**Course Name/ Code: Geometry/MSG21**

 **School Year: 2014-2015**

 **Teacher: Mr. Kaufman**

**Email: kaufman@whsad.org**

**Room: 213**

**Office Hours: Per. 4 (Mon. Tues. Wed.)**

**Course Description:**

Geometry is a Regents level course. This course will prepare students for taking the Regents and Common Core exams which are given in June. This course is a two term course gives students the opportunity to explore various mathematical and geometric concepts. Emphasis will be placed on discovery, conjecture, and problem-solving. Students will complete open-ended projects, create their own theorems, and apply geometric concepts to the real-world around them. Topics include plane geometry, locus of points, circles, triangles, quadrilaterals, geometric proof, transformations, coordinate geometry, and more.

**Materials (Textbooks/ Online Access Instructions):**

**Khan Academy**: This is an excellent website with in-depth explanations of tons of mathematical topics. [www.khanacademy.org](http://www.khanacademy.org)

**Regents Prep and JMAP**: These sites compile various Regents questions and exams and provide additional content as well as simple explanations for common test topics and questions. [www.regentsprep.org](http://www.regentsprep.org), [www.jmap.org](http://www.jmap.org)

**WHSAD Course Website:** [www.whsad.org/author/kaufman](http://www.whsad.org/author/kaufman) Class assignments, documents, and news will be posted here.

**Your Materials:** You will be expected to bring a notebook/binder and a pen/pencil to class every day!

**Grading Policy:**

Assessments (Exams, quizzes, and projects) 50%

Homework 10%

Class Participation 20%

CCSS Writing Tasks 20%

**Total 100%**

\***Final Grade** will be an average of all three marking periods

**Assessments:**

1. Attendance & Lab: Students are expected to attend all classes. If a class is missed, students are expected to obtain the notes and assignments from a classmate or online at
2. Assignments: Students are expected to complete all of their homework assignments and classwork, and project assignments and submit them promptly.
3. Exams: There will be a full period exam for each unit during the year.
4. Quizzes: There will be regular quizzes to assess understanding of lessons during each unit. Students will be notified of a quiz multiple days in advance.
5. Regents Examination: The class culminates in a June Regents and Common Core Exam.

**Major Assessments**:

* Midterms and final exams will be administered for each term.

**Required Projects**:

Throughout the course, students will undertake project-based learning assignments to demonstrate their mathematical, geometric reasoning, and creative thinking/design skills. These projects include, but are not limited to:

* Triangulart Poster Project
* Quadrilateral Design Project
* CCST Writing Assignments

**Classwork:**

There are a few class procedures which will help the class to run smoothly and be as productive as possible.

**Start of Class**: Each day there will be a “DO NOW” written on the board that you are expected to start work on **as soon as you arrive**. These assignments will be key when it comes to classroom discussion and the day’s topic. It is best to arrive early to ensure enough time to complete the work.

**Homework**: Homework is an important part of your learning. It helps to reinforce what you have learned in class and also serves as a means for assessing any problem areas.

 Homework is to be turned in **at the beginning of class.**

**Lateness and Attendance:**

Regular attendance is required. The courses cover a large amount of material and good attendance is necessary to keep current with the work. Always bring a note from a doctor or your parent when you come to class after an absence. You are responsible for making up all missed work!

Late to Class:

Students should have plenty of passing time in between classes to arrive to class on time. If a student is late to class, without a pass from a teacher, they will be subject to loss of “Do Now” credit for that class period. If you are late, you must sign the late log at the front of the classroom.

Cutting Class:

Any student that chronically arrives late to school without a pass from an administrator or a note from your parent/guardian and misses my class as a result, will be considered cutting class.

**Course Outline Topics:**

**TERM I:**

**Unit 1 (Triangle Geometry)**

* Triangle theorems
* Triangle terminology
* Types of triangles
* Classifying triangles
* Formulating theorems

**Unit 2 (Triangle Congruence)**

* Triangle congruence conditions
* Triangle congruence proofs
* Formal mathematical logic

**Unit 3 (Quadrilateral Geometry)**

* Interior and exterior angles
* Properties of quadrilaterals
* Quadrilateral applications
* Relationships between number of sides and measures of angles

**Unit 4 (Similarity)**

* Pythagorean Theorems
* Proportions
* Similarity Theorems
* Means and extremes

**TERM II:**

**Unit 5 (Area, Perimeter, Surface Area)**

* Dimensions (length, width, height)
* Surface area and nets
* Proving volume
* Faces, vertexes, and prisms

**Unit 6 (Coordinate Geometry)**

* Parallel, perpendicular
* Planes
* Slopes, midpoint, distance
* Quadratic-linear systems

**Unit 7 (Locus)**

* Focus
* Constructing shapes and functions
* Points and lines

**Unit 8 (Circles)**

* Radius, diameter
* Chord, tangent, secant
* Area
* Angles and arcs
* Equation of a circle

**Unit 9 (Regents Prep.)**

* Problem solving strategies
* Starters for short response problems
* What to expect in terms of topics