Geometry is a one semester course which gives 1 math credit. This class is the second course in the core math program at MEHS, and the minimum credit required for graduation.

Units:

| 1. FOUNDATIONS FOR GEOMETRY |  |
| :--- | :--- |
| 1.1 | Understanding Points, lines, and Planes |
| 1.2 | Measuring and Constructing Segments |
| 1.3 | Measuring and Constructing Angles |
| 1.4 | Pairs of Angles |
| 1.5 | Using Formulas in Geometry |
| 1.6 | Midpoint and Distance in the Coordinate Plane |
| 1.7 | Transformations in the Coordinate Plane |

2. GEOMETRIC REASONING
2.1 Using Inductive Reasoning to Make Conjectures
2.2 Conditional Statements
2.3 Using Deductive Reasoning to Verify Conjectures
2.4 Biconditional Statements and Definitions
2.5 Algebraic Proof
2.6 Geometric Proof
2.7 Flowchart and Paragraph Proofs
3. PARALLEL AND PERPENDICULAR LINES
3.1 Lines and Angles
3.2 Angles Formed by Parallel Lines and Transversals
3.3 Proving Line Parallel
3.4 Perpendicular Lines
3.5 Slopes of Lines
3.6 Lines in the Coordinate Plane
4. TRIANGLE CONGRUENCE
4.1 Congruence and Transformations
4.2 Classifying Triangles
4.3 Angle Relationships in Triangles
4.4 Congruent Triangles
4.5 Triangle Congruence: SSS and SAS
4.6 Triangle Congruence: ASA, AAS, and HL
4.7 Triangle Congruence: CPCTC
4.8 Introduction to Coordinate Proof
4.9 Isosceles and Equilateral Triangles
5. PROPERTIES AND ATTRIBUTES OF TRIANGLES
5.1 Perpendicular and Angle Bisectors
5.2 Bisectors of Triangles
5.3 Medians and Altitudes of Triangles
5.4 The Triangle Midsegment Theorem
5.5 Indirect Proof and Inequalities in One Triangle
5.6 Inequalities in Two Triangles
5.7 The Pythagorean Theorem
5.8 Applying Special Right Triangles
6. POLYGONS AND QUADRILATERALS
6.1 Properties and Attributes of polygons
6.2 Properties of Parallelograms
6.3 Conditions for Parallelograms
6.4 Properties of Special Triangles
6.5 Conditions for Special Triangles
6.6 Properties of Kites and Trapezoids
7. SIMILARITY
7.1 Ratios in Similar Polygons
7.2 Similarity and Transformations
7.3 Triangle Similarity: AA, SSS, and SAS
7.4 Applying Properties of Similar Triangles
7.5 Using Proportional Relationships
7.6 Dilations and Similarity in the Coordinate Plane
8. RIGHT TRIANGLES AND TRIGONOMETRY
8.1 Similarity in Right Triangles
8.2 Trigonometric Ratios
8.3 Solving Right Triangles
8.4 Angles of Elevation and Depression
8.5 Law of Sines and Law of Cosines
8.6 Vectors
9. SPATIAL REASONING
11.1 Solid Geometry
11.2 Volume of Prisms and Cylinders
11.3 Volume of Pyramids and Cones
11.4 Spheres
12 CIRCLES
12.1 Lines that Intersect Circles
12.2 Arcs and Chords
12.3 Sector Area and Arc Length
12.4 Inscribed Angles
12.5 Angle Relationships in Circles
12.6 Segment Relationships in Circles
12.7 Circles in the Coordinate Plane
10. PROBABILITY - (This unit is occasionally cut, depending on time available at the end of the semester.)
13.1 Permutations and Combinations
13.2 Theoretical and Experimental Probability
13.3 Independent and Dependent Events
13.4 Two-Way Tables
13.5 Compound Events
