

Course Objectives/Course Outline
Spokane Community College

Course Title: Advanced Architectural Math

Prefix and Course Number: ARCHT 124

Course Learning Outcomes:

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

- Demonstrate mastery of basic math concepts necessary to solve architectural-related problems common to drafters in the building design industry.

Course Outline:

- I. Whole Numbers
 - A. Signed Numbers
 - B. Exponents and Square Roots
 - C. Powers and Roots using a Calculator
- II. Fractions
 - A. Arithmetic Manipulation
 - B. Plotting and Ordering
- III. Decimals, Proportions, and Percent
 - A. Place Value, Rounding, Ordering
 - B. Conversion Between Fractions and Decimals
 - C. Ratios, Rates, and Proportions
- IV. Measurement and Conversion
 - A. Imperial and Metric
 - B. Unit Conversion
- V. Geometry
 - A. Polygons and Quadrilaterals
 - B. Area and Volume of Complex Shapes
- VI. Data Analysis and Statistics
- VII. Algebraic Expressions and Equations
 - A. Evaluating expression
 - B. Distributive Property
 - C. Combining Like Terms
 - D. Writing variable Expression
 - E. Additive and Multiplicative Properties of Equality
 - F. Solving Equations with Multiple Steps
 1. Integers
 2. Signed Fractions
 3. Signed Decimals
 4. Linear Equations with multiple occurrences of variable
 - G. Applications of Linear Equations – Word Problems