

ENGR 1112 Intro to Engineering

Fall 2007

Department of Engineering and Physics

University of Central Oklahoma

Location	Howell Hall 220
Time	T 11:00 - 12:50 p.m.
Instructor	Evan Lemley, Ph.D.; Prof., Department of Engineering and Physics
Office	Howell Hall 221L
Web	http://evan.lemley.org/
email	elemley@ucok.edu
Phone	(405)974-5473
Office Hours	MTR 1:30 p.m. - 2:30 p.m. or by appointment
Final	R Dec 13, 2007 from 11:00 a.m. - 12:50 p.m. // Final Design Presentations

Course Description

This course provides an introduction to engineering disciplines, problem-solving techniques, engineering homework skills, engineering ethics, and university resources. A design project is an integral component of the course. As part of the project, students will function as part of an engineering team, use computer applications, write a report, and make an oral presentation.

Prerequisites

PHY 1003 or High School Physics and MATH 1593 or concurrent enrollment in MATH 1593.

Textbooks

Engineering Success, Peter Schiavone, Second Edition, Prentice Hall, 2002.

Engineering Design and Problem Solving, Steven K. Howell, Second Edition, Prentice Hall, 2002.

Objectives

Students will:

1. demonstrate an understanding of the various engineering disciplines and possible career paths in engineering;
2. demonstrate an understanding of the National Society of Professional Engineers Code of Ethics;
3. demonstrate an understanding of the process of obtaining profession engineering licensure;
4. demonstrate an understanding of basic engineering graphics;
5. demonstrate an ability to find engineering materials using university computing and library resources;
6. demonstrate an ability to produce a properly formatted engineering report using a word-processor including tabular data, graphs or other figures, and equations;
7. demonstrate an ability to prepare and give a technical presentation on an engineering topic;
8. demonstrate an ability to use the web for course assignments;
9. demonstrate an understanding of the rudiments of engineering design;
10. function as part of an engineering team in an engineering design project; and
11. demonstrate an understanding of techniques used to solve engineering problems.

Internet & E-mail

Access to the Internet and ability to send and receive E-mail are required for the class. If you do not have a computer at home or a laptop, you can use machines on the UCO campus: Look at <http://technology.ucok.edu/support/microcomplab.htm> for a full list of available general use computers on campus.

I will send e-mail to your "ucok" e-mail address on a pretty regular basis with class announcements and updates or corrections. Therefore you should check your "ucok" e-mail address often.

Portable Electronic Devices - including cell phones/pmp's/laptops

Please turn off any portable electronic devices during class. You may not access any portable electronic device during exams except calculators that are on the approved list. If you plan to take notes on the computer you must speak with Dr. Lemley and get permission. In any event you are not allowed to work on homework or any assignment during lectures unless told specifically to do so.

Instruction Techniques

Lecture will be used for about 50% of class time and team design and problem-solving will be used for about 50% of class time.

Class Polices

- Prepare before you arrive in class by reading sections ahead of time.
- Come to class (some lecture info will be placed on the course website – which you should review as well as attend class). Attendance in lecture sessions is **very strongly recommended and VVVV**. This is not the only one way you learn, but come prepared for the session and you will learn as much as possible.
- Take notes.
- Listen carefully.
- Keep background conversation and noise to a minimum in class and lab.
- You are responsible for paying attention to all class announcements and notes. Sometimes the course web-site may not have the latest announcements.
- Attendance is mandatory for all exams or other graded activities (e.g. project competitions or presentations).
- Cheating or academic dishonesty of any kind will not be tolerated (see Code of Student Conduct – http://evan.lemley.org/courses/2006_2007_cosc.pdf)
- Attendance in lab sessions is **required**. One absence per semester is allowed. Please do not bother telling the instructor about the absence unless it is your second or higher absence.

Paper Homework

Homework papers should be folded length-wise with your name written on the outside of the folded pages before turning it in. Each problem should fit all of the following criteria: clearly labeled, **one problem per sheet of paper**, legible and organized. HW papers that do not fit these criteria will be penalized accordingly. See the following link (http://evan.lemley.org/courses/hwk_format.php) for details on the presentation of HW problems.

Electronic Assignments

These may be homework, design projects, or other assignments. What will need to be turned in will vary, but whatever documents you need to submit should be attached to an e-mail message to Dr. Lemley. File names should be distinct from other students – following is the general format for file names:

date_assignment_name.ext

where

date = current date in MMDDYY format
assignment = assignment (e.g. *hwk* for a homework & *dpr* for design project)
name = last name or team name/number
ext = file extension that indicates the type of file (e.g. *c* for program source, *xls* for a spreadsheet, *ppt* for a PowerPoint presentation, etc...)

For example if you are submitting a report (an MS Word document) for Team#1 for design project 1, and you are submitting on 09/12/07, then your filename needs to be:

091207_desproj1_team1.doc

Late Homework

Homework is generally due at the **beginning of class**. HW turned in after this time will have 20% deducted per late class period. For example: if a paper is turned in at 11:01 p.m. on the day it is due, 20% will be deducted. If it is turned in at 10:59 a.m. just as the next class meeting is about to begin, 20% will also be deducted. Dr. Lemley will check e-mail just before class – any electronic assignment must be received by this time, or 20% will be deducted.

Team Design Project

There will be team design project in this course. This will incorporate some of the work you do throughout the semester into a single design. You will be working in a team with other students. We will have some early exercises so you get to know your team.

Grading Policies

The following table shows the breakdown of credit for the course.

HW and misc.	25%
Advising	25%
Attendance	25%
Projects	25%
Total	100%

Tentative Grading Scale

90-100% -- A, 80-90% -- B, 70-80% -- C, 60-70% -- D, <60% -- F

Advising

As part of this course you will be advised by a faculty member from the Engineering and Physics Department. Each Engineering Physics and Biomedical Engineering major at UCO has (or will have) an assigned faculty advisor. The advisement times and advisors will be posted near the end of October. Dr.

Lemley will announce these events in class. Advisement is a class requirement. Advisement is required each semester by all EP and BME students.

STUDENT INFORMATION SHEET / SYLLABUS ATTACHMENT

Go to: http://evan.lemley.org/courses/stud_info_sheet_fall07.pdf

DISABILITY SUPPORT SERVICES

http://www.ucok.edu/disability_support/

Tentative ENGR 1112 Intro to Engineering Schedule			
Week #	Day	Date	Topic
1	T	08/21/2007	Syllabus // Introduction // Why Engineering?
2	T	08/28/2007	Initial Design Meetings // Leadership Opportunities // Campus Organizations
3	T	09/04/2007	Academic Success in Engineering // Campus Resources
4	T	09/11/2007	Intro to Design Project
5	T	09/18/2007	Design Project // UCO BME Presentation
6	T	09/25/2007	UCO Background // Educational Goals // Academic Biography // Library
7	T	10/02/2007	Student Code of Conduct // Engineering Ethics // Design Project
8	T	10/09/2007	Design Project
9	T	10/16/2007	Design Project and RoboLab Intro
10	T	10/23/2007	BME and EP Advising Overview // Design Project
11	T	10/30/2007	Design Project // RoboLab
12	T	11/06/2007	Design Project // RoboLab
13	T	11/13/2007	Design Project // RoboLab
14	T	11/20/2007	Design Project // RoboLab
15	T	11/27/2007	RoboLAB Project Presentations and Competition
16	T	12/04/2007	Design Project
17	R	12/13/2007	11:00 a.m. - 12:50 p.m. // Final Design Presentations
Revised		08/21/2007	