

Syllabus

Below is an overview of the topics discussed in your course:

Course Credit:

Estimated Completion Time: Students are given 16 weeks per segment + 2 weeks of floating vacation, which equals 32-36 weeks total for the whole course.

Module 1

Numerical Operations

- Algebraic Expressions
- Units and Graphs
- Descriptive Modeling and Accuracy
- Translations
- Algebraic Properties and Equations

Module 2

- One-Variable Equations
- Two-Variable Equations
- Absolute Value Equations
- Inequalities
- Compound Inequalities
- Literal Equations

Module 3

- Relations and Functions
- Function Notation and Graphs
- Linear Functions
- Linear Models
- Writing Linear Functions
- Horizontal and Vertical Lines

Module 4

- Properties of Exponents

- Operations with Radicals
- Exponential Functions and Models
- Graphing Exponential Functions
- Sequences
- Exploring Linear and Exponential Growth

Module 5

- Solving Systems of Equations Graphically
- Solving Systems of Equations Algebraically
- Solving Systems of Equations Approximately
- Two-Variable Linear Inequalities
- Systems of Linear Inequalities

Module 6

- Representing Data
- Comparing Data Sets
- Data Sets and Outliers
- Two-Way Frequency Tables
- Scatter Plots and Line of Best Fit
- Correlation and Causation

Module 7

- Introduction to Polynomials
- Addition and Subtraction of Polynomials
- Multiplication of Monomials
- Division of Monomials
- Multiplication of Polynomials
- Special Products
- Division of Polynomials
- Function Operations

Module 8

- Greatest Common Factor
- Factoring By Grouping
- Factoring Trinomials
- Perfect Square Trinomials
- Difference of Perfect Squares

- Polynomial Functions

Module 9

- Quadratic Models
- Quadratics and Completing the Square
- Quadratics and the Quadratic Formula
- Applications of Quadratic Functions
- Exploring Non-Linear Systems and Growth