



I. Course Description

This course will expand students' knowledge of functions to include polynomial, rational and radical functions. Students will work with expanding features of the functions and draw connections with the experiences of linear, quadratic, and exponential functions. Students will model situations to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Students will build on their experiences to work with trigonometric ratios and functions. **A graphing calculator is required for this course.** Prerequisite: Algebra I (C or better) and Geometry credit or concurrent enrollment in Geometry.

II. Goals

Students will be able to organize his/her approach to the solutions of problems using appropriate problem solving strategies. Students will be able to perform algebraic processes. Students will be able to identify and graph specific relations and function. The following goals are based upon the AACPS Algebra II goals, Maryland College and Career-Ready Standards, and the PARCC Algebra II Standards and Objectives. The class will include active engagement strategies such as: class discussions, exploratory activities, open-ended problem solving, cooperative groups, lectures, and formative and informative assessments. Students will explore algebraic concepts through the use of the TI-84 graphing calculator.

III. Course Outline

In an effort to satisfy course objectives, the following concepts will be covered throughout the year. Corresponding textbook sections follow each concept.

- Unit 1: Systems of Linear Equations (3.1-3.2, 3.5)
- Unit 2: Quadratic Functions and Complex Solutions (4.1-4.8)
- Unit 3: Polynomial Functions (5.1-5.4, 5.8-5.9)
- Unit 4: Exponential and Logarithmic Functions (7.1-7.6, 9.1-9.5)
- Unit 5: Periodic Functions (13.2-13.5, 13.7, 14.3)
- Unit 6: Introduction to Radical and Rational Functions (6.1-6.8)
- Unit 7: Rational Functions (8.1-8.6)

IV. Assignments and Assessments

- Assessments are worth 65% of the student's total grade. 3-5 assessments will be given per quarter. Assessments may include unit tests, quizzes, and/or projects.
- Classwork assignments are worth 15% of the student's total grade. At least 6 classwork assignments will be graded per quarter. All work must be shown to receive credit for classwork.
- Homework assignments are worth 10% of the student's total grade.
 - Homework will be assigned consistently.
 - Homework will be checked. Students must show all work, and attempt **every** problem to receive full credit (3/3 points). Some homework assignments may be checked for completion, while others may be collected.
 - Any questions regarding a homework problem will be addressed and answered.
- A Quarterly Exam is given during the final week of the quarter and is worth 10% of the student's total grade. **The Quarterly Exam is not eligible to be retaken.**

V. Re-Do Policy

Students may redo an **assessment** after receiving feedback and re-teaching/intervention from the teacher. This may be done during Pride Period or after school (arrangements need to be made with the teacher). Students are *expected* to:

- Previously have completed **all** homework and classwork assignments.
- Perform corrections on the original assessment **on a separate sheet of paper**. Students are to attach the corrections onto the original assessment. If a student is not able to complete the problem correctly, the student is expected to see the teacher during Pride Period or another set time for help.

The higher grade for the assessment will be recorded in the grade book. Retakes must be completed by the assigned date. Violation of the academic integrity policy is not eligible for redo.

VI. Make-Up Work

Students are responsible for making up homework, quizzes, and tests when absent from class. Completion should occur upon returning to school within the time frame of the number of days the student missed. Unexcused absences will result in an automatic zero.

VII. Late Work

All assignments not submitted on the due date are considered late. Late assignments shall be penalized by a maximum of 50%. Late assignments must be completed by the date given by the teacher.

VIII. Grading Scale

The grading system complies with AACPS Board of Education Grading Policy, II-RA. Grades are earned by student to document mastery of course objectives, skills, content, and concepts.

Letter Grade	Proficiency Level	Number Grade
A	Advanced	90 – 100%
B	Proficient	80 – 89%
C	Minimally Proficient	70 – 79%
D	Not Yet	60 – 69%
E	Not Yet	0 – 59%

Semester grades are determined by 50% from each marking period.

IX. Course Materials

- Textbook: Algebra 2 Common Core, Pearson (2012)
- Graphing Calculator: TI-83 or TI-84 Plus
- 3-ring binder with lined paper and/or notebook
- Pencils

X. Additional Help

- Students may get help during Pride Period or after school by appointment.
- The National or Math Honor Society provides tutors. The student should see his/her counselor or teacher if interested.
- Students may also choose to hire a personal tutor. The TAAAC office in Annapolis has a list of available tutors. They may be reached at (410) 224-3330, or <http://www.taaaconline.org/need-help.html>.
- Online video resources are also available. A running list of these resources will be made available to students as the year progresses.