

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

Course Prefix and Number: MTH 120

Credits: 3

Course Title: Introduction to Mathematics

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

Introduces number systems, logic, basic algebra, and descriptive statistics. Lecture 3 hours per week.

General Course Purpose

This course is intended for occupational/technical programs to introduce students to basic areas of mathematics.

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

Prerequisites: placement recommendation for MTH 120 and MTH 2 or equivalent.

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

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

- a. Use symbolic logic to write word statements.
- b. Construct truth tables for compound statements.
- c. Determine whether an argument is valid.
- d. Compute and use measures of central tendency to describe a data set.
- e. Compute and use measures of dispersion to describe a data set.
- f. Construct frequency tables and histograms for a given set of data.
- g. Use the Empirical Rule
- h. Convert decimal numbers to binary, octal, or hexadecimal equivalents.
- i. Convert binary, octal, or hexadecimal numbers to decimal equivalents.
- j. Perform addition, subtraction, and multiplication of binary numbers.
- k. Convert binary numbers to octal or hexadecimal equivalents.
- l. Convert octal or hexadecimal numbers to binary equivalents.
- m. Solve linear equations and inequalities in one variable.
- n. Graph linear equations and inequalities in two variables.
- o. Understand the slope of a line.
- p. Find markups given certain information.
- q. Find markdowns given certain information.
- r. Compute simple and compound interest.
- s. Find rates, charges, and monthly payments for installment plans.
- t. Find monthly payments for different types of mortgages.

Major Topics to be Included

- a. Logic
- b. Systems of Numeration
- c. Introduction to Algebra
- d. Consumer Mathematics
- e. Statistics

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