

# Civil Engineering & Architecture Syllabus

## **Course Description/Goals:**

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

## **Course TEKS/Objectives:**

Civil Engineering and Architecture students are introduced to important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architectural design software. Utilizing the activity-project-problem-based (APB) teaching and learning pedagogy, students progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills.

<https://tea.texas.gov/academics/learning-support-and-programs/innovative-courses/pltw-civil-engineering-and-architecture.pdf>

## **Course Outline:**

Semester 1	Semester 2
<ul style="list-style-type: none"><li>-History of Civil Engineering and Architecture</li><li>-Careers in Civil Engineering and Architecture</li><li>-Building Design and Construction</li><li>-Cost and Efficiency Analysis</li><li>-Residential Designs</li></ul>	<ul style="list-style-type: none"><li>-Commercial Building Systems</li><li>-Structures</li><li>-Services and Utilities</li><li>- Building Site Considerations</li><li>-Design, Construction and</li><li>-Presentation of a residential/commercial development</li></ul>