**ENGR 1112 Intro to Engineering**
Spring 2007
Department of Engineering and Physics
University of Central Oklahoma

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| **Location** | Howell Hall 220 |
| **Time** | T 11:00 - 12:50 p.m. |
| **Instructor** | Evan Lemley, Ph.D.; Assoc. Prof. of Engineering and Physics |
| **Office** | Howell Hall 221L |
| **Web** | http://evan.lemley.org/ |
| **email** | elemley@ucok.edu |
| **Phone** | (405)974-5473 // (405)204-5616 |
| **Office Hours** | MWF 10:00 a.m. - 11:00 a.m. or by appointment. |
| **Final** | R May 3, 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. produce a basic web-page with hyper-text mark-up language;
10. demonstrate an understanding of the rudiments of engineering design;
11. function as part of an engineering team in an engineering design project; and
12. demonstrate an understanding of techniques used to solve engineering problems.

**Instruction Techniques**
Lecture will be used predominantly although sometimes recitation periods will be employed.

**All Homework**
Working HW problems in a timely manner is the best way to do well on exams and in the class as a whole. Homework is due at the beginning of the class period on the due-date or due-day.

**Non-Web Homework**
Homework should be neatly written on only one side of your paper, 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. You may visit the following site for an electronic version of the homework format requirements: http://evan.lemley.org/courses/hwk_format.php

Each HW problem you turn in is worth ten points. Some problems will be graded on detailed solutions and others will be graded on effort. I will **not** tell you ahead of time which or how many problems will be graded relative to a detailed solution, but on the returned and graded HW paper a check mark next to the problem number will indicate full effort (or ten points) and a numerical score (e.g. 8/10) next to the problem number will be used on those problems under more scrutiny.

**Grading Policies**
The following table shows the breakdown of credit for the course.

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| 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. This advisement will be arranged by Dr. Lemley who will give you the proper forms and arrange an advisement time. *Advisement is a class requirement. Dr. Lemley or a Engineering and Physics faculty member must sign off on all advisement forms before you will receive a grade for this course.*

**STUDENT INFORMATION SHEET / SYLLABUS ATTACHMENT**
See separate handout or go to:
http://www.busn.ucok.edu/academicaffairs/FORMS/Student%20Information%20SheetSPR07.pdf

| Tentative ENGR 1112 Intro to Engineering Schedule | | | |
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| **Week #** | **Day** | **Date** | **Topic** |
| 1 | T | 01/09/2007 | Syllabus // Introduction // Why Engineering? // Design Teams |
| 2 | T | 01/16/2007 | Initial Design Meetings // Leadership Opportunities // Campus Organizations // EPC Meeting |
| 3 | T | 01/23/2007 | Academic Success in Engineering // Campus Resources // Dr. Mauricio Sanchez – UCO EP Director |
| 4 | T | 01/30/2007 | Dr. John Bowen – UCO Chemistry Dept. // Intro to Design Project |
| 5 | T | 02/06/2007 | Design Project // UCO BME Presentation |
| 6 | T | 02/13/2007 | UCO Background // Educational Goals // Academic Biography // Library |
| 7 | T | 02/20/2007 | Student Code of Conduct // Engineering Ethics // Design Project |
| 8 | T | 02/27/2007 | Design Project |
| 9 | T | 03/06/2007 | Design Project and Robolab Intro |
| 10 | T | 03/13/2007 | BME and EP Advising Overview // Design Project |
| 11 | T | 03/20/2007 | **Spring Break – No Class** |
| 12 | T | 03/27/2007 | Design Project // RoboLab |
| 13 | T | 04/03/2007 | Design Project // RoboLab |
| 14 | T | 04/10/2007 | Design Project // RoboLab |
| 15 | T | 04/17/2007 | RoboLAB Project Presentations and Competition |
| 16 | T | 04/24/2007 | Design Project |
| 17 | R | 05/03/2007 | 11:00 a.m. - 12:50 p.m. // Final Design Presentations |
| Revised | | 01/11/2007 | |