In this course, students will explore the relationships among points, lines, and planes in space. The concept of logical reasoning and the exploration of complex geometric situations lead students to make formal mathematical arguments. Geometric shapes are described and characterized. Equivalence relations pertaining to geometry such as congruence and similarity, along with spatial, coordinate geometry, circles, spheres, and transformations are studied.

50% Mastery (at least 7)
50% Progress (at least 24)

Students may retake a Mastery Assessment (unit test) if they score below a 70%. Mastery assessments could be unit tests, projects or a cumulative assessment for the course.

Progress grades can be from classwork, homework, warm-ups, quizzes and/or other work completed for the course. Work will be considered LATE after 3 school days and deduction of points will occur. Assignments will not be accepted after 10 school days.

All students at Queen Anne’s County High School are expected to conduct themselves with great pride in academics and the community at large. To this end, it is expected that all students will maintain academic integrity in every assignment. Work must be completed individually unless otherwise directed by the teacher. Plagiarism is a severe offense at QACHS and will result in immediate consequences. The use of Photomath and other electronic sources is a form of plagiarism.
Students must log into our class on schoology every school day to be counted as present. Students should complete daily work to keep up the class. The teacher/school should be contacted if a student will be absent from class. Student are responsible for all missing work due to an absence.

**Online Learning Expectations**

**Synchronous** – Join the video conference on time and have materials ready. These materials include pencil, paper, calculator and any websites needed to complete math work. Have Schoology open and ready to go in a browser. You are expected to be on the video conference for the duration of class. Please find a quiet place in your house and give yourself an area to work.

**Asynchronous** – Assignments that are asynchronous are to be done on your own; however, I am available for help during the designated asynchronous period. Also during this time you may be asked to attend a video conference for small group instruction. Small group instruction, if assigned, is mandatory.

**Check-in Day** – Every Wednesday there will be a brief 10 minute video conference or check in to provide a brief period of instruction and to ensure all students are on track with the current assignments. Students will also complete an asynchronous assignment on check-in day.

**Office Hours** – Every day except for Wednesday there are Office Hours set aside for reteaching, 1:1 or group tutoring, small group instruction and student/parent meetings. You may schedule a time during office hours for tutoring. You may also attend a tutoring or instructional video conference during office hours. Office hours are considered part of the school day, so tutoring or conferences scheduled during this time are mandatory. If there is an instructional conflict during the requested time, we will work together to find a time that works.

**Course Topics**

1: Using Inductive Reasoning and Conjectures
2: Rigid Transformations
3: Transformations & Coordinate Geometry
4: Deductive Reasoning & Logic
5: Conditional Statements & Converes
6: Lines & Transversals
7: Properties of a Triangle
8: Special Lines and Points in Triangles
9: Congruent Triangles Postulates
10: Using Congruent Triangles
11: Compass and Straightedge Construction
12: Dilatations and Similarity
13: Applications of Similarity
14: Pythagorean Theorem & Distance Formula
15: Right Triangle and Trig Relationships
16: Trigonometry in General Triangles
17: Polygons and Special Quadrilaterals
18: Algebraic Representations of Circles
19: Chords, Arcs, and Inscribed Angles
20: Lines and Segments on Circles
21: Modeling with Area
22: Arc Length and Sectors of Circles
23: Relating 2-D and 3-D Objects
24: Prisms and Cylinders
25: Pyramids and Cones
26: Spheres
27: Analyzing Dimensional Changes
5: Conditional Statements & Converes
16: Trigonometry in General Triangles