

COMMON COURSE OUTLINE: Course discipline/number/title: MATH 1015: Applied Technical Math

A. CATALOG DESCRIPTION

1. Credits: 3
2. Hours/Week: 4 **This is a 3 credit class with 4 contact hours. It is a 2 Lecture/1Lab (2 hours /week)**
3. Prerequisites (Course discipline/number): None
4. Co-requisites (Course discipline/number): None
5. MnTC Goals (if any): NA

This course covers the basic arithmetic skills of fractions, decimals, percents and ratio/proportion. In addition, applied geometry, measurement, basic statistical skills, basic algebraic expressions and linear equations, and basic right triangle trigonometry are presented. Emphasis is on problem solving with specific application packets designed to interface with the student's core program. Cooperative learning lab activities and technology are used to support learning.

B. DATE LAST REVISED (Month, year): February, 2008

C. OUTLINE OF MAJOR CONTENT AREAS:

1. Operations with: Fractions, decimals, ratios and proportions, percents, and signed numbers
2. US and Metric Measurement Systems
3. Basic geometry of lines, angles, plane figures, and solids, including the concepts of perimeter, area, and volume
4. Basic stoical concepts of reading and constructing graphs, and stoical measurements on mean, median, mode, range and standard deviation.
5. Basic algebraic expressions and linear equations
6. Basic right triangle trigonometry
7. Application problems utilizing content areas 1-6

D. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Use fractions, decimals, ratios, proportions, percents, US and metric measurements, and signed numbers to solve application problems.
2. Recognize geometrical principles of lines, angles, plane figures and solids.
3. Calculate perimeter, area, and volume in application problems
4. Read, and construct statistical graphs.
5. Calculate mean, median, mode, range, and standard deviation.
6. Simplify basic algebraic expressions.
7. Solve 1 and 2 algebraic linear equations.
8. Use basic right triangle trigonometry to solve application problems.
9. Operate a scientific calculator.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:

1. Objective and short answer tests
2. Group work

G. SPECIAL INFORMATION (if any): None