Course Prefix and Number: MTH 115  Credits: 3

Course Title: Technical Mathematics I

Course Description: Presents algebra through exponential and logarithmic functions, trigonometry, vectors, analytic geometry, and complex numbers. Part I of II. Prerequisites: a placement recommendation for MTH 115 and Algebra I, Geometry, and Algebra II, or equivalent. Lecture 3 hours per week.

General Course Purpose: MTH 115 is designed for technical mathematics students and not designed for transfer.

Course Prerequisites and Co-requisites:
Prerequisites: The prerequisites for this course include Algebra I, Algebra II, and Geometry, or equivalent. A placement recommendation for MTH 115 is also required.

Student Learning Outcomes:
Upon completing the course, the student will be able to
a. Recognize a function, identify its properties, and sketch its graph;
b. Evaluate trigonometric functions and solve right triangles;
c. Solve systems of linear equations;
d. Factor polynomials, perform operations with algebraic fractions, and solve equations involving algebraic fractions;
e. Solve quadratic equations;
f. Perform operations involving fractional exponents and radical expressions; and
g. Define, graph, and apply exponential and logarithmic functions.

Major Topics to Be Included:
a. Basic algebraic operations (a review)
b. Functions and graphs
c. The trigonometric functions
d. Systems of linear equations; determinants
e. Factoring and fractions
f. Quadratic equations
g. Exponents and radicals
h. Exponential and logarithmic functions

Date Created/Updated (Month, Day, and Year): Fall 2007