

MAT 062 Intro to Workplace Mathematics

MAT 062 Course Objectives

Upon completion of this course, the student can:

1. Convert between units of measurement.
2. Use significant digits to show the accuracy and precision of a measurement.
3. Use and interpret scientific notation.
4. Simplify algebraic expressions using the properties of algebra, including the distributive law and combining like terms.
5. Solve linear equations in one variable.
6. Translate verbal statements into algebraic expressions.
7. Solve literal equations for a given variable.
8. Solve variation problems with percentages, ratios, and proportions.
9. Plot points on a rectangular coordinate system.
10. Graph lines from their equation.
11. Find the intercepts of a line from the graph or equation.
12. Calculate the slope of a line from the graph, equation, or two given points.
13. Interpret slope as a rate of change in applications.
14. Simplify algebraic expressions using the rules of exponents.
15. Use technology appropriately to solve application problems.
16. Solve applied problems using the above competencies within appropriate contexts.

MAT 062 Course Outline

- I. Studying Mathematics
 - A. Learning Styles
 - B. Study Skills
 - C. Test Taking
 - D. Real Number Arithmetic Skills
 - E. Effective Calculator Use
 - F. Calculation with Basic Geometric Formulas
- II. Measurement
 - A. Unit Conversion
 - B. Significant Digits
 - C. Scientific Notation
 - D. Accuracy and Precision of Measurements
- III. Formulas
 - A. Introduction to Formulas
 - B. Writing Formulas from Verbal Information
 - C. Formulas and Applications
- IV. Properties of Algebra
 - A. Basic Properties of Algebra
 - B. Simplifying Algebraic Expressions
 - C. Properties of Equality

- V. Equations
 - A. Interpreting Equations
 - B. Guidelines for Solving Equations
 - C. Solving Linear Equations
 - D. Solving Formulas for a Variable
- VI. Ratios, Proportions, and Variation
 - A. Ratios
 - B. Proportions
 - C. Percent
 - D. Direct Variation
 - E. Inverse Variation
 - F. Joint Variation
- VII. Graphing
 - A. Plotting Points
 - B. Graphing Lines
 - C. Slope
 - D. Rates of Change
 - E. Intercepts of a Line
- VIII. Exponents
 - A. Algebraic Rules of Exponents
 - B. Integer Exponents
 - C. Simplifying Algebraic Expressions with Exponents