

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

Course Prefix and Number: MTE 4

Credits: 1

Course Title: First Degree Equations and Inequalities in One Variable

Course Description: Includes solving first degree equations and inequalities containing one variable and using them to solve application problems. Emphasizes applications and problem solving. Credits not applicable toward graduation. Prerequisite: Placement recommendation or MTE 3. Lecture 4 hours per week for $\frac{1}{4}$ semester.

General Course Purpose: This course is designed to give the student understanding and practice in solving first degree equations and inequalities (with emphasis on the steps involved) and their applications.

Course Prerequisites and Co-requisites:

Prerequisite: Placement recommendation or MTE 3

Student Learning Outcomes:

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

- a. Solve first degree equations in one variable using the Addition or Multiplication Properties of Equality;
- b. Solve first degree equations in one variable using the Addition and Multiplication Properties of Equality;
- c. Solve first degree equations in one variable that contain parentheses;
- d. Solve first degree equations in one variable with the variable on both sides of the equal sign;
- e. Solve first degree equations in one variable and identify the solution to an equation as finite, the empty set, or all real numbers;
- f. Solve a formula or equation for one of its variables using the Addition and/or Multiplication Property of Equality;
- g. Solve first degree absolute value equations containing a single absolute value;
- h. Solve first degree inequalities in one variable stating the solution using inequality notation and interval notation;
- i. Solve first degree inequalities in one variable and graph the solution on a real number line; and
- j. Solve an application using a single first degree equation or inequality.

Major Topics to Be Included:

- a. First Degree Equations in One Variable
- b. Formulas
- c. First Degree Absolute Value Equations
- d. First Degree Inequalities
- e. Applications of First Degree Equations and Inequalities

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