



## *Civil Engineering and Architecture (CEA)*

Teacher: Ms. Holmes  
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Civil Engineering and Architecture is the study of the design and construction of residential and commercial building projects. The course includes an introduction to many of the varied factors involved in building design and construction including building components and systems, structural design, stormwater management, site design, utilities and services, cost estimation, energy efficiency, and careers in the design and construction industry.

The major focus of the CEA course is to expose students to the design and construction of residential and commercial building projects, design teams and teamwork, communication methods, engineering standards, and technical documentation

Utilizing the activity-project-problem-based (APPB) teaching and learning pedagogy, students will analyze, design and build electronic and physical models of residential and commercial facilities. While implementing these designs students will continually hone their interpersonal skills, creative abilities and understanding of the design process.

Civil Engineering and Architecture is a high school level course that is appropriate for 10th or 11th grade students interested in careers related to civil engineering and architecture. Other than their concurrent enrollment in college preparatory mathematics and science courses, this course assumes no previous knowledge.

Civil Engineering and Architecture is one of four specialization courses in the Project Lead The Way® high school pre-engineering program. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology

### **CEA Unit Summary:**

- Unit 1 Overview of Civil Engineering and Architecture
- Unit 2 Residential Design
- Unit 3 Commercial Applications
- Unit 4 Commercial Building Design

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### **Expectations:**

- Come to class each day prepared and ready to put forth your best effort.
- Be respectful of each other, the teacher, classroom materials, and yourself.
- Follow all policies set forth in the student handbook at Castro Valley High School.

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## **Materials :**

- Pencil and eraser and black or dark blue pen
  - Scientific or graphing calculator
  - Architect's Scale
  - Glue and/or tape
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## **Extra Help & Grading Policies:**

- I will have office hours during lunchtime and after school most days. I will also announce a zoom link available for when at home for further questions.

### **Grading Policy:**

I'm using a point system with a standard grading scale as follows:

Mark	Low %	High %
A+	98.00	110.00
A	92.00	97.00
A-	89.50	91.00
B+	88.00	89.40
B	82.00	87.00
B-	79.50	81.00
C+	78.00	79.40
C	72.00	77.00
C-	69.50	71.00
D+	68.00	69.40
D	62.00	67.00
D-	59.50	61.00
F	0.00	59.40

In the interest of equity, I have set the minimum grade to 30% so that struggling students can have a fighting chance to recover from low grades.

### **Retake Policy**

Students will be given multiple opportunities to show their level of mastery of the standards. Students will be allowed to perform additional assessments after completing relearning activities. Check in with your teacher for relearning activity suggestions.

**Homework/Classwork Policy**

Students will be assigned classwork and homework daily. Students are expected to actively participate and use these activities as learning opportunities. While Classwork and Homework will not be part of their grade, students are strongly encouraged to complete all assignments in order to master and maintain mastery of the standards. Classwork and Homework completion rates will be tracked to help students, parents/guardians, and teachers better understand student's learning practices.

**Success**

Every student can achieve an A if they work hard and have a positive attitude during class. The secret to doing well is simple: Come to class, do the work, meet deadlines, and demonstrate self-discipline.

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**About Me:** This is my fourth year at Castro Valley High School as a Trojan! I received my Bachelors of Science in Mechanical Engineering from UC Davis. In my free time, I enjoy knitting, traveling and tennis. I visited a Tuscan style medieval castle this summer. Although I did not grow up in Castro Valley, I really like it here. Get ready for an exciting year!!

Please complete the [Syllabus Agreement Form](#) to acknowledge that you have reviewed the attached course information. Keep this syllabus at the front of your engineering notebook or binder for reference.

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