Student Learning Outcomes for Mathematics Courses

Department of Mathematics
College of the Canyons

Math 025 – Arithmetic
Demonstrate proficiency with arithmetic of whole numbers, fractions, decimals, and percents and use arithmetic to solve various applied problems.

Math 026 – Arithmetic – Computer-Assisted
Demonstrate proficiency with arithmetic of whole numbers, fractions, decimals, and percents and use arithmetic to solve various applied problems.

Math 058 – Algebra Preparation – Lecture
Use linear equations to analyze and solve elementary word problems.

Math 059 – Algebra Preparation – Computer Assisted
Use linear equations to analyze and solve elementary word problems.

Math 060 – Elementary Algebra
1. Analyze and interpret equations of lines.
2. Solve and analyze systems of linear equations.
3. Factor polynomials.

Math 070 – Intermediate Algebra
Solve radical, quadratic, logarithmic, and exponential equations.
Math 075 – Intermediate Algebra for Statistics

Construct, evaluate, and analyze mathematical models, specifically linear and exponential functions, to represent relationships in quantitative data.

Math 083 – Geometry

1. Solve a variety of problems by applying the definitions, postulates, and theorems of plane geometry.
2. Develop and write simple proofs of geometric theorems.

Math 102 – Trigonometry

Define the six trigonometric functions and analyze them through graphing, proving identities, and solving equations.

Math 103 – College Algebra

Analyze and graph polynomial, rational, logarithmic, and exponential functions.

Math 104 - Precalculus

1. Analyze and graph polynomial, rational, logarithmic, exponential and trigonometric functions.
2. Solve problems involving functions.

Math 111 – Finite Mathematics

Solve problems by applying the simplex method, principles of logic, and game theory.

Math 140 & Math 104 Honors – Introductory Statistics

Apply basic statistical procedures, including the collection, analysis, and reporting of data designed to test a research hypothesis, as well as to demonstrate the appropriate use of computer-based statistical software (Minitab).
Math 211 – Calculus I
Recognize, analyze, and solve problems using elementary derivatives and integrals.

Math 212 – Calculus II
1. Select appropriate advanced techniques of integration to solve problems involving algebraic and transcendental functions.
2. Apply appropriate tests for convergence/divergence of infinite sequences and series.

Math 213 – Calculus III
1. Calculate and apply the various types of derivatives and integrals in 2-space and 3-space.
2. Apply fundamental theorems to compute vector integrals.

Math 214 – Linear Algebra
1. Apply basic theorems, axioms, and definitions of general vector spaces to compose proofs of properties of finite dimensional vector spaces, inner product spaces, and linear transformations.
2. Compose and apply bases for various finite dimensional vector spaces.

Math 215 – Differential Equations
1. Apply a variety of techniques to solve differential equations with and without initial values and/or boundary values.
2. Apply differential equations to set up problems for the sciences and/or economics for solutions.

Math 240 – Mathematical Analysis for Business and Social Science
Solve problems related to business and social sciences using elementary derivatives and integrals.