J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: MTH 115   **Credits:** 3

Course Title: Technical Mathematics I

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

Presents algebra through exponential and logarithmic functions, trigonometry, vectors, analytic geometry, and complex numbers. Part I of II. Prerequisites: a placement recommendation for MTH 115 and Algebra I, Geometry, and Algebra II, or equivalent. Lecture 3 hours per week.

General Course Purpose

MTH 115 is designed for technical mathematics students and not designed for transfer.

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

The prerequisites for this course include Algebra I, Algebra II, and Geometry, or equivalent. A placement recommendation for MTH 115 is also required.

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

Upon completing the course, the student will be able to:
a. Recognize a function, identify its properties, and sketch its graph.
b. Evaluate trigonometric functions and solve right triangles.
c. Solve systems of linear equations.
d. Factor polynomials; perform operations with algebraic fractions, and solving equations involving algebraic fractions.
e. Solve quadratic equations.
f. Perform operations involving fractional exponents and radical expressions.
g. Define, graph, and apply exponential and logarithmic functions.

Major Topics to be Included

a. Basic Algebraic Operations (A review)
b. Functions and Graphs
c. The Trigonometric Functions
d. Systems of Linear Equations; Determinants
e. Factoring and Fractions
f. Quadratic Equations
g. Exponents and Radicals
h. Exponential and Logarithmic Functions

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