

George Washington High School

Course Syllabus



Course Name: Algebra 2

Instructor Name: Gyawu Robert

Contact Information: Call or email me with any questions or concerns.

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- Planning Period/Office Hours: **2nd Period**

Course Description

Students enrolled in Algebra II are assumed to have mastered those concepts outlined in the Algebra I standards. A thorough treatment of advanced algebraic concepts will be provided through the study of functions, equations, inequalities, systems of equations, polynomials, rational and radical equations, complex numbers, and sequences and series. Emphasis will be placed on practical applications and modeling throughout the course of study. Oral and written communication concerning the language of algebra, logic of procedures, and interpretation of results should also permeate the course. These standards include a transformational approach to graphing functions. Transformational graphing uses translation, reflection, dilation, and rotation to generate a “family of functions” from a given “parent” function and builds a strong connection between algebraic and graphic representations of functions. Students will vary the coefficients and constants of an equation, observe the changes in the graph of the equation, and make generalizations that can be applied to many graphs. Graphing utilities (calculators, computers, and other technology tools) will be used to assist in teaching and learning. Graphing utilities facilitate visualizing, analyzing, and understanding algebraic and statistical behaviors and provide a powerful tool for solving and verifying solutions.

VDOE Standards:

Algebra 2 Curriculum Map

This course builds upon the foundational concepts learned in Algebra 1 by delving deeper into algebraic principles while introducing students to more complex functions, equations, and real-world applications. **Spiral review expectations include Number Sense Routines daily.**

Unit Name	Standards of Learning (SOL)	Big Ideas	Suggested Time Frame	
			Yearlong	Semester
Unit 0: Think Like A Mathematician	Priority SOL: A2.F.2b Complementary SOL: A2.F.1a; A2.F.2acdefg	Properties of functions	5 days	3 days
Unit 1: Analyzing Functions	Priority SOL: A2.F.1b; A2.F.2b; A2.EI.1b Complementary SOL: A2.F.2acdefg; A2.EI.1acde	Function Properties Function Families	18 days	9 days
Buffer Days: Assessment, Enrichment, and Remediation			5 days	3 days
Unit 2: Quadratic & Polynomial Functions	Priority SOL: A2.EI.2b; A2.EI.3c; A2.EI.6c; A2.EO.1d; A2.EO.3abd; A2.EO.4c Complementary SOL: A2.EI.2ad; A2.EI.3abd; A2.EI.6abd; A2.EO.1b; A2.EO.3c; A2.EO.4ab; A2.F.2	Quadratic functions Polynomial functions	34 days	17 days
Buffer Days: Assessment, Enrichment, and Remediation			5 days	3 days
Unit 3: Radical Functions	Priority SOL: A2.EO.2ac; A2.EI.5ac Complementary SOL: A2.EI.5b; A2.EO.2b; A2.F.1ace; A2.F.2bdfgijk	Square root functions Cube root functions Additional roots	18 days	9 days
Buffer Days: Assessment, Enrichment, and Remediation			5 days	3 days
Unit 4: Rational Functions	Priority SOL: A2.F.1b; A2.F.2b; A2.EO.1ad, A2.EI.1b, A2.EI.4a Complementary SOL: A2.F.1acde; A2.F.2acfgj; A2.EI.4bcd; A2.EO.1bc	Ratio of two polynomials	22 days	11 days
Buffer Days: Assessment, Enrichment, and Remediation			5 days	3 days
Unit 5: Exponential & Logarithmic Functions	Priority SOL: A2.F.1b; A2.F.2b Complementary SOL: A2.F.1ace; A2.F.2acfgj	Exponential functions Logarithmic Functions Growth/decay models	10 days	6 days
Buffer Days: Assessment, Enrichment, and Remediation			5 days	3 days)
Unit 6: Probability & Statistics	Priority SOL: A2.ST.1b; A2.ST.2h Complementary SOL: A2.ST.1acdefghi; A2.ST.2abcdefg; A2.ST.3	Regression models Univariate data Normally Distributed data	18 days	11 days
Unit 7: Show What You Know	Review assessment data to identify student strengths and areas for growth. Provide differentiated learning opportunities to reinforce and extend understanding, ensuring all students demonstrate ongoing mastery through targeted support and enrichment.		20 days	5 days

Major Assignments:

Major Assignments include unit tests, quizzes, performance tasks, mathematical modeling projects, SOL practice assessments, midterm and final examinations, and cumulative review activities. Students may also complete digital assignments and collaborative projects throughout the course.

