**ENGR 10 Course Outline as of Spring 2003**

# CATALOG INFORMATION

Dept and Nbr: ENGR 10 Title: INTRO ENGINEERING
Full Title: Introduction to the Engineering Profession
Last Reviewed: 12/12/2023

| Units | | Course Hours per Week | | Nbr of Weeks | Course Hours Total | |
|---|---|---|---|---|---|---|
| Maximum | 1.50 | Lecture Scheduled | 2.40 | 14 | Lecture Scheduled | 33.60 |
| Minimum | 1.50 | Lab Scheduled | 0 | 10 | Lab Scheduled | 0 |
| | | Contact DHR | 0 | | Contact DHR | 0 |
| | | Contact Total | 2.40 | | Contact Total | 33.60 |
| | | Non-contact DHR | 0 | | Non-contact DHR | 0 |

Total Out of Class Hours: 67.20 Total Student Learning Hours: 100.80

| | |
|---|---|
| Title 5 Category: | AA Degree Applicable |
| Grading: | Grade or P/NP |
| Repeatability: | 00 - Two Repeats if Grade was D, F, NC, or NP |
| Also Listed As: | |
| Formerly: | |

**Catalog Description:**
Non-mathematical introduction to the field of engineering. Students research and discuss the role of engineering and technology in society, and the expectations and experiences of engineers in academia & industry. Group activities, assignments, and interaction are emphasized. Course focuses on information technology as a way to assist in making informed decisions about career paths, majors, and schools. Course also includes information regarding engineering transfer requirements and coursework expectations. Job hunting skills such as networking, resume writing, and interviewing are explored. A short oral presentation will be required. Field trips and guest speakers augment student information gathering.

**Prerequisites/Corequisites:**

**Recommended Preparation:**
Course Eligibility for ENGL 100 OR Course Eligibility for EMLS 100 ( or ESL 100)

**Limits on Enrollment:**

**Schedule of Classes Information:**
Description: Non-mathematical introduction to the field of engineering. Students research and

discuss the role of engineering and technology in society, and the expectations and experiences of engineers in academia and industry. Group activities, assignments, and interaction is emphasized. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Course Eligibility for ENGL 100 OR Course Eligibility for EMLS 100 ( or ESL 100)
Limits on Enrollment:
Transfer Credit: CSU;UC.
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

| | | | | | |
|---|---|---|---|---|---|
| **AS Degree:** | **Area** | | | Effective: | Inactive: |
| **CSU GE:** | **Transfer Area** | | | Effective: | Inactive: |
| **IGETC:** | **Transfer Area** | | | Effective: | Inactive: |
| **CSU Transfer:** | Transferable | Effective: | Fall 1989 | Inactive: | |
| **UC Transfer:** | Transferable | Effective: | Fall 1989 | Inactive: | |

**CID:**
CID Descriptor:ENGR 110 Introduction to Engineering
SRJC Equivalent Course(s): ENGR10

**Certificate/Major Applicable:**
Not Certificate/Major Applicable

## COURSE CONTENT

**Outcomes and Objectives:**
The student will:
1. Analyze and discuss the role of engineering and technology in society.
2. Investigate the spectrum of engineering and engineering related occupations.
3. Develop study skills required for success in engineering courses.
4. Apply analytic techniques and intuitive estimation to solve simplified engineering problems.
5. Experience the advantages and difficulties of working in an engineering design group.
6. Access the internet and utilize the career and transfer centers to research career, college, and university information.
7. Summarize information gathered in assignments and present that summary to their fellow students in an oral presentation.
8. Conduct an interview with a working engineer to gather current and personal career information.
9. Synthesize all interview data and assess the various degrees of occupational compatability.
10. Write a resume and cover letter.

11. Investigate their academic and career goals and the institutions that help them achieve those goals.

**Topics and Scope:**

1. Role of engineering and technology in society.
2. Legal, moral, and ethical issues in engineering.
3. Overview of the engineering fields.
   a. mechanical
   b. electrical
   c. civil
   d. nuclear
   e. chemical/petroleum
   f. aeronautical
   g. architectural
4. Engineering communication and technology.
   a. pictoral communication
   b. oral communication
   c. written communication
   d. engineering design processes.
   e. role of computers in engineering
5. The engineering curriculum.
   a. SRJC & lower division
   b. State U., polytechs & upper divisions
   c. U.C. , private U. & graduate level
6. Occupational information.
   a. value and applicability of education to job
   b. demand for engineering/market trends
   c. interviewing techniques as a career info resource
   d. career literature and data awareness
   e. working conditions/pay rates
7. Engineering student survival skills.
   a. budgeting time
   b. preparation and participation in lectures
   c. working in a group
   d. working on problem sets
   e. writing lab reports
   f. study for and taking exams

**Assignment:**

All assignments emphasize the use of the internet to acquire information.

1. Report on an engineering issue.
2. Report on an engineering article (from a periodical)
3. Essay on career goals and interests.
4. Engineering problem solution.
5. Report on an engineering field.
6. Report on an engineering university program.
7. Interview an engineer.
8. Develop and produce a resume and cover letter.
9. Daily schedule.
10. Write an educational plan.

11. Questions list for an interview.
12. Oral presenation to the class.

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

| | |
|---|---|
| Written homework, Reading reports | Writing<br>20 - 50% |

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

| | |
|---|---|
| Homework problems | Problem solving<br>10 - 20% |

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

| | |
|---|---|
| Oral Presentation | Skill Demonstrations<br>2 - 20% |

**Exams:** All forms of formal testing, other than skill performance exams.

| | |
|---|---|
| None | Exams<br>0 - 0% |

**Other:** Includes any assessment tools that do not logically fit into the above categories.

| | |
|---|---|
| Group Evaluations, Attendance, Discussion Participation | Other Category<br>20 - 50% |

**Representative Textbooks and Materials:**
Instructor Prepared Materials and/or
Landis, Studying Engineering: A Roadmap to a Rewarding Career, 2nd Ed., Discovery Press, 2000