Montclair High School
Course Syllabus

Department: Mathematics
Course: Geometry
Level: Academic
Credits: 5 Credits

Course Description:
This Geometry course provides the student with in-depth instruction, an above average pace of instruction, critical thinking skills and a cooperative learning environment. At the completion of the course, the student will be able to understand the basic properties of geometric figures involving area and volume, deduction, induction, congruent triangles and similar figures. Students are expected to be able to read and solve problems each night.

Standards
Common Core Standards for Math

Anchor Text(s):

Text Title	Publisher/Author	Year/Edition	ISBN	Text Distribution
Prentice Hall Mathematics Geometry	Pearson Education, Inc	2004	0-13-062560-4	Online Version, Hard copy on request

Supplementary Materials:
Tools needed for the course: ruler, protractor, scientific calculator.

Units of Study:
- Points, lines, planes and angles
- Reasoning and proof
- Perpendicular and parallel lines
- Congruency in triangles and other polygons
- Quadrilaterals
- Proportion and similarity
- Right triangles
- Circles
- Polygons and arcs
- Transformations
- Constructions

Proficiencies:
By the end of this course, students will:
- Differentiate among various concepts of points, lines and angles leading to geometric postulates and theorems

- Understand if-then statements as applied to definitions, theorems and postulates
- Prove triangles congruent using SSS, SAS, ASA, AAS, and HL theorems
- Understand the difference between deduction and induction
- Recognize and apply the basic properties of parallel and perpendicular lines
- Understand and use the relationships between the seven major types of quadrilaterals to solve problems
- Recognize convex polygons and solve problems about their interior and exterior angles
- Recognize similar figures and solve problems using scale factor
- Understand and use formulas area of quadrilaterals and circles
- Understand and use formulas for surface area and volume prisms, pyramids, cones, cylinders and spheres
- Apply the Pythagorean Theorem and properties of special right triangles to solve problems
- Know and apply the distance and midpoint formulas for tow dimensional coordinate geometry problems
- Understand properties of ratios and proportions
- Use properties of circle to solve for various segments and angles
- Solve right triangles using trigonometric ratios

Evaluation & Assessment:
- Tests   40 %
- Quizzes   30 %
- Homework   15 %
- Classwork   15 %