

Course Number: **Math 111** Au, Sp

Course Name: **Technical Mathematics I**

Credit Hours: **4 cr**

Prerequisites: **Math 103 with a grade of “C” or better, or placement by the ASSET or COMPASS test.**

COURSE DESCRIPTION: A brief review of scientific notation and other algebraic concepts; dimensional analysis; significant digits; introduction to complex numbers; solutions to quadratic equations and applications of the quadratic function; solving formulas; ratio and proportion; direct and inverse variation; algebraic functions and rectangular coordinates; solutions to 2 X 2 linear systems; linear interpolation; right triangle trigonometry. Lab work with a graphing calculator and Microsoft Excel will be included. Meets degree requirement for Electronic Engineering, Mechanical Engineering, Computer Electronics, Quality Assurance, Electro-Mechanical, Welding Certification, and Aviation Technologies.

GOALS AND/OR OBJECTIVES: An understanding of elementary algebra is assumed. The student will be able to: (1) manipulate and/or solve equations and formulas; (2) solve variation problems; (3) graph functions; (4) solve systems of linear equations; and (5) solve right triangle problems

TEXTBOOK & SPECIAL COURSE REQUIREMENTS:

Technical Mathematics, 2nd Edition, Dale Ewen, Joan Gary, and James Trefzger, Pearson Prentice Hall 2005 (ISBN#0-13-048810-0)

A **TI- 83 or TI-84** graphing calculator is **required**.

INSTRUCTIONAL METHODS: Classroom lecture and discussion, exploratory labs, and usage of the graphing calculator.

UNITS OF INSTRUCTION: It is assumed the student is familiar with the concepts in sections 1.1-