

Algebra 2

Fall Semester Syllabus

(Syllabus is subject to change)

St. Augustine High School
Room C-217

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Textbook
Algebra 2
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Mission Statement:

St. Augustine School develops the whole person, promotes Gospel values, inspires a love of learning, and upholds academic excellence in a nurturing community.

Course Description:

Algebra 2 is organized around families of functions, including linear, quadratic, exponential, logarithmic, radical, and rational functions. As we study each family of functions, students will learn to represent them in multiple ways—as verbal descriptions, equations, tables, and graphs. Students will also learn to model real-world situations using functions in order to solve problems arising from those situations. In addition Algebra 2 includes lessons on probability and data analysis as well as numerous examples and exercises involving geometry and trigonometry. Technology support for this course is available at **classzone.com**.

Grading Scale:

Daily assignment:	10%
Quizzes	30%
Tests	60%

Materials:

Pencils
Ruler
Graphing calculator (TI 84 or 83 series)
3-ring Notebook and dividers
Cloth book cover
Notebook paper and graph paper

Overview/Sequence of Topics

Semester 1

- Ch. 1 Basic Algebra (review) Equations and Inequalities
- Ch. 2 Linear Equations and Functions
- Ch. 3. Linear Systems and Matrices
- Ch. 4 Quadratic Functions and Factoring
- Ch. 5. Polynomials

Date	Topics
August 20-22	Introductions, rules, procedures, expectations, etc.
August 25-29	Apply properties of Real Numbers Evaluate and Simplify Algebraic Expressions Solve Linear Equations
September 1-5	Rewrite Formulas and Equations Use Problem Solving Strategies and Models Solve Linear Inequalities
September 8-12	Solve Absolute Value Equations and Inequalities Represent Relations and Functions
September 15-19	Find Slope and Rate of Change Graph Equations of Lines
September 22-26	Write Equations of Lines Model Direct Variation Draw Scatter Plots and Best-Fitting Lines
September 29-Oct. 3	Use Absolute Value Functions and Transformations Graph Linear Inequalities in two Variables
October 6-10	Solve Linear Systems by Graphing Solve Linear Systems Algebraically
October 13-17	Graph Systems of Linear Inequalities Use Linear Programming Solve Systems of Linear Equations in Three Variables
October 20-24	Perform Basic Matrix Operations Multiply Matrices

October 27-31	Evaluate Determinants Apply Cramer's Rule Use Inverse Matrices to Solve Linear Systems
November 3-7	Graph Quadratic Functions in Standard Form Graph Quadratic Functions in Vertex or Intercept Form Factoring
November 10-14	Solve Quadratic Equations by Factoring Solve Quadratic Equations by Finding Square Roots
November 17-21	Perform Operations with Complex Numbers Complete the Square Use the Quadratic Formula and the Discriminant
November 24-25	Graph and Solve Quadratic Inequalities
December 1-5	Use Properties of Exponents Evaluate and Graph Polynomial Functions Add, Subtract, and Multiply Polynomials
December 8-12	Factor and solve Polynomial Equations Review for Semester Exams
December 15-18	Semester Exams

Absences:

Missed assignments, quizzes, or tests for excused absences should be made up on the second day the student returns to school. Arrangements need to be made with the teacher about when this can be done.

Students needing more help outside the class time should make arrangements with the teacher either from 7:30-7:55 AM or 3:15-4:00 PM.