MVLA
2019-2020
COURSE INFORMATION SHEET

Course Title: Geometry
School: MVHS
Instructors: Alvarez, Rosales, Chiu, & Chang
UC/CSU requirement: YES/YES
Textbook and/or other learning resources (Piloting):
Core Connections Geometry; Published by College Preparatory Mathematics (CPM)

Student Learning Outcomes:

This course involves the formal development of geometric skills and concepts necessary for students who will take Algebra II and other advanced courses in math. The instructional program will include consistent use of Algebra I concepts, exploratory development and demonstration of the nature of proof through logical arguments, geometric transformations, and use of problem-solving skills in the development of geometric concepts. Properties of triangles, quadrilaterals, other polygons, circles, and polyhedra will be explored. The trigonometry of right triangles will also be studied.

In this course students will learn:

- Three rigid transformations: reflection (flip), rotation (turn), and translation (slide).
- The relationships between pairs of angles formed by transversals and the angles in a triangle.
- How to find the area and perimeter of triangles, parallelograms, and trapezoids.
- The relationship among the three side lengths of a right triangle (the Pythagorean Theorem).
- How to determine when the lengths of three segments can and cannot form a triangle.
- How to support a mathematical statement using flowcharts and conditional statements.
- About the special relationships between shapes that are similar or congruent.
- How to determine if triangles are similar or congruent.
- The trigonometric ratios of sine and cosine as well as the inverses of these functions.
- How to apply trigonometric ratios to find missing measurements in right triangles.
- How to model real world situations with right triangles and use trigonometric ratios to solve problems.
- Several ways to model probability situations, such as tree diagrams and area models.
- How to formalize methods for computing probabilities of unions, intersections, and complements of events.
- How to recognize when the information provided is not enough to determine a unique triangle.
- The information that is needed in order to conclude that two triangles are congruent.
- How to organize a flowchart or T-tables that concludes two triangles are congruent.
- The relationships of the sides, angles, and diagonals of special quadrilaterals, such as parallelograms, rectangles, kites, and rhombi (plural of rhombus).
- How to write a convincing proof in a variety of formats, such as a flowchart or two- column proof.
- How to use algebraic tools to explore quadrilaterals on coordinate axes.
- How the measures of the interior and exterior angles of a regular polygon are related to the number of sides of the polygon.
- How the areas of similar figures are related.
- How to find the area and circumference of a circle and parts of circles and use this ability to solve problems in various contexts.
- Find the surface area and volume of three-dimensional solids, such as prisms and cylinders.
- Represent a three-dimensional solid with a mat plan, a net, and side and top views.
- Determine the changes to volume when a three-dimensional solid is enlarged proportionally.
- Construct familiar geometric shapes (such as a rhombus or a regular hexagon) using construction tools such as tracing paper, a compass and straightedge, or a dynamic geometry tool.
- Explore the relationships between angles, arcs, and chords in a circle.
- Develop an understanding of conditional probability and more formal mathematical definitions of independence.
- How to find the volume and surface area of a pyramid, cone, and a sphere.
- How to find the measure of angles and arcs that are formed by tangents and secants.
- About the relationships between the lengths of segments created when tangents or secants intersect outside a circle.

Assessment and Grading (BP 5121 / AR 5121**):** To ensure that every student has an equal opportunity to demonstrate their learning, the course instructors implement aligned grading practices and common assessments with the same frequency.

1. Grading categories and their percentage weights:

Weight of assignments and/or components of the grade: The final grade will be composed of the following:

Students' grades will be determined as follows:

Quizzes 20%
Homework/Classwork/Projects/Participation 15%
Cumulative Exam 1 15%
Cumulative Exam 2 15%
Cumulative Exam 3 15%
Cumulative Exam 4 (Final) 20%

2. Achievement evidence collected within each grading category:
   Homework, Classwork, Projects, Participation, Quizzes, and Cumulative Exams.
3. Grading scales:

90-92.49% A-	92.50-97.49% A	97.50-100% A+
80-82.49% B-	82.50-87.49% B	87.50-89.99% B+
70-72.49% C-	72.50-77.49% C	77.50-79.99% C+
60-62.49% D-	62.50-67.49% D	67.50-69.99% D+
50-59.99% F		

4. Homework/outside of class practices (AR 6154):

Complete assignments will receive full credit when checked in class.

5. Excused absence make up practices (Education Code 48205(b))

6. Academic integrity violation practice MVHS Academic Integrity Policy

   A student's education and integrity are extraordinarily valuable. Thus, students are expected to do their own work. If a student is concerned that they may not be able to complete their own work, they should consult their teacher for assistance. Student or parents/guardians who are unclear about what constitutes cheating should consult the instructor and the district Academic Integrity policy posted on the instructor's website. District policy regarding cheating will be followed at all times.

7. Late work practices:

   Late complete assignments will be accepted until the next test and will receive up to 80% credit. Incomplete assignments will receive partial credit.

8. Revision practices:
   There will be alternate "make up" versions of the first three cumulative tests so that students who miss a test and have an excused absence will be able to make up the test. Test scheduling will be determined by the teacher, with students having the opportunity for input about an appropriate testing time. The student will have a day for each day of the absence, up to three days, to make up a missed test. The cumulative test will replace all or part of the previous test if it improves the grade. Quizzes leading up to an exam will be replaced if the exam score is higher.

9. Extra credit practices: No extra credit opportunities.

Instructors' email addresses:

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Additional information:
We at MVHS value an equitable and collaborative learning environment in which students and staff respect the diversity of our society. We value the intellectual, emotional and physical well-being of our community. We are committed to empowering lifelong learners who can think critically, solve problems creatively, and participate ethically at MVHS and in our greater democratic society.