Alexandria Technical and Community College

MATH 1451: Technical Math

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 3
Lab Hours/Week: *.*
OJT Hours/Week: *.*

Prerequisites:
This course requires any of these six prerequisites
  MATH 0421 - Bridge to College Algebra (Minimum grade: 2.0 GPA Equivalent and Number of Years Valid: 5)
  MATH 0431 - Intermediate Algebra (Minimum grade: 2.0 GPA Equivalent and Number of Years Valid: 5)
    Algebra College Level
    ATCC Fund of Physics
    ATCC Calculus-Level Placement
    A score of 2 on test Algebra

Corequisites: None
MnTC Goals: None

This course teaches math concepts used in trade and industry formulas by engine technicians. Emphasis is on decimal and fractional operations, simplifying values, practical applications of ratios and percentages, measurement conversion, geometric relationships, and use of many industry formulas.
Prerequisite(s): College level math score on a placement test or a minimum grade of "C" in MATH 0322 College Prep Tech Math.

B. COURSE EFFECTIVE DATES:  07/01/1999 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Applying formulas to hydraulic systems
2. Applying geometric formulas such as perimeter, area, and volume
3. Calculating accurately in decimal and fraction form
4. Converting measurements between systems
5. Determining engine measurements
6. Problem solving using ratios and proportions
7. Problem solving using transmission and gear ratios
8. Solving crankshaft and camshaft applications
9. Using percentages in business and technical applications

D. LEARNING OUTCOMES (General)

1. The learner will select and utilize the appropriate industry formula to solve applied technical problems.
2. The learner will select and utilize the appropriate industry formula to solve applied technical problems.
3. The learner will use problem solving techniques to solve applied technical problems, providing the answer in simplest form.
E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted