

Prerequisite courses: none

Grade level: 9-12

Course Description

In this course, students will explore transformations, similarity, symmetry, scale drawings, and three-dimensional geometry. Students will investigate congruence and similarity through transformations, including translations, reflections, rotations, and dilations on the coordinate plane. The course delves into the relationships between scale factor, area, and proportions in scale drawings, as well as the geometry of three-dimensional figures. Additionally, students will calculate the volume and surface area of prisms, pyramids, cones, spheres, and composite figures. This course emphasizes critical thinking, spatial reasoning, and real-world problem-solving.

This course is part of the Exceptional Students Course Suite, designed for high school students working three or more grade levels behind. The Exceptional Students courses are ideal for students whose IEPs allow them to earn credit for below-grade-level coursework.

Course Objectives

Students will meet the following goals in this course.

- Explore congruence and similarity using transformations and scale factors on the coordinate plane.
- Analyze and apply properties of reflections, translations, rotations, and dilations to solve geometric problems.
- Solve real-world problems involving scale drawings, proportions, and dimensional analysis.
- Calculate the volume and surface area of prisms, pyramids, cones, spheres, and composite figures.
- Identify and describe symmetry in two-dimensional shapes and apply it to geometric analysis.

Student Expectations

This course requires the same level of commitment from students as a traditional classroom course. Students are expected to spend approximately 5–7 hours per week online on:

- interactive lessons, which include a mixture of instructional videos and tasks.
- assignments, in which they apply and extend learning in each lesson.
- assessments, including quizzes, tests, and cumulative exams.

Basic Geometry II

Communication

Teachers will communicate with students regularly through discussions, emails, chats, and system announcements. Students will also communicate with classmates, either via online tools or face to face, to collaborate, ask and answer questions in peer groups, and develop speaking and listening skills.

Grading Policy

Students will be graded on work completed online and work submitted electronically to the teacher. The weighting for each category of graded activity is listed below.

Grading Category	Weight
Assignments	20%
Lesson quizzes	30%
Unit tests	30%
Cumulative exams	20%

Scope and Sequence

When students log on to Imagine Edgenuity, they can view the entire course map—an interactive scope and sequence of all topics under study. The units of study are listed below

Course Units
Unit 1: Transformations
Unit 2: Scale Drawings
Unit 3: Volume
Unit 4: Surface Area