

**Miami Dade Community College**  
**MAT 1033**  
**Intermediate Algebra**

**Course Description:** Through this course students develop various concepts of Algebra. Students will solve linear, quadratic, rational, and radical equations; graph linear equations and inequalities in one variable; graph linear equations in two variables; solve and graph systems of linear equations and inequalities in two variables; simplify rational expressions; simplify expressions containing rational exponents; simplify complex numbers; solve related applications.

**Prerequisites:** MAT 0024 or MAT 0020 with a grade of S or appropriate placement test score.

**Credits:** 3

**Course Competencies:**

**Competency 1:**

**The student will demonstrate knowledge of the slope of a line by:**

- a. Determining the slope of a line given two points that lie on the line.
- b. Determining the slope and intercept(s) of a line given its equation.
- c. Determining the slope of a line from a graph.
- d. Finding the slope of a line that is parallel to a given line.
- e. Finding the slope of a line that is perpendicular to a given line.

**Competency 2:**

**The student will demonstrate knowledge of linear equations and inequalities in two variables by:**

- a. Solving literal equations.
- b. Finding an equation of a line given two points.
- c. Finding an equation of a line given a point on the line and information about the slope of the line.
- d. Writing an equation of a line in standard form.
- e. Writing an equation of a line in slope-intercept form.
- f. Graphing linear equations in two variables using the slope and y-intercept of the line.
- g. Graphing linear inequalities in two variables.