

Upon completing the course, the student will be able to:

- a. Demonstrate an understanding of relations and functions and graph them in the coordinate plane using a graphing calculator.
- b. Recognize, graph and solve given linear equations and inequalities, both with a single variable and with two variables.
- c. Demonstrate an understanding of properties of lines to find and apply knowledge of slopes, graph and find equations of lines, and write equations in the required form when -given sufficient information.
- d. Demonstrate an understanding of rules Governing exponents, use of zero and negative exponents.
- e. Perform arithmetic operations on polynomials, factor polynomials, and solve equations involving polynomials.
- f. Find the domain of rational functions, simplify rational expressions, and solve rational equations. Perform arithmetic operations on complex number.
- g. Simplify radical expressions, and solve radical equations.
- h. Solve quadratic equations and sketch the graph of quadratic functions.

Major Topics to be Included

- a. Coordinate Plane and Functions
- b. Linear Equations and Inequalities
- c. Properties of Lines
- d. Exponents
- e. Factoring
- f. Rational Expressions
- g. Radical Expressions
- h. Quadratic Equations

Effective Date of Course Content Summary (Month, Date Year): Fall 2007