

**Southern Regional High School**  
Manahawkin, New Jersey  
**Course Syllabus**

**Department:** Math

**Course:** Algebra II Advanced

Marking Period 1

Topics/Units to be covered:

- Classroom Expectations/grading
- Linear Equations and Inequalities
- Writing & Graphing Linear Functions
- Piecewise Functions
- Absolute Value Functions and Inequalities
- Quarterly

Marking Period 2

Topics/Units to be covered:

- Systems of Linear Equations by Graphing & Algebraically
- Systems of Linear Inequalities by Graphing
- Basic Operations with Matrices
- Solving Systems Using Inverse Matrices
- Determinants and Cramer's Rule
- Quarterly

Marking Period 3

Topics/Units to be covered:

- Graphing Quadratic Functions and Inequalities
- Solving Quadratic Functions by Factoring, Square Roots, Completing the Square, and Using the Quadratic Formula
- Basic Operations with Complex Numbers
- Using Properties of Exponents
- Factoring and Solving Polynomial Functions
- Quarterly

Marking Period 4

Topics/Units to be covered:

- Analyzing, Evaluating, and Graphing Polynomial Functions
- Powers, Roots and Radicals
- Power Functions, Function Operations and Inverse Operations
- Graphing Square Root and Cube Root Functions
- Solving Radical Equations
- Analyzing and Graphing Exponential Growth and Decay
- Rational Equations and Functions
- Final Exam