

Introduction to Engineering

Engr 10

De Anza College Summer 2015

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Office S48

Office hours:

Wed 1:00 pm to 2:00 pm

Tue 6:00 pm to 6:30 pm

Thurs 10:00 pm to 10:30 pm

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Course objectives

Introduction to Engineering is designed to allow students to explore engineering through hands-on design projects. Students would learn about the various aspects of the engineering profession and acquire both technical skills and non-technical skills, in areas such as communication, teamwork, and engineering ethics. Students would learn about human factors and engineering design factors in a design process and product life cycle stages.

During this course, students would be exposed to so many ideas and principals. As a team of 2 to 3 students, they would work on a project that excites them and matters to them. Since a working project is not required, it gives them an endless opportunity to deeply understand and analyze different aspects of both technical and non-technical of their projects. Theory is one the important parts of the projects. The goal of the Projects would be either to proof or verify a theory by gathering supporting data via creating proper tests, or to analysis why they were not able to achieve the expected outcome(s). Since it is highly recommended to create a diverse team, students would learn and have a good sense of the different engineering fields and how they overlap.

Students would understand the importance of team work and leadership. They would learn to understand the concept of project management by experiencing the importance of organizational skills and time management skills while keeping track of the budget. They would create PERT and Gantt chart. Constantly, they would be reminded to check for engineering ethics by discussing current engineering ethics news in the class

Communication is highly encouraged during this course. Students would be able to have several mini-presentations and draft reports opportunities before submitting their final ones. As a class, students would do peer evaluations by providing constructive feedbacks.

Course Requirement:

Begin this course with an open mind.

Text

Recommended but not required

ENGINEERING YOUR FUTURE, A Comprehensive Introduction to Engineering By William C. Oakes, PhD
2009-2010 Edition

Evaluation*:

Draft PPT **	15%
Draft Report	10%
Final PPT **	15%
Final Report	15%
Excel-HW	15%
Written Assignment	15%
Quizzes	10%
Class participation***	5%

***Late Excel HW and written assignment must be submitted on time otherwise up to 50% credit will be given**

No Makeup quiz will be given

Final report, PPT, and the presentation must be on time. No exception!

All team members must be present and participate during the presentations. Otherwise they would receive up to 50% credit

**** Written Reports**

10%	Overall content
10%	Format
10%	Summary/Introduction/Abstract
15%	Theory
20%	Project management such as Pert, Gantt, budget, Part, task assignment,...
20%	Test/Verification/Result/Setup- technique and interoperations
10%	Conclusion
5%	References/Appendixes

****PPT**

20%	Overall content
10%	Format
30%	Presentation (team and individual)
10%	Theory

30% Verifications/Outcome

*****class participation is mandatory if a guest speaker is scheduled**

Please note that the instructor would create a master project folder on the dropbox during the first week of the class to create access to each team. Students are required to contentiously upload their work on this folder. Students are responsible the check the calendar folder on a regular basis to see if there is a change in the schedule.

Course Schedule: Please refer to the calendar folder