

Course Name: Civil Engineering and Architecture

Duration: 1 Semester Full Year

Grade Level: 9th 10th 11th 12th (check all that apply)

Are there any prerequisites for the course?

Introduction to Engineering Design or completed Advance Engineering from SAC

WHAT this course is about:

You will learn important aspects of building and site design and development. We apply math, science, and standard engineering practices to design both residential and commercial projects and document our work using 3-D architectural design software.

WHY take this course:

Civil Engineering and Architecture is a high school level specialization course in the PLTW Engineering Program. In this course you are introduced to important aspects of building and site design and development. You will progress from completing structured activities to solving openended projects and problems that will require you to develop planning, documentation, communication, and other professional skills.

WHAT you'll learn:

- Overview of Civil Engineering and Architecture
- Residential Design
- Commercial Applications
- Commercial Building Systems

WHAT you'll do:

Through both individual and collaborative team activities, projects, and problems, students will solve problems as they practice common design and development protocols such as project management and peer review. Students will develop skill in engineering calculations, technical representation and documentation of design solutions according to accepted technical standards, and use of current 3D architectural design and modeling software to represent and communicate solutions.

WHERE this could take you:

- Civil Engineering
- Architecture
- Structural Engineering

OPTIONAL Course Outline ("scope and sequence", sequence chart, etc.)