

Prerequisites: MAT 070

Class: 4 hours per week = 2 Lecture + 2 Lab

Corequisites: None

Credit: 3 semester hours

COURSE DESCRIPTION

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include simplification and evaluation of algebraic functions, and solving of algebraic equations; complex numbers; right triangle trigonometry; systems of equations. Upon completion, students should be able to demonstrate an understanding of the use of mathematics and technology to solve problems and analyze and communicate results.

COURSE COMPETENCIES

The student will demonstrate the ability to properly develop the following:

1. Simplify expressions, evaluate functions, and solve algebraic equations.
2. Solve quadratic, rational, radical equations.
3. Analyze and graph linear functions using the slope and intercepts.
4. Evaluate expressions involving the trigonometric functions and their inverses.
5. Solve right triangles and applications that result in right triangles.
6. Solve problems involving complex numbers and their operations.
7. Solve systems of equations both algebraically and graphically.
8. Organize, analyze, and interpret results of calculations or experimental data in correct units, using technology where appropriate.
9. Communicate procedures and results in a clear and concise form.
10. Work cooperatively in groups to accomplish the above competencies.