Southern Regional High School
Manahawkin, New Jersey

Course Syllabus

Department: Mathematics
Course: Algebra II

Marking Period 1
Topics/Units to be covered:
- Overview of Algebra I Review Assignment
- Absolute Value Equations and Inequalities
- Absolute Value Functions and Graphs
- Systems with Three Variables
- Solving Systems using Matrices
- Quadratic Functions and Transformations
- Standard Form of a Quadratic Function

- Modeling with Quadratic Functions
- Factoring Quadratic Expressions
- Quadratic Equations
- Completing the Square
- The Quadratic Formula
- Quarterly

Marking Period 2
Topics/Units to be covered:
- Complex Numbers
- Quadratic Systems
- Polynomial Functions
- Polynomials, Linear Factors, and Zeros
- Solving Polynomial Equations
- Dividing Polynomials

- Theorems About Roots of Polynomial Equations
- The Fundamental Theorem of Algebra
- Transforming Polynomial Functions
- Roots and Radical Expressions
- Multiplying and Dividing Radical Expressions
- Quarterly

Marking Period 3
Topics/Units to be covered:
- Binomial Radical Expressions
- Rational Exponents
- Solving Square Root and Other Radical Equations
- Functional Operations
- Inverse Relations and Functions
- Graphing Radical Functions

- Exploring Exponential Models
- Properties of Exponential Functions
- Logarithmic Functions as Inverses
- Properties of Logarithms
- Exponential and Logarithmic Equations
- Natural Logarithms
- Quarterly

Marking Period 4
Topics/Units to be covered:
- Inverse Variation
- The Reciprocal Function Family
- Rational Functions and Their Graphs
- Rational Expressions
- Adding and Subtracting Rational Expressions

- Solving Rational Equations
- Periodic Data
- The Unit Circle
- Final Exam