NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
MTE 4 – FIRST DEGREE EQUATIONS AND INEQUALITIES IN ONE VARIABLE (1 CR.)

Course Description

Includes solving first degree equations and inequalities containing one variable, and using them to solve application problems. Emphasizes applications and problem solving. Credit is not applicable toward graduation. Lecture 1 hour per week.

General Course Purpose

The purpose of this course is to develop competency necessary to succeed in 100-level math courses in solving first degree equations and inequalities containing one variable and using them in applications.

Course Prerequisites/Co-requisites

Prerequisite: MTE 3 or qualifying placement score

Course Objectives

Upon completing the course, students will be able to:

4.1   Solve first degree equations in one variable.
    4.1.1   Solve first degree equations in one variable using the Addition Property of Equality.
    4.1.2   Solve first degree equations in one variable using the Multiplication Property of Equality.
    4.1.3   Solve first degree equations in one variable using the Addition Property of Equality and the Multiplication Property of Equality.
    4.1.4   Solve first degree equations in one variable that contain parentheses.
    4.1.5   Solve first degree equations in one variable with the variable on both sides of the equal sign.
    4.1.6   Solve first degree equations in one variable and identify the solution to an equation as finite, the empty set or all real numbers.
4.2   Solve a formula or equation for one of its variables.
    4.2.1   Solve a formula or equation for one of its variables using the Addition Property of Equality.
    4.2.2   Solve a formula or equation for one of its variables using the Multiplication Property of Equality.
    4.2.3   Solve a formula or equation for one of its variables using the Addition Property of Equality and the Multiplication Property of Equality.
4.3   Solve first degree absolute value equations containing a single absolute value.
4.4   Solve first degree inequalities in one variable.
    4.4.1   Solve first degree inequalities in one variable stating the solution using inequality notation.
    4.4.2   Solve first degree inequalities in one variable stating the solution using interval notation.
    4.4.3   Solve first degree inequalities in one variable and graph the solution on a real number line.
4.5   Solve application problems using a single first degree equation or inequality.

Major Topics to be Included

4.1 Solving first degree equations in one variable.
4.2 Solving formulas and equations for one variable.
4.3 Solving first degree absolute value equations containing a single absolute value.
4.4 Solving first degree inequalities in one variable.
4.5 Solving application problems using a single first degree equation or inequality.