

Course Introduction

This Geometry course will allow students to apply the concepts of Algebra 1 to geometric reasoning as they solve problems regarding geometric figures such as triangles, polygons, and circles. Students will have the opportunity to learn and use appropriate mathematical language as they apply both inductive and deductive reasoning in problem solving.

Course Description

Geometry focuses on the properties and applications of common geometric figures in both two- and three-dimensions such as points, lines, planes, polygons, circles, prisms, pyramids, cylinders, cones, and spheres. Students will learn formulas for calculating distance, midpoint, perimeter, circumference, area, and volume for these figures; and they will use these geometric figures to continue progressing in their understanding of transformation, congruence, and similarity. In the Geometry course, students will learn to use both inductive and deductive reasoning as they look for patterns and create two-column, paragraph, flow, and indirect proofs. Students will also learn about ratios and proportions as they study right triangle trigonometry and probability.

This is a yearlong course consisting of 13 units. Upon successful completion students will receive 1 credit towards high school graduation.

Course Prerequisites

Minimum grade of a “C” in Algebra 1.

Course Overview

Semester 1

- Tools of Geometry
- Reasoning and Proof
- Parallel and Perpendicular Lines
- Congruent Triangles
- Relationships Within Triangles
- Polygons and Quadrilaterals

Semester 2

- Similarity
- Right Triangles and Trigonometry
- Transformations

- Area
- Surface Area and Volume
- Circles
- Probability

Required Course Materials

Please access the list of course materials from the OC Online book ordering system and order your materials as soon as possible. Oftentimes, course materials are on back order and you may experience a delay in receiving them, causing students to fall behind in their online coursework. When ordering used or rented materials, be careful that online access codes are also current.

Methods of Instruction

Students will view an instructional video for each lesson in this course and then complete a written assignment from the textbook. Additional practice is assigned through MathXL, which is an interactive online math program that will provide students immediate feedback on their work and offer help when needed. Students participate in discussions which will allow an opportunity to interact with classmates, as well as weekly synchronous sessions in which they can share questions and get answers directly from their instructor.

Methods of Evaluation

Student learning will be assessed through the following tools:

- Mid-unit quizzes
- End of unit tests
- Cumulative end of semester final exams

Daily MathXL assignments will be graded for completion. Participation in synchronous sessions and end of unit discussions is required and will also be counted in the student's grade.

Grading Policy:

Students will demonstrate mastery through the following formative and summative assessments:

- 40% Assignments
- 10% Participation (Discussion Posts, Synchronous Sessions)
- 10% Quizzes
- 25% Final Exam
- 15% Unit Tests