

A. Geometry Syllabus

Course Description/Goals:

Applied Geometry This course modifies Geometry content to meet the individual learning requirements of students as determined by the ARD committee. In Applied Geometry, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra I to strengthen their mathematical reasoning skills in geometric contexts. Within the course, students will begin to focus on more precise terminology, symbolic representations, and the development of proofs. Students will connect previous knowledge from Algebra I to Geometry through the coordinate and transformational geometry strand. Though this course is primarily Euclidean geometry, students should complete the course with an understanding that non-Euclidean geometries exist. Students will use deductive reasoning to justify, prove and apply theorems about geometric figures.

Course TEKS/Objectives:

The Geometry TEKS (Texas Essential Knowledge and Skills) are organized into reporting categories, each focusing on a specific area of algebra. These categories include: Coordinate and Transformational Geometry, Logical Argument and Constructions, Triangles and Trigonometry, Measurement of 2D and 3D Figures, and Probability. Each category contains specific standards (TEKS) that students are expected to master.

<https://tea.texas.gov/sites/default/files/ch111c.pdf>

Course Outline:

Semester 1	Semester 2
-Geometric Figures and Basic Reasoning -Distance, Midpoint, and Angle Measurements -Angles, Parallel and Perpendicular Lines -Transformations -Triangle Congruence -Properties of Triangles -Similar Triangles	-Special Right Triangles -Trigonometry -Quadrilaterals -Interior and Exterior Angles of Polygons, Area of Polygons -Surface Area and Volume -Circles - Equations and Segments -Circles - Angles and Arcs, Area of Sector -Probability