COURSE TITLE: Geometry
COURSE LENGTH: 1 year
COURSE CREDIT: 1 credit

COURSE TYPE: required
GRADE LEVEL: 9, 10
PREREQUISITE: Algebra 1

COURSE GOALS:

1. Students will identify and sketch geometric figures, use postulates to identify congruent segments, find lengths of segments in the coordinate plane, and find the midpoint of a segment.
2. Students will describe patterns, including visual and number patterns, and use inductive reasoning to make and test conjectures.
3. Students will classify angle pairs formed by three intersecting lines, study angle pairs formed by a line that intersects two parallel lines, and use angle relationship to prove lines parallel.
4. Students will classify triangles, find measures of angles of triangles, identify congruent figures, and prove triangles congruent.
5. Students will use properties of midsegments to find lengths of segments in triangles.
6. Students will use ratios, proportions, and geometric means to solve geometry problems.
7. Students will investigate side lengths and angles in triangles.
8. Students will identify angle measures in polygons.
9. Students will perform translations with vectors, algebra, and matrices.

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COURSE CONTENT:

1. Essentials of geometry
2. Reasoning and proof
3. Parallel and perpendicular lines
4. Congruent triangles
5. Relationships within triangles
6. Similarity
7. Right triangles and trigonometry
8. Quadrilaterals
9. Properties of transformations