**Geometry**

**Mr. Reginald Crawford**

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**Phone Number: (678) 667-2475      Planning Period: 6th  Period**

**Course Description and Objectives**

**Geometry**is the second course in a sequence of three required high school courses designed to ensure career and college readiness. The course represents a discrete study of geometry with correlated statistics applications.

Unit 1 (3 - 4 weeks)    Transformations in a Coordinate Plane

Building on standards from middle school, students will perform transformations in the coordinate plane, describe a sequence of transformations that will map one figure onto another, and describe transformations that will map a figure onto itself. Students will compare transformation s that preserve distance and angle to those that do not.

Unit 2 (10 - 11 weeks)    Similarity, Congruence and Proofs

Building on standards from Unit 1 and from middle school, students will use transformations and proportional reasoning to develop a formal understanding of similarity and congruence. Students will identify criteria for similarity and congruence of triangles, develop facility with geometric proofs (variety of formats), and use the concepts of similarity and congruence to prove theorems involving lines, angles, triangles, and other polygons.

Unit 3 (3 - 4 weeks)    Right Triangle Trigonometry

Students will apply similarity in right triangles to understand right triangle trigonometry. Students will use the Pythagorean Theorem and the relationship between the sine and cosine of complementary angles to solve problems involving right triangles.

Unit 4 (6 - 7 weeks)    Circles and Volume

Students will understand and apply theorems about circles, find arc lengths of circles, and find areas of sectors of circles. Students will develop and explain formulas related to circles and the volume of solid figures and use the formulas to solve problems. Building on standards from middle school, students will extend the study of identifying cross-sections of three-dimensional shapes to identifying three-dimensional objects generated by rotations of two-dimensional objects.

Unit 5 (5 - 6 weeks)    Geometric and Algebraic Connections

Students will use the concepts of distance, midpoint, and slope to verify algebraically geometric relationships of figures in the coordinate plane (triangles, quadrilaterals, and circles). Students will solve problems involving parallel and perpendicular lines, perimeters and areas of polygons, and the partitioning of a segment in to a given ratio. Students will derive the equation of a circle and model real world objects using geometric shapes and concepts.

Unit 6 (5 - 6 weeks)    Applications of Probability

Students will understand independence and conditional probability and use them to interpret data. Building on standards from middle school, students will formalize the rules of probability and use the rules to compute probabilities of compound events in a uniform probability model.

Unit 7 (5 – 6 weeks)    Review and 12th Grade Preview

**Assignments and Absences**

Students will receive a variety of assignments designed to enhance their learning. If a student is absent, the student is responsible for the missed assignment. Students who have an excused absence will be allowed five days to turn in the missed assignment. No work will be accepted after five days. **It is Students responsibility to contact me if they are having trouble or needs assistance.**

**Course Assessment Plan/Grading Scale:**This course will include many formative assessments and labs. The course will also include four countywide common assessments. At the conclusion of the course, in early May all Geometry students are required to take the Georgia Milestone which will count as 20% of their final grade. For this course grades will be assigned as follows:

        Summative Assessments   40%

        Formative Assessments     35%

        Labs/HW/Other                 25%

**School Expectations**

Follow all school rules and policies (P.R.I.D.E – PBIS).

* P – Positive
* R – Respectful
* I – Innovative
* D – Determined
* E - Excellence

**Classroom Expectations**

1.Be prepared for class.

2.Be Respectful.

3.Be Responsible.

4.Be Positive.

5.Phones should be turned off or silenced and put in the “Charging Station”.

**Classroom Consequences**

1.     Verbal warning 3. Write-up

2.      Call home 4. Parent Conference

  All consequences will be aligned with the HHS school wide discipline plan.

**Course Materials Suggested Students may take notes online and use Desmos**

1 Large Three-ring binder (1” or 2”)                     Pencils

1 Package of Dividers (Label: Notes, HW, QUIZZES/TEST)

Erasers

Loose Leaf Paper                                                        Headphones

Compass. Protractor, straight edge                           Highlighters

Scientific Calculator                                                   Composition notebook

**Conferences**

The primary goal is to meet the developmental needs of each student; therefore, student progress during each grading period will be closely monitored.  A **Parent conference should be scheduled for all students earning D’s and F’s prior to the end of each nine weeks grading period.**

**In order to schedule a conference with your teachers, please contact the Guidance Office 706-592-2089**

**Parents are welcome to join Remind**

**Online Geometry**

Text @9echga to the number 81010

**KEEP THIS SYLLABUS IN THE FRONT OF YOUR MATH NOTEBOOK**

By signing below, we acknowledge that we have read and understand the: **Course Syllabus 2021 – 2022 Geometry**

**Mask ARE TO BE WORN PROPERLY AT ALL TIMES!**

Class Period \_\_\_\_\_\_\_\_\_\_\_\_

Print Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Print Parent Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_