**Gateway STEM High School**

***Learners Today, Leaders Tomorrow!***



**ADVANCED ALGEBRA 350**

**Course Syllabus**

**INSTRUCTOR: Steve Miller PLANNING PERIOD: 1st and 7th**

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**COURSE FRAMEWORK:**

Algebra 2 extends student’s understanding of variables, algebraic expressions, equations, functions, inequalities, and their multiple representations. Additionally, students will be introduced to new concepts needed for college algebra topics such as logarithmic and trigonometric functions. Students will further develop their ability to explore and solve real-world application problems, demonstrate the appropriate use of graphing calculators, and communicate mathematical ideas clearly.

**LEARNING OUTCOMES:**

By the end of the course, students will:

* Use the language of functions to describe, interpret, and analyze graphs to model real-world data.
* Use algebraic properties of functions to describe, interpret, and analyze graphs to model real-world data.
* Develop and solve systems of linear equations and inequalities to model real-world problems.
* Describe, interpret, and analyze quadratic functions to model real-world data.
* Determine the complex solutions of quadratic equations.
* Describe, interpret, and analyze exponential and logarithmic functions to model real-world data.
* Describe, interpret, and analyze radical functions to model real-world data.
* Describe, interpret, and analyze rational functions to model real-world data.
* Describe, interpret, and analyze polynomial functions using technology to model real-world data.
* Model data using linear, quadratic, power, exponential, logarithmic, and polynomial functions.

**COURSE OUTLINE:**

**FIRST SEMESTER**

* Basic Algebraic Skills Review
* Linear Relations and Functions
* Linear Systems
* Quadratic Functions and Equations

**SECOND SEMESTER**

* Polynomial Functions
* Rational and Radical Functions
* Exponential and Logarithmic Functions
* Trigonometric Functions, Equations, and Identities
* Conic Sections (Time Permitting)

**REQUIRED MATERIALS:**

* Notebook
* Pencil
* 3-Ring Binder or 2 Pocket Folder
* Computer/Tablet

**Classroom EXPECTATIONS/POLICIES:**

* *Be respectful.* Respect the content we are learning, the materials we have in class, and above all, every person that comes and goes in room 200 South. Use appropriate language; discriminatory words will NOT be tolerated.
* *Be prepared.* Bring all materials to class that you will need. Use the restroom during breaks so that you do not lose valuable class time.
* *Be focused.* In order to be on time, you must be in your seat BEFORE the bell rings. Remain on task and follow directions the first time they are given. Ask for clarification, if needed.

\*\*Class Norms will be developed as a community during the first weeks of school and will follow in an addendum.

**Virtual Classroom EXPECTATIONS/POLICIES:**

* *Attendance:* Students are expected to attend all live class meetings on time (approximately 1st 45 min. of each period).
* *Be prepared.* Have all materials. Taking notes and doing examples on your own will be essential for completing independent assignments.
* *Be focused.* It will be difficult to work one-on-one with students virtually. Therefore, students will need to be attentive and take notes to be able to complete independent work.
* *Assignments:* All assignments/tests will be uploaded to TEAMS by the required due date.

**Virtual Learning Etiquette**

* Arrive to live class meetings on time, or a few minutes early.
* Keep microphone on mute, unless participating in a discussion, asking/answering a question, or presenting.
* Make sure you are in a quiet area. Limit background noise and other distractions.
* Wear appropriate attire. Upper body must be covered and images/words on clothing should be school appropriate.
* Background and surrounding area should be clear of distracting items. Items that can be seen in video should be school appropriate.
* Use school appropriate language/gestures when speaking or posting messages.
* Messages sent to peers should be related to the content and should follow guidelines set by teacher.

**GRADING SCALE/POLICY:**

**Assignments Descriptions Value**

Formative Classwork, Independent work, Exit Tickets, Do Nows, Class Notes = 40%

Summative Quizzes, Projects, Unit Tests = 60%

 **TOTAL = 100%**

**Students Must Show Work To Receive Full Credit On Assignments/Tests/Quizzes!!**

**Grading Scale** (issued by the district)

A—90-100 The student’s work is exemplary and is completed in a timely and independent manner. The work shows a high level of understanding or performance.

B—80-89 The student’s work is above average and has been completed in a timely and independent manner. The work shows a clear level of understanding or performance.

C—70-79 The student’s work is satisfactory and may or may not be completed in a timely/independent manner.

D—60-69 The student’s work barely meets requirements and work is not completed in a timely or independent manner.

F—0-59 The student’s work does not meet the minimum standards of understanding or performance or work is not the student’s personal best.

**VIRTUAL GRADING SCALE/POLICY:**

All the above is the same for virtual grading except:

Students will not receive points for notes during virtual learning but notes will be essential for understanding and completion of independent work. Also, students will turn in assignments through TEAMS. All due dates will be listed in TEAMS and on my school website page.

All assignments will be uploaded through TEAMS by the given due date.

Parents may have internet access to their student’s grades and assignments, upon Administrative approval at <https://sis.slps.org/SLPS/Default.aspx>

**ACADEMIC INTEGRITY/ PLAGIARISM:**

The integrity of the academic program and the evaluation of each student’s achievement are of primary concern to educational institutions. Cheating on an educational exercise not only reflects dishonesty on the part of the student, but also diminishes the value of the work done by his/her classmates. Students who cheat or plagiarize (using another’s words, ideas or writing as one’s own) shall be subject to the following: a zero recorded for the exercise and if behavior continues, a referral to administration.

**MISCELLANEOUS COURSE INFORMATION:**

* **Attendance:** Being in class is very important. With block scheduling, missing one class can set you behind by almost two days and make it hard to catch up.
* **Missed Exams:** Exams can be made up. It is the responsibility of the student to come to the teacher in order to discuss when the test will be made up.
* **Make-up work:** When a student misses a class, he/she will have two days plus the number of days missed to submit make-up work. It is the student’s responsibility to ask for make-up work the day he/she returns to class during an appropriate break in instruction.
* **Late Work:** Homework is collected on its due date. Late work from the current unit is accepted but points will be deducted.
* **Uniforms:** All students are expected to wear the school uniform of a black Gateway polo and khaki bottoms. Uniforms must be worn appropriately with pants pulled up and no midriff showing. See the Student Handbook for further statements on the School Uniform Policy.
* **Class Organization:** When you enter class, begin the Do Now which will be posted on a board. The agenda for class will also be posted.
* **Hall Passes:** Students each receive TWO hall passes at the beginning of each semester. If the hall pass is not used, it can be turned in at the end of the semester for extra credit points.
* **Cell Phone:** Students may use their cellphone with teacher permission. Students must communicate with the teacher in cases of emergency where cellphone usage is required.

The following signage will be used to indicate phone usage:

**RED – No devices**

* Devices should be placed somewhere safe where you will not access them until the end of the period.
* Devices should be off or on silent.

**YELLOW – Headphone usage allowed**

* Headphone volume should be low enough that you can still hear the teacher and you are not distracting your neighbor.
* While headphones are in use, the device should be face down on the desk or in your pocket. You must choose a playlist and stick to it.

**GREEN – Devices may be use for educational purposes**

* You will be able to use your device in order to access educational resources as instructed by your teacher.
* While your phone is out, you should refrain from using it for social purposes.