MONROE COUNTY COMMUNITY COLLEGE
enriching lives

Outline of Instruction

Division:	Science/Mathematics	**Area:**	Mathematics
Course Number:	MATH 124	**Course Name:**	Technical Mathematics II
Prerequisite:	MATH 121		
Corequisite:	NONE		
Hours Required:	**Class:** 60	**Lab:** 0	**Credits:** 4 (four)

Course Description/Purpose

This course is designed to provide advanced mathematics preparation for students in technology programs. It emphasizes concepts and applications of algebra, geometry and trigonometry to technical areas. The course includes geometry, graphs and charts, functions and graphs, trigonometry, vectors and polar coordinates, systems of equations, logarithms and statistics.

Major Units

- Geometry
- Functions and Graphs
- Right Triangles
- Vectors and Polar Coordinates
- Systems of Two Equations
- Systems of Three Equations
- Powers, Roots, and Logarithms
- Graphs and Charts
- Statistics

Educational/Course Outcomes

Student learning will be assessed by a variety of methods, including, but not limited to, quizzes and tests, journals, essays, papers, projects, laboratory/clinical exercises and examinations, presentations, simulations, portfolios, homework assignments, and instructor observations.

Cognitive Each student will be expected to *Identify/Recognize*. . .

- common statistical tests to draw conclusions about relationships between numerical data;

Performance Each student will be expected to *Demonstrate/Practice*. . .

- applying basic geometry relationships to the calculation perimeters, areas, volumes, and angles of common geometric figures and solids;
- using the xy-coordinate system to graph linear functions and determine the slopes and intercepts of the graphs;
- applying the basic trigonometric relationships to solve for angles or sides of right triangles;
- resolving vectors into their right-angle components and find the magnitude and direction of the resultant two vectors;
- interconverting the coordinates of a point on a graph between rectangular and polar forms;

Performance Each student will be expected to *Demonstrate/Practice*. . . (continued)

- solving two- and three-variable systems of linear equations by substitution or determinant methods;
- evaluating formulas containing exponential or logarithmic terms;
- analyzing and organizing linear and logarithmic data and representing it in an appropriate graphic form;
- extracting data from graphical representations;
- using common statistical measures to summarize numerical data.