

5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: ENGR 10A **DIVISION:** 10 **ALSO LISTED AS:**

TERM EFFECTIVE: Fall 2022

CURRICULUM APPROVAL DATE: 04/25/2011

SHORT TITLE: INTRO TO ENGR I

LONG TITLE: Introduction to Engineering I

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
2	18	Lecture:	2	36
		Lab:	0	0
		Other:	0	0
		Total:	2	36

COURSE DESCRIPTION:

Engineering 10A introduces students to the engineering profession. The course explains the engineering education pathways and explores effective strategies for students to reach their full academic potential. Topics will include an introduction to the various engineering disciplines; the role of engineers and engineering in society; the curriculum requirements for the various engineering disciplines at different four-year institutions; academic success strategies; personal and professional development techniques; an introduction to the engineering design process; an introduction to engineering problem-solving methodologies; engineering

STUDENT LEARNING OUTCOMES:

1. Explore the engineering profession and compare and contrast the various disciplines.

Measure of assessment: Exam and homework.

Total 36 Lec Hours.

HOURS: 2 Lec

TOPIC: Definition and history of engineering. Introduction to various engineering disciplines. Role of engineers and engineering in society.

STUDENT PERFORMANCE OBJECTIVE: Students will identify the role of an engineer in society and the various fields of engineering.

OUT OF CLASS ASSIGNMENTS: Read chapter 1 from book.

HOURS: 2 Lec

TOPIC: Keys to success in engineering study, Mindsets, Attitudes, ABET, Education models.

STUDENT PERFORMANCE OBJECTIVE: Students will develop strategies to succeed academically.

OUT OF CLASS ASSIGNMENTS: Written assignment HW 1.

HOURS: 2 Lec

TOPIC: Rewards and opportunities of an engineering career, greatest engineering achievements.

STUDENT PERFORMANCE OBJECTIVE: Students will develop personal goals for their careers.

OUT OF CLASS ASSIGNMENTS: Read chapter 2.1-2.6 from book and written assignment HW 2.

HOURS: 2 Lec

TOPIC: Engineering Disciplines, Job Functions, Job Outlook, Professional Societies, Professional Registration.

STUDENT PERFORMANCE OBJECTIVE: Students will compare and contrast the various engineering disciplines.

OUT OF CLASS ASSIGNMENTS: Read chapter 2.7-2.10 from book and Written assignment HW 3.

HOURS: 2 Lec

OUT OF CLASS ASSIGNMENTS:

Required Outside Hours: 72

Assignment Description: Analyze and study pertinent text material, solved examples and lecture notes. Apply principles and skills covered in class by solving regularly-assigned homework problems. Regularly synthesize course materials in preparation for exams. Some of the assignments will be in the form of take home projects where students will work in groups.

METHODS OF EVALUATION:

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

CSU GE:

CSU B1, effective 201970

CSU B5, effective 201970

CSU B6, effective 201970

CSU B9, effective 201970

IGETC:

CSU TRANSFER:

Transferable CSU, effective 200230

UC TRANSFER:

Transferable UC, effective 201970

SUPPLEMENTAL DATA:

Basic Skills: N

Classification: Y

Noncredit Category: Y

Cooperative Education:

Program Status: 2 Stand