

Principles of Engineering

Distance 2020-2021

Instructor Information

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Course Description

Principles of Engineering (POE) is a high school-level survey course of engineering. The course exposes students to some of the major concepts that they will encounter in a post-secondary engineering course of study. Students have an opportunity to investigate engineering and high tech careers. POE gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based (APPB) learning. Used in combination with a teaming approach, APPB learning challenges students to continually hone their interpersonal skills, creative abilities, and problem solving skills based upon engineering concepts. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.

Grading Scale/ Grading Information

Daily Lab – 20%

Projects/Inventory/Assessments – 80%

A+	100.1 & ↑	B+	89.9 – 88.0	C+	79.9 – 78.0	NC	69.9 & ↓
A	100 – 93.0	B	87.9 – 83.0	C	77.9 – 73.0		
A-	92.9 – 90.0	B-	82.9 – 80.0	C-	72.9 – 70.0		

Outcome Alignment

Personal Responsibility: Students will demonstrate their success with this outcome by completing projects and assignments on time, taking care with equipment, and utilizing all available resources, including tutorial time, classmates, and appointments with the instructor.

Civic Responsibility: Students will behave appropriately for a course in Engineering. Students will work with fellow classmates and respect other's property.

Communication: Students will develop an increasing level of skill at listening, speaking, reading, and writing to demonstrate understanding of technical ideas.

Critical Thinking: Students will demonstrate growth in problem solving skills using a variety of methods.

Necessary Materials/Supplies

- Computer (not a tablet) with internet access
- Headphones with a microphone
- Engineering Notebook (provided)
- Pencil
- Pen
- Straight Edge/Ruler

Classwork and Projects

Most projects and assignments will be done during class, which makes attendance extremely important. If you have an excused absence, you **may** be able to make up the work missed, but some classwork cannot be duplicated. Late assignments will only be considered for acceptance if an excused absence is presented. If you can make it up, you will have as many days to make up work, as you were absent. It is recommended that you check the website in the meantime so that you do not fall behind. Unexcused absences = 0 points on all missed assignments, quizzes and tests. Daily Lab grades can made up during office hours if you have an excused absence.

Contracts

Due to the nature of the class, there will be no contracts given.

College Credit Opportunity

Principles of Engineering is a dual enrollment course with Las Positas Community College. Students who have successfully completed POE with at least a B are eligible to receive 2 UC transferrable college credits. The class you are getting credit for is ENGR 10, Introduction to Engineering.

Academic Honesty

- Do your own work.
- Plagiarism and cheating will not be tolerated, and will be dealt with according to the school Academic Honesty Policy.
- Many projects will be done in groups. You are responsible for anything that is turned in with your name on it.

Class Time Expectations & Procedures

- Your camera must be on at all times, you must be in frame, and your face must be properly lighted. I need to be able to see your face and expressions as you interact with the class.
- Each class period, I expect your full attention. Homework is almost never assigned, so staying engaged in class is essential for your success.
- Distance learning is something we are all getting used to, please be patient with your peers, with me, and with yourself as we navigate this together.

Strategies for getting an A

- Stay organized!
- Keep up to date with the class website: www.berbawy.com
- Collaborate on ideas with peers; the real-world values results, which often comes from the efforts of a group rather than an individual
- Utilize office hours for additional work time. When permitted, come on campus to use equipment and get more hands-on experience.
- When in doubt, ASK! Never assume you understand. There is nothing wrong with asking questions of your peers or of myself in or out of class.