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

11. 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

13. 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*