

COURSE TITLE: Algebra II  
COURSE LENGTH: 1 year  
COURSE CREDIT: 1 credit

COURSE TYPE: required  
GRADE LEVEL: 10, 11, 12  
PREREQUISITE: Algebra I and Geometry

COURSE GOALS:

1. Students will use the properties of real numbers and order of operations to evaluate and simplify algebraic expressions.
2. Students will solve linear and absolute value equations and inequalities.
3. Students will identify how slope affects graphs and equations of parallel and perpendicular lines as well as discovering best fit lines for a scatter plot.
4. Students will solve systems of equations with three variables and calculate basic operations with matrices.
5. Students will graph and write quadratic functions in several forms and assess operations with square roots and complex numbers.
6. Students will identify and apply properties of exponents as they simplify expressions involving powers and add, subtract, and multiply polynomials that they can factor using the remainder and factor theorems.
7. Students will use rational exponents to solve function operations, find inverse functions, and graph radical functions that can be evaluated.
8. Students will graph and solve exponential and logarithmic functions as well as write and apply exponential and power functions.

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COURSE CONTENT:

1. Equations and inequalities
2. Linear equations and functions
3. Linear systems and matrices
4. Quadratic functions and factoring
5. Polynomials and polynomial functions
6. Rational exponents and radical functions
7. Exponential and logarithmic functions