

Calallen ISD 2025-2026
Syllabus - Template

Campus: Calallen High School

Course &/or Grade Level: Geometry – Grades 9 & 10

Course Description: This course conveys an introduction to the basic structure of geometry (formula proofs) with a stress on developing concepts & applications of theorems. Concepts of space geometry are integrated with plane geometry. Algebraic skills are reviewed & strengthened. Area, volume, constructions, & trigonometry are included.

Semester 1: August 13 – December 19, 2025

1st Quarter Topics	2nd Quarter Topics
Unit 1: Foundations of Geometry • Points, Lines & Planes • Distance & Length • Segment Addition • All About Angles & Angle Measures Unit 2: Logical Reasoning • Conditional Statements • Inductive/Deductive Reasoning • Venn Diagrams Unit 3: Functions, Parallel Lines & Transversals Tests • Parallel Lines, Transversals, & Angles • Angles & Parallel Lines • Proving Lines Parallel Unit 4: Triangle Congruency Postulates • Classifying Triangles • Congruent Triangles & Corresponding Parts • Proving Triangles & Congruent (proofs)	Unit 5 & 6: Special Triangles & Quadrilaterals • Triangle Inequalities • Special Segments of Triangles • Properties of Quadrilaterals Unit 7: Similar Figures • Exploring Similarities • Properties of Similar Figures • Proving Triangles Similar • Proportional Reasoning • Parallel Lines & Proportional Parts in Triangles Unit 8: Pythagorean Theorem/Special Right Triangles • Modeling the Pythagorean Theorem • Pythagorean Theorem Formula (study trips) • Simplify Radicals • Geometric Mean • Special Right Triangles

Semester 2: January 5 – May 29, 2026

3 rd Quarter Topics	4 th Quarter Topics
Unit 9: Transformations • Reflections & Lines of Symmetry • Translations & Rotations • Tessellations Unit 8: Trigonometry • Trigonometric Ratios “SOH-CAH-TOA” • Trigonometric Applications • Angles of Elevation & Depression • Laws of Sine & Cosine Unit 10: Circles • Attributes of Circles • Arcs & Chords • Special Segments & Angles Unit 11: Perimeter, Circumference, & Area • Perimeter, Circumference, & Area • Circumference & Area of Circles • Equations of Circles • Arc Length & Area of Sectors • Measuring Composite Figures • Area of Composite Shapes/Floor Plans	Unit 12: Continued Orthographic & Isometric Views • Orthographic & Isometric Drawings • Three Dimensional Solids • Cross Sections of 3D Solids Unit 13: Surface Area of Polyhedron • Nets & Surface Area • Unwinding the Surfaces of Prisms & Cylinders • Surface Areas of Prisms & Cylinders • Surface Area of Pyramids, Cones, & Spheres Unit 14: Volume & Dimension Change • Volumes of Polyhedrons • Dimensional Change – Volume Comparison Unit 15: Constructions • Constructing Segments & Angles • Constructing Perpendicular Lines • Constructing Parallel Lines Unit 16: Non-Euclidean Geometry • Taxi-cab Geometry • Spherical & Hyperbolic Geometry Unit 17: Probability • Representing Sample Space • Probability with Permutations & Combinations • Geometric Probability • Probabilities of Independent & Dependent Events

**Minor adjustment to the schedule may be made based on campus schedules & student needs.*