

PUBLIC SYLLABUS

Mathematics Department

COURSE and NUMBER: MATH 1075 ~ Intermediate Algebra

CREDITS: 5 CLASS HOURS PER WEEK: 5

PREREQUISITE: MATH 1050; minimum grade of “C”, or completion of MATH 1099 (MATH 1050 module), or placement equivalent.

DESCRIPTION OF THE COURSE:

Second of a two-semester sequence. Includes the study of rational expression arithmetic and simplification and complex fraction simplification; operations on radical expressions and expressions containing rational exponents; the complex number system; solving absolute value, rational, radical, and quadratic equations; solving absolute value and polynomial inequalities in one variable; solving compound inequalities in one variable; graphs, relations, and functions including quadratic functions; the distance and midpoint formulas and circles. Includes applications and activities to build skills in problem solving.

LEARNING OUTCOMES:

1. Simplify rational expressions, solve rational equations, and use rational equations to solve problems
2. Identify, evaluate, graph, and interpret functions
3. Solve compound inequalities; solve absolute value equations and inequalities
4. Simplify radical expressions and solve radical equations
5. Perform operations on expressions containing complex numbers; solve quadratic equations and inequalities and use quadratic equations to solve problems
6. Graph and analyze quadratic functions
7. Use the distance, midpoint, and circle formulas

COURSE MATERIALS REQUIRED:

- Access to ALEKS 360 is included automatically when students enroll in this course.
- A graphing calculator

UNITS OF INSTRUCTION:

- Rational Expressions and Equations (Sections 7.1 – 7.7, 8.5)
- Graphs, Relations, and Functions (Sections 8.1 – 8.3, 3.6)
- Compound and Quadratic Inequalities; Absolute Value Equations and Inequalities (Sections 9.1 – 9.4)
- Radical Expressions, Functions, and Equations (Sections 10.1 – 10.7)
- Complex Numbers; Quadratic Equations (Sections 10.8, 11.1 – 11.3)

- Quadratic Functions (Sections 11.4, 11.5)
- Distance and Midpoint Formulas; Circles (Section 13.1)

GENERAL INSTRUCTIONAL METHODS:

Instructional methods may include face-to-face or video lectures or demonstration, face-to-face or virtual discussion, individual or group activities including the use of visual aids, graphing calculators, computers and/or other technologies. Students may be expected to participate in these activities during class and/or outside of class. Instructors may require class participation, collaborative learning, and peer review.

A NOTE ON PROCTORED TESTING

The CSCC Mathematics Department requires proctored testing in all courses, in all modalities. All assessments will be taken on campus or at another approved testing center, by appointment.