College of Engineering and Computer Science, California State University, Sacramento

Engr 1 Introduction to Engineering, 1 unit, Fall 2012
Section 1, Call No. 85817, Tue 3:10 – 5:50 P.M., Riverside Hall, Room 3013
Section 2, Call No. 85818, Thu 3:10 – 5:50 P.M., Riverside Hall, Room 3013
Section 3, Call No. 86326, Tue 5:00 – 7:40 P.M., Riverside Hall, Room 1015
Section 4, Call No. 86325, Thu 5:00 – 7:40 P.M., Sequoia Hall, Room 316

Course Content: Provide problem-solving skills needed in all areas of engineering offered at Sacramento State. Students will be exposed to different areas of engineering and will understand the relationship between them. Statics and dynamics, materials testing, surveying, fluid mechanics, analog circuits and digital circuits, and robotics will be introduced. Computers will be used throughout.

Graded: Credit / No Credit.

Prerequisite: Algebra and Trigonometry or permission of instructor.

Textbook: ***Engineering Your Future – Brief Student's Guide***, Oakes, Leone and Gunn, 2nd Edition, 2006, Great Lakes Press. ISBN: 1-881018-96-2

Instructor: Russ Tatro Office: Riverside 5010
email: rtatro@csus.edu Website: www.csus.edu/indiv/t/tatror
Office Phone: 278-4878
Office Hours: See my website for current office hours.

Grading: Credit/No Credit.

Course Objectives:

1. Develop problem-solving skills through hands on laboratory experience/projects.
2. Work collaboratively as a team member to solve problems.
3. Develop communication skills – both oral and written.
4. Develop computer literacy.
5. Expose students to different engineering areas and show the relationships between those areas.

The course has a 50 minute lecture with the remaining time dedicated to laboratory work.

Section	Lecture Time and Room	Lab Time and Room
1 – Tues early	5:00 to 5:50 pm in RVR 1015	3:10 to 4:50 pm in RVR 3013
3 – Tues late	5:00 to 5:50 pm in RVR 1015	6:00 to 7:40 pm in RVR 3013
2 – Thur early	5:00 to 5:50 pm in RVR 1015	3:10 to 4:50 pm in RVR 3013
4 – Thur late	5:00 to 5:50 pm in RVR 1015	6:00 to 7:40 pm in RVR 3013

Thursday lecture moves to Sequoia Hall Room 316 only on 9/27, 10/25 and 11/29. All other lectures will be held in RVR 1015.

Homework: Problems shall either be from the textbook or created by the instructor. Check my course site for homework assignments.

Exams: There are no exams. All grading will be based attendance, homework and laboratory reports.

Grading Policy: Attendance is required at all scheduled laboratory sessions.
Satisfactory participation is required in all team activities. See the amplified grading policy on my course site.

Engr 1 – All sections – Lecture – Fall 2012

Week	DATE:	TOPICS:
1	08-28 & 08-30	Lecture – Chapter 1 - The History of Engineering
2	09-04 & 09-06	Lecture – Chapter 2 - Engineering Majors
3	09-11 & 09-13	Lectures – Chapter 3 - Profiles of Engineers
4	09-18 & 09-20	Lecture – Chapter 4 - Statistical Profile of the Engineering Profession – read on your own. Movie - Modern Marvels "Bridges"
5	09-25 & 09-27	Lecture – Chapter 5 - Succeeding in the Classroom Homework #1 Due – Career Essay Thursday Lecture meets in SQU 316
6	10-02 & 10-04	Movie - Nova "Medieval Siege"
7	10-09 & 10-11	Lecture – Continue Succeeding in the Classroom Chapter 6 - Problem Solving – read own your own
8	10-16 & 10-18	Lecture – Chapter 11 - Ethics Homework #2 – Technology Analysis Essay – due at the start of your lab period.
9	10-23 & 10-25	Lecture – Chapter 7 - Computer Tools for Engineers Thursday Lecture meets in SQU 316
10	10-30 & 11-01	Lecture – Chapter 8 - Teamwork Skills Homework #3 – Ethics Essay – due at the start of your lab period.
11	11-06 & 11-08	Lecture – Chapter 9 - Engineering Design
12	11-13 & 11-15	Lecture – Chapter 10 - Communication Skills
13	11-20 & 11-22	No Lecture – Thanksgiving Holiday week
14	11-27 & 11-29	Lecture – Chapter 10 - Communication Skills - continued
15	12-04 & 12-06	No lecture this week. Chapter 12 – Engineering Design – read own your own
16		**Exam Week – No exam – no lecture or lab**

Engr 1 – All sections – Laboratory – Fall 2012

Week	DATE:	TOPICS:
1	08-28 & 08-30	Introduction and ECS ID process Introduction to ECS Hive Discuss Lab 1 – Peer Profile Book
2	09-04 & 09-06	Lab 1 - Profile Book – Pictures and Biographies – due at start of lab Create Team Hive folders Discuss Lab 2 – Individual schedules
3	09-11 & 09-13	Lab 2 – Individual schedules – Printed copy – due at start of lab
4	09-18 & 09-20	Lab 3 – Bridge Design Introduction –Continue schedule review
5	09-25 & 09-27	Lab 3 – West Point Bridge Design – Team Presentations
6	10-02 & 10-04	Lab 4 – Trebuchet Introduction – Lab 3 Team Report Due – post to ECS Hive course site to your team's folder by the start of your lab period.
7	10-09 & 10-11	Lab 4 – Trebuchet building Revised individual schedule review
8	10-16 & 10-18	Lab 4 – Table top trebuchet Presentation & Testing
9	10-23 & 10-25	Lab 5 – Matlab Introduction Lab 4 Trebuchet - Team Report Due – post to ECS Hive course site to your team's folder by the start of your lab period.
10	10-30 & 11-01	Lab 6 – DC Circuits Lab 5 Matlab - Team Report Due – post to ECS Hive course site to your team's folder by the start of your lab period.
11	11-06 & 11-08	Lab 7 – Ollo Explorer Robotics Lab 6 DC Circuits - Team Report Due – post to ECS Hive course site to your team's folder by the start of your lab period.
12	11-13 & 11-15	Lab 7 – Ollo Explorer Robotics
13	11-20 & 11-22	No laboratory – Thanksgiving Holiday week
14	11-27 & 11-29	Lab 7 – Ollo Explorer Robotics – Team Presentations
15	12-04 & 12-06	No Lab this week Lab 7 Ollo Robotics - Team Report Due – post to ECS Hive course site to your team's folder by the start of your normal lab period. Last date for any late reports/assignments
16		**Exam Week – no lab**