SLO to ILO Alignment Reports

CAN - 00 - Institutional Learning Outcomes (ILOs)

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

There are no Results for this SLO

CAN ILO #2 - Creativity - Produce, combine, or synthesize ideas in creative ways within or across disciplines.

There are no Results for this SLO

CAN ILO #3 - Communication - Use language to effectively convey an idea or a set of facts, including the accurate use of source material and evidence according to institutional and discipline standards.

CAN Dept - Mathematics

CAN MATH 200 : Elem Probability & Statistics

Terminology: Define statistical terms.

CAN ILO #4 - Community - Understand and interpret various points of view that emerge from a diverse world of peoples and cultures.

There are no Results for this SLO

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN Dept - Mathematics

CAN MATH 110 : Elementary Algebra

Solve Linear Equations: 1. Solve linear algebraic equations and inequalities that model a given application.
a. Translate a statement into an appropriate one-variable linear equation or inequality.
b. Use appropriate strategies to find the solutions.
c. Model and solve word problems whose solutions require formulating one variable linear equations.

CAN MATH 110 : Elementary Algebra

Simplify Polynomials and Rational Expressions: 2. Simplify polynomials, and rational expressions.
a. Use appropriate techniques to multiply, divide, add, and subtract polynomials and rational expressions.
b. Simplify expressions with integer exponents.

CAN MATH 110 : Elementary Algebra

Graphing Lines: 3. Construct and analyze a linear graph in a Cartesian coordinate system.
a. Use different methods to graph a two-variable linear equation.
b. Interpret the graph.

CAN MATH 110 : Elementary Algebra

Applying and Solving Quadratic and Rational Equations: 4. Construct and solve quadratic equations to model a given application.
a. Apply factoring techniques to solve quadratic equations.
b. Verify that solutions comply with any constraints in the model.

CAN MATH 110 : Elementary Algebra

Systems of Equations: 5. Solve a two by two system of linear equations.
a. Identify the different types of systems and their graphical interpretations.
b. Use different methods to solve a system of two linear equations.

CAN MATH 120 : Intermediate Algebra

Using equations to model: 1: Write and solve linear, quadratic, exponential, and logarithmic equations and inequalities that model a given application.

CAN MATH 120 : Intermediate Algebra

Use and interpret function notation: Use and interpret function notation in algebraic, numerical, verbal, and graphical contexts.

CAN MATH 120 : Intermediate Algebra

Analyze and solve equations: Analyze and solve quadratic, exponential, and logarithmic equations.

CAN MATH 120 : Intermediate Algebra

Graph and analyze functions: Graph and analyze linear, quadratic, exponential, and logarithmic functions.

CAN MATH 125 : Elementary Finite Mathematics

Matrices: Solve a system of equations using matrices and row operations

CAN MATH 125 : Elementary Finite Mathematics

Simplex method: Use the simplex method to solve a standard maximization problem

CAN MATH 125 : Elementary Finite Mathematics

Financial: Use the simple interest, compound interest, future value, and present value formulas to solve financial problems

CAN MATH 125 : Elementary Finite Mathematics

Counting: Use counting methods to solve probability problems

CAN MATH 125 : Elementary Finite Mathematics

Probability: Find expected values of a random variable

CAN MATH 130 : Analytical Trigonometry

Six Trig functions: State and apply correctly the various definitions, values for key angles, and basic identities for the six trigonometric functions.

CAN MATH 130 : Analytical Trigonometry

Graphs: Produce and interpret graphs of the six trigonometric functions including transformations

CAN MATH 130 : Analytical Trigonometry

Trig equations: Use algebra and identities to solve trigonometric equations.

CAN MATH 130 : Analytical Trigonometry

Modeling periodic behavior: Use Trigonometric functions to model periodic behavior.

CAN MATH 130 : Analytical Trigonometry

Solve Triangles: Solve triangles using the definitions of the trigonometric functions, the law of sines, or the law of cosines.

CAN MATH 130 : Analytical Trigonometry

Identities: Use algebra and identities to derive or verify identities.

CAN MATH 200 : Elem Probability & Statistics

Central tendency and variation: Compute measures of central tendency and variation

CAN MATH 200 : Elem Probability & Statistics

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN MATH 200 : Elem Probability & Statistics

Plots: Plot histogram, scatter plot, box plot

CAN MATH 200 : Elem Probability & Statistics

Probability: Identify and apply the basic laws of probability such as complements, independence, and the role of probability in statistics

CAN MATH 200 : Elem Probability & Statistics

Hypothesis testing: Given an inferential statistics problem, identify the appropriate hypothesis test, perform the hypothesis test, and interpret the results.

CAN MATH 222 : Pre-Calculus Col Algebra/Trig

recognize functions: Recognize and classify a function from an equation, graph, or table

CAN MATH 222 : Pre-Calculus Col Algebra/Trig

transformations: Identify and apply transformations to functions and graphs, including vertical and horizontal shifts, reflections, and scaling.

