Mrs. Kelin
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Algebra II Honors
2025/2026

Algebra II Honors Course
Syllabus

Text: Algebra 2, Glencoe/McGraw Hill publisher (2018)

Course Overview:

Algebra 2 is a rigorous course designed to build upon a student's background in Algebra 1 and Geometry and to prepare them for higher level mathematics courses, including Calculus and Statistics, and higher level thinking. (This course can be taken prior to Geometry as well – Algebra I is the critical prerequisite.) Upon successful completion of this course, a student will be qualified for Pre-Calculus followed by Calculus or Statistics. While some topics covered in this course are not necessarily new to the student, they are covered in more depth at a higher level than before and connected to other disciplines as well. Many new concepts are also introduced. The use of a graphing calculator (TI-83 Plus or TI-84 Plus recommended) allows for better progress and performs functions that a scientific calculator cannot and will also be used in future math courses, including in college. Khan Academy and Aleks online math are a few of the connected resources that can be used to supplement the text and enhance the student's progress.

Course Objectives:

A student who successfully completes the course will be able to:

- Analyze equations and inequalities
- Graph linear equations and functions, special functions, transformations
- Solve systems of linear equations and inequalities
- Applying equation solving/systems of equations to word problems
- Explore quadratic functions and inequalities
- Perform operations with polynomials and rational expressions
- Perform operations with radical expressions and rational exponents
- Inverse functions – solving and graphing
- Explore exponential and logarithmic functions, including natural logarithms
- Explore rational functions
- Investigate sequences and series
- Analyze conic sections
- Investigate probability and statistics, normal distribution
- Explore and perform operations with matrices
- **Intro to trig: Radian measure, sine, cosine, tangent functions and their reciprocals, periodic functions
- **Trig identities and solving equations

** These topics will also be covered in Pre-Calculus, so Algebra II students will see and delve into them during their math journey.

A variety of teaching methods are used to meet the needs of all students. They include:
- Formal lecture involving note taking
- Group work
- Demonstrations of techniques
- Guided practice
- Small projects/long-term assignments
- Online learning (Khan Academy, Aleks, other)

Basic Course Procedures/Expectations:

There is a lot of material covered in this course. Therefore, a certain pace needs to be maintained. In order to maximize achievement, homework is given on a regular basis and is expected to be completed. Assessments are made in the form of homework, quizzes, tests, semester exams, and periodic projects or long-term assignments. Notebooks are to be kept up to date. Tests are announced in advance so that students will have adequate time to prepare for them. If a student is having trouble with any particular concept or simply needs some extra help, I am available 10 minutes prior to class or longer or after class (by arrangement), or by phone prior to 9:30 PM. In general, I can be reached through the school or via email at tenisbum29@aol.com. If a student is absent only on the day a test is given, she is expected to take the test upon her return, since I do not teach any new material the day before a test. If a student is absent for multiple days, a schedule for completion of missed work will be worked out.

Daily Requirements:

Students should bring the following to class:
- Math textbook
- Homework
- Binder and/or spiral notebook and folder
- Calculator, preferably graphing (TI-83 Plus or TI-84 Plus preferred)
- Pencils, etc.
- Graph paper (have some handy, not used daily)

Grading System:

Using a test as the norm, a quiz is worth half a test, projects or long-term assignments are worth a test or half a test, depending on the depth of the project/assignment, semester exam is worth 1 ½ tests. Homework/participation comprises one test (usually about 15% of a student's grade). Borderline situations rely on effort/participation to "tip the scale".