

**Course Objectives/Course Outline
Spokane Community College**

Course Title: Applied Technical Math 1
Prefix and Course Number: CAD 111

Course Learning Outcomes:

By the end of this course, a student should be able to:

- By the end of this course, a student should:
- Solve problems with fractions, decimals and percents
- Work with and convert English and Metric units
- Solve linear and quadratic equations
- Solve ratio and proportion problems
- Solve density and specific gravity problems
- Learn basic properties of angles and triangles

Course Outline:

I. Review

- a. Whole Numbers
- b. Common Fractions
- c. Decimal Fractions
- d. Percents

II. Measurement Units

- a. Linear Units
 1. English
 2. Metric
- b. Area Units
 1. English
 2. Metric
- c. Volume Units
 1. English
 2. Metric
- d. Practical Problems.

III. Basic Concepts of Algebra

- a. Introduction to Algebra
 1. Symbols
 2. Algebraic expressions
 3. Evaluation of algebraic expressions and formulas
- b. Signed Numbers
 1. Number scale
 2. Representation of negative and positive numbers
 3. Addition, subtraction, multiplication, and division of signed numbers
 4. Powers and roots of signed numbers
 5. Scientific Notation
 6. Combined operations
- c. Basic Algebraic Operations
 1. Definitions
 2. Addition, subtraction, multiplication, and division
 3. Powers and Roots
 4. Combined operations

- d. Simple Equations
 - 1. Principals of equality
 - 2. Solutions of simple equations
 - 3. Setting up equations
- e. Complex Equations
 - 1. Combined operations
 - 2. Substitution of values
 - 3. Rearranging formulas
 - 4. Setting up equations
 - 5. Quadratic equations
- f. Ratio and Proportion
 - 1. Direct proportions
 - 2. Inverse proportions
- g. Density and specific gravity

IV. Geometry

- a. Introduction to geometry
- b. Triangles.