

Geometry

Syllabus

Textbook: Test Book Elementary Geometry for College Students 6th Edition

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Prerequisites: Algebra I

Credit: 1

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Course Description:

This course develops a structured mathematical system employing both deductive and inductive reasoning. It includes plane, spatial, coordinate, and transformational geometry. Algebraic methods are used to solve problems involving geometric principles. Live video demonstrations.

Attendance login requirements: Students must log into class at the scheduled class time and remain until class ends. Student must attend class 165 days per year.

Homework: Homework assignments will be given at the discretion of the instructor.

Class Participation: All class participation will be online. Instructor will give written feedback on progress and acceptable work directly to student online.

Course Grade Policy:

90-100 average = A

80-89 average = B

70-79 average = c

60-69 average =D

Semester I

[Unit 1.1 Sets Statements and Reasons.](#)

[Unit 1.2 Informal Geometry and Measurement](#)

[Unit 1.3 Definitions and Postulates](#)

[Unit 1.4 Angles and Their Relationships](#)

[Unit 1.5 Introduction to Geometric Proof](#)

[Unit 1.6 Relationships: Perpendicular Lines](#)

[Unit 1.7 The Formal Proof of a Theorem](#)

[Unit 2.1 The Parallel Postulate and Special Angles](#)

[Unit 2.2 Indirect Proof](#)

[Unit 2.3 Proving Lines Parallel](#)

[Secondary Education Geometry Unit 2.4 Angles and Triangles](#)

[Unit 2.5 Convex Polygons](#)

[Unit 2.6 Symmetry and Transformation](#)

[Unit 3.1 Congruent Triangles](#)

[Unit 3.2 Corresponding Parts of Congruent Triangle](#)

[Unit 3.3 Isosceles Triangles](#)

[Unit 3.4 Basic Constructions Justified](#)

[Unit 3.5 Inequalities in a Triangle](#)

[Secondary Education Geometry Unit 4.1 Properties of Parallelogram](#)

[Unit 4.2 The Parallelogram and Kite](#)

[Unit 4.3 The Rectangle, Square, and Rhombus](#)

[Unit 4.4 Trapezoid](#)

[Unit 5.1 Ratios, Rates, and Proportions](#)

[Unit 5.2 Similar Polygons](#)

[Unit 5.3 Proving Triangles Similar](#)

[Unit 5.4 The Pythagorean Theorem](#)

[Unit 5.5 Special Right Triangles](#)

[Unit 5.6 Segments Divided Proportionally](#)

Mid Term Exam

Semester II

[Unit 6.1 Circles and Related Segments and Angles](#)

[Unit 6.2 More Angle Measures in the Circles](#)

[Unit 6.4 Some Constructions and Inequalities for the Circle](#)

[Unit 7.1 Locus of Points](#)

[Unit 7.2 Concurrence of Lines](#)

[Unit 7.3 More About Regular Polygons](#)

[Unit 8.1 Areas and Initial Postulates](#)

[Unit 8.2 Perimeter and Area of Polygons](#)

[Unit 8.4 Regular Polygons and Areas](#)

[Unit 8.5 More Area Relationships in a Circle](#)

[Unit 9.1 Prisms, Area, and Volume](#)

[Unit 9.1 Pyramids, Area, and Volume](#)

[Unit 9.3 Polyhedrons and Spheres](#)

[Unit 10.1 The Cosine Ratio and Applications](#)

[Unit 10.1 The Rectangular Coordinate System](#)

[Unit 10.1 The Unit Sign Ratio and Applications](#)

[Unit 10.2 Graphs of Linear Equations and Scope](#)

[Unit 10.3 Preparing to Do Analytic Proofs](#)

[Secondary Education Geometry Unit 10.4 Analytic Proofs](#)

[Secondary Education Geometry Unit 10.5 Equations of Lines](#)

[Unit 10.6 The Three-Dimensional Coordinate System](#)

[Unit 11.3 The Tangent Ratio and Other Ratios](#)

[Unit 11.4 Applications with Acute Triangles](#)

Final Exam