

Course Number: **Math 112** Wi, Su

Course Name: **Technical Mathematics II**

Credit hours : **4cr.**

Prerequisites: **Math 111 with a grade of “C” or better, or placement by the ASSET or COMPASS test.**

COURSE DESCRIPTION: Periodic functions with an emphasis on graphing the sine and cosine curves; exponential and logarithmic functions; finding products, quotients and roots of complex numbers in rectangular, polar, and exponential form; vectors and oblique triangles using the Law of Sines and Law of Cosines; sequences, series, and summation notation; solving radical equations and equations in quadratic form; the equations of lines and circles and parabolas as conic sections. Change of bases, logic, and Boolean Algebra are introduced. Lab work with the TI-83 graphing calculator will be included. Not open to students with credit for Math 150. Meets degree requirement for Electronics Engineering, Mechanical Engineering, Quality Assurance, and Electro-Mechanical Technologies.

GOALS AND/OR OBJECTIVES: The student will be able to: (1) sketch sine and cosine curves; (2) solve exponential and logarithmic equations; (3) Solve radical and quadratic form equations; (4) determine resultant vectors; (5) solve oblique triangle problems using the Laws of Sines and Cosines; (6) compute terms and sums of finite and infinite series; (7) Analyze and graph the equations of lines, circles and parabolas; (8) operate with complex numbers in polar and exponential form; (9) change bases in number systems; (10) create truth tables for logic 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)