CAN MATH 222 : Pre-Calculus Col Algebra/Trig

polynomial and rational functions: Describe the short run and long run behavior of polynomial and rational functions.

CAN MATH 241 : Applied Calculus I

Derivatives: Find and interpret the derivatives of polynomial, rational, piecewise defined, exponential, and logarithmic functions including those requiring the product, quotient, and chain rules

CAN MATH 241 : Applied Calculus I

Extrema and optimization: Find and apply relative extema, absolute extrema, and points of inflection.

CAN MATH 241 : Applied Calculus I

Related Rates: Solve related rates problems

CAN MATH 241 : Applied Calculus I

Antiderivatives: Find and apply the antiderivative of a function

CAN MATH 241 : Applied Calculus I

Integrals: Evaluate and apply definite integrals

CAN MATH 251 : Calculus/Analytic Geometry I

define/interprete derivatives: Interpret derivatives of functions from a numerical, graphical, and symbolic point of view.

CAN MATH 251 : Calculus/Analytic Geometry I

compute derivatives: Compute derivatives numerically, graphically, and symbolically for explicitly defined functions.

CAN MATH 251 : Calculus/Analytic Geometry I

apply derivatives: Apply derivatives to related rates and optimization problems.

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN MATH 252 : Calculus/Analytic Geometry II

integrals: Relate Integrals to anti-derivatives, limits of the Riemann sums, and areas under a curve.

CAN MATH 252 : Calculus/Analytic Geometry II

integration techniques: Use different techniques of integration to evaluate indefinite and definite integrals

CAN MATH 252 : Calculus/Analytic Geometry II

convergence of improper integrals: Analyze the convergence of sequences and series.

CAN MATH 252 : Calculus/Analytic Geometry II

convergence of sequences and series: Analyze the convergence sequences and series and evaluate them where possible.

CAN MATH 253 : Calculus/Analytic Geometry III

partial derivatives: Compute derivatives of multivariable functions and apply to geometry and
optimization problems.

CAN MATH 253 : Calculus/Analytic Geometry III

vectors-valued functions: Model motion using vectors valued functions.

CAN MATH 253 : Calculus/Analytic Geometry III

integrals: Identify and compute the different types of integrals.

CAN MATH 253 : Calculus/Analytic Geometry III

ftoc: Recognize and apply the fundamental theorem of calculus.

CAN MATH 270 : Linear Algebra

vectors: Correctly use vectors to solve a problem.

CAN MATH 270 : Linear Algebra

systems via matrices: Correctly solve a system of equations using matrices and Gaussian
elimination.

CAN MATH 270 : Linear Algebra

eigenvectors and eigenvalues: Correctly find the eigenvectors and eigenvalues of a matrix.

CAN MATH 275 : Ordinary Differential Equation

Classify Differential Equations: Correctly classify differential equations by degree (first-order, second-order, ...), linear or nonlinear, ordinary or partial, homogeneous or
driven.

CAN MATH 275 : Ordinary Differential Equation

Develop Models: Correctly develop a differential equation to model a particular situation.

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN MATH 275 : Ordinary Differential Equation

Validate Solutions: Correctly determine whether a given function is a solution to a differential equation.

CAN MATH 275 : Ordinary Differential Equation

Direction Fields: Correctly use a direction field to describe the behavior of the solution to a first-order differential equation given an initial condition.

CAN MATH 275 : Ordinary Differential Equation

Solve Differential Equations: Correctly determine whether a solution to a differential equation exists and whether or not it is unique.

CAN MATH 275 : Ordinary Differential Equation

Initial value problems: Use standard methods (integrating factors, undetermined coefficients, variation of parameters, Laplace Transforms, numerical methods, power series) to find a solution to an initial-value problem.

CAN MATH 811 : Pre-Algebra

operations: Simplify numeric expressions using mathematical operations using order of operations.

CAN MATH 811 : Pre-Algebra

fractions: Simplify numeric expressions involving fractions.

CAN MATH 811 : Pre-Algebra

proportions: Set up and solve proportion problems.

CAN MATH 811 : Pre-Algebra

percentages: Solve problems involving percentages.

CAN MATH 811 : Pre-Algebra

signed numbers: Perform mathematical operations using signed numbers.

CAN MATH 811 : Pre-Algebra

word problem: Translate verbal expressions into math and solve.

CAN MATH 818: Basic Mathematics for Health Science

arithmetic: Perform basic mathematical operation on whole numbers, fractions, and decimals.

CAN MATH 818: Basic Mathematics for Health Science

percent: Set up and solve a proportions and percent problem.

CAN MATH 818: Basic Mathematics for Health Science

units: Perform unit conversions

CAN MATH 818: Basic Mathematics for Health Science

stats: Compute basic descriptive statistics: Mean, Standard Deviation, and Coefficient of Variation