Student Evaluation:

- (Gold) Tests, Projects, Labs, Final Essays 40 %
- (Silver) Quizzes, Lab Reports 35 %
- (Bronze) Classwork and Homework 25 %

A = 90-100% | B = 89-80% | C = 79-70% | D = 69-60% | F = 59-0%

- **Final Exams** will count for 10% of the overall grade for each high school course.
 - Courses with Standards of Learning end-of -course assessments will count this test as the final exam and must calculate the score as 10% of the final grade

Student Goal:

During the 2026–2027 school year, all students will actively engage with High-Quality Instructional Materials (HQIM) and instruction provided by the teacher to earn a final course grade of 80% or higher, maintain 90% or greater attendance in the course, and pass the applicable End-of-Course SOL assessment or gain industry credential.

Promotion Requirements:

In alignment with the Virginia High School League, individual student promotion shall be based upon satisfactory performance as follows:

Grade Level	Required Credits
9th	0-5
10th	6
11th	12
12th	18

Promotion is based upon earned units of credits. Before a student can graduate, he or she must earn the required credits as indicated below:

1. To be classified as a 10th grader, a student must have earned a minimum of six (6) standard units of credit to include three credits, which must be from the disciplines of English, mathematics, science, history, or physical education.
2. To be classified as an 11th grader, a student must have earned a minimum of twelve (12) standards of credit to include six credits which must be from the disciplines of English, mathematics, science, history, or physical education.
3. To be classified as a 12th grader, a student must have earned a minimum of eighteen (18) standard units of credit, including ten credits, which must be from the disciplines of English, mathematics, science, history, or physical education.
4. Five (5) verified credits (i.e., English (2), mathematics (1), science (1), and history (1) are graduation requirements for the Advanced Diploma and Standard Diploma). Minimally, students are expected to earn verified credits as follows:
 - i. 9th grade earns at least one verified credit
 - ii. 10th grade earns at least two verified credits
 - iii. 11th grade earns at least two verified credits in English

Please be aware that you can keep track of your student's grades, assignments, and attendance by using your Parent Portal account. Homework is posted each week on our school webpage under the teacher's

name. Please contact your student's school counselor or grade level administrator if you need help navigating our school website, a Parent Portal activation code, or assistance accessing the Parent Portal.

Course Requirements:

- All homework should be completed as assigned.
- All students should be ready to participate in all class activities.
- All students will be expected to use appropriate classroom etiquette.
- All students are expected to be respectful, responsible, and ready to learn on a daily basis

Makeup Work Procedure:

- For excused absences, it is the responsibility of the student to secure and complete the missed assignments in consultation with the teacher. Students have 7 days, including weekends, from the due date to complete any missing work.

Late Work Procedure:

- Late work will be accepted up to 3 calendar days after the due date. If that date falls on the weekend/breaks/student absence, students **should** communicate with the teacher on submission requirements.
- No assignment will be accepted beyond three days of the original due date and the student may receive a grade of Zero. After the three days the student may utilize the Grade Recovery Procedure to recover missing assignments.
- Late work will be accepted at a penalty of 25% off of the earned grade.
 - **Late work formula calculation** → $\text{Student Score} \times 0.75 = \text{Final Assignment Score}$
 - ie. if a student submits an assignment late and earns a 90, the late penalty would be 22.5 points deducted for a total of 67.5% grade

Parent and Student Resources

- All parents are encouraged to check the Parent Portal to monitor student academic progress and attendance. PowerSchool Mobile can be downloaded from Google Play and the App Store.
- Be sure to follow the George Washington High School on Facebook and on the DPS App.

