

Introduction to Careers in Architecture and Construction

Course Overview and Syllabus

Grade level: 9–12

Prerequisite Courses: None

Credits: 0.5

Course Description

The goal of this semester-long high school course is to provide students with an overview of careers in architecture and construction in order to assist with informed career decisions. This dynamic, rapidly evolving career cluster is comprised of three pathways (fields): Design and Pre-Construction (Architecture and Engineering); Construction (Construction and Extraction); and Maintenance and Operations (Installation, Maintenance, and Repair). The Architecture and Construction career cluster is defined as careers in building, designing, managing, maintaining, and planning the built environment. The built environment encompasses all zones of human activity—from natural conservation areas with minimal human intervention to highly dense areas with tall skyscrapers and intricate highway systems to suburban cul-de-sacs. The interrelated components that make up the built environment are as varied and unique as the professionals who help shape it.

Course Objectives

Throughout the course, you will meet the following goals:

- Examine the ongoing process of shaping the built environment encompassing sites, utilities, structures, and infrastructure
- Review the phases of design and pre-construction, construction, and maintenance and operations
- Discuss how architecture and structures are used as symbols of the power of a civilization
- Investigate the relationship architecture has with technology, science, and innovation
- Explore the art and science of building through the professions of the architect and the engineer
- Evaluate the growing practice of sustainable green design and construction
- Learn about the USGBC and the LEED program, and their profound effect on green building
- Examine specialized careers that focus on artistry, from illustrators to ironworkers
- Discuss how the building arts are integrated with visual arts, botany, history, and fashion
- Explore how civic infrastructure connects buildings to their environment

Student Expectations

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

- Interactive lessons that include a mixture of videos, readings, and tasks
- Assignments in which you apply and extend learning in each lesson
- Assessments, including quizzes, tests, and cumulative exams

Communication

Your teacher will communicate with you regularly through discussions, email, chat, and system announcements. You will also communicate with classmates, either via online tools or face to face, as you collaborate on projects, ask and answer questions in your peer group, and develop your speaking and listening skills.

Grading Policy

You will be graded on the work you do online and the work you submit electronically to your teacher. The weighting for each category of graded activity is listed below.

Grading Category	Weight
Lesson Quizzes	20%
Unit Tests	20%
Cumulative Exams	20%
Assignments	10%
Projects	30%
Additional	0%

Scope and Sequence

When you log into Edgenuity, you can view the entire course map—an interactive scope and sequence of all topics you will study. The units of study are summarized below:

- Unit 1:** Introduction to Careers in Architecture and Construction
- Unit 2:** Building the Future: the Art and Science of Buildings
- Unit 3:** Green Jobs in Architecture and Construction
- Unit 4:** The Arts and the Built Environment: Jobs for Creatives
- Unit 5:** Building the City