Algebra II
Course Syllabus
Academic Expectation fulfilled: Critical Thinking

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Textbook: Algebra 2, Big Ideas Math, Larson Boswell

Mathematics Department's **enduring understandings:**
Students will demonstrate the ability to:

- transfer previous knowledge to understand new concepts.
- communicate mathematics both orally and in well-written sentences and explain solutions to problems.
- use technology to help solve problems, experiment, interpret results, and verify conclusions.
- model a written description of a physical situation with a function, an equation, or an inequality.
- determine the reasonableness of solutions including sign, size, relative accuracy, and units of measurements.
- classify elements (real numbers, figures, functions, etc) by their attributes.

Mathematics Department's **essential questions:**

- Why is it important to study mathematics?
- What are the basic skills necessary to be successful in high school and college-level mathematics?
- How do you envision yourself applying mathematics in your life?

Course Overview:
This is the third course in a three-year sequence of college preparatory mathematics. It integrates the study of algebra and geometry, with an emphasis on advanced algebra, functions, and an introduction to trigonometry. It is intended to develop proficiency with mathematical skills, to expand understanding of mathematical topics, and to improve logical thinking.

Student Outcomes:
Upon completion of this course, students should become familiar with using the TI 83 Graphing Calculator in class and should be able to analyze and solve problems, communicate mathematically, and make connections within the following topics:

- Single Variable Equations and Inequalities
- Linear Equations and Functions (solving and Graphing)
- Graphical Transformations of Functions
- Systems of Linear Equations and Inequalities
- Quadratic Functions
- Polynomials and Polynomial Functions
- Powers, Roots, and Radicals
- Radical Functions and Inverses
- Rational Equations and Functions
- Exponential Functions (if time allows)

Expectations for Student Performance, Grading Standards, & Extra Help Arrangements:
See classroom expectations