ENGR 100 Introduction to Engineering

COURSE DESCRIPTION:
This course introduces the fields and careers of engineering. How one becomes an engineer is discussed. This is a required course for all engineering majors and should be taken early in the curriculum.

PREREQUISITE:
None.

SPECIAL MATERIALS:
None.

GENERAL OBJECTIVES:
Upon successful completion of this course, you will be able to:
1. Convey to some other person a broad notion of the nature of work an engineer does.
2. Discuss the differences between the primary fields of engineering.
3. Clearly present the reasons why you are currently leaning toward one particular field of engineering.
4. Set goals for your education and career.
5. Demonstrate an understanding of the academic requirements of the engineering degree of your choice.
6. Demonstrate an understanding of the engineering education process.
7. Demonstrate an understanding of the role of good communication skills (oral, written, graphical and electronic) in engineering.
8. Demonstrate an understanding that engineering is a lifelong learning process.
9. Implement academic success strategies (such as: time management, study techniques and study groups) necessary to allow you to achieve at the highest level you can.
10. Apply concepts of personal development to your life situation.
11. Demonstrate an understanding of the need to work effectively as an engineering team member.
COURSE REQUIREMENTS:
Assignments: We cover selected chapters in the text. Read the text before class.

CLOSURE POLICY:
Information on Olympic College campus closure may be found at:
http://www.olympic.edu/Campuses/AboutOC/OCNews/snow.htm  
My policy is to be on campus, when possible, if the campus is open. If I cannot come in I will use my voice mail message to indicate whether there will be class. I will post a message by 7 a.m. if possible.

You may sign up for email and/or text message notifications regarding campus closures at http://www.olympic.edu/alerts

POLICIES:
This is a one credit, Pass/No Credit, class. To receive the passing grade you must:

1. **Attend every class.** *It is expected that you will attend every class and join in the discussions (attendance will be taken).* **One unexcused absence, or more than 2 excused absences, will result in a No Credit grade for this class.** I am aware that life happens and you may need to miss a class. Absences will be excused on an emergency basis only. Missing class because you are overloaded or have misplaced your priorities or forgot class does not constitute an emergency. To receive an excused absence, you must talk to me in advance of the absence, or email me, or text me, or you must leave a message on my voice mail, stating the reason for your absence, prior to start of class on the day you are absent. You are responsible to learn the material you miss.

2. **Submit a two-page (minimum) paper by Tuesday, 11 December 2012 at noon.** Your paper will discuss the reasons behind your choice of careers and the steps you will need to take to succeed. The format is discussed on p 3 of this syllabus.

3. Meet with an Engineering Faculty Advisor (Krista Beer, Dr. Jeff Brown, or Linnea Hess) to work out an Education Plan for your Associate of Science degree. **You must have an approved Ed Plan in the OC Advising Relation Management System by 11 December, 2012 at noon.**

**Behavior:** It is expected that the focus of your classroom participation is learning engineering. Behavior that is disruptive to the learning process will be referred to the student conduct code as appropriate. Further you are expected to adhere to the National Society of Professional Engineers Code of Ethics for Engineers (cf., pages 4-5) in all aspects regarding your participation in this class as you will be required to do throughout your engineering career.
Paper Format

The paper must be typewritten, single-spaced, 12-point font, 1 inch margins all sides, and must use acceptable English sentence construction. The paper must be at least two pages long.

You must discuss each of the following topics:

1. Define, in your own words, the general nature of work done by an engineer,
2. The differences between the seven primary fields of engineering—you must use your own words,
3. Clearly articulate the reasons behind your current choice of engineering field,
4. What are the academic requirements of this field of engineering?
5. Present the goals you have set for your education and career, including any life style changes you will make to succeed,
6. Discuss why engineering involves life-long learning; that the bachelor of science degree is just a beginning,
7. Discuss the four-year school you are currently considering for transfer—discuss why you have chosen that four-year school; what are the transfer requirements for this school?
8. The implementation of academic success strategies and personal development in your life situation,
9. The role of good communication in engineering (is it important? why?), and
10. Why is modern engineering done in teams?
National Society of Professional Engineers (NSPE)

Code of Ethics for Engineers

Preamble

Engineering is an important and learned profession. As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness and equity, and must be dedicated to the protection of the public health, safety and welfare. Engineers must perform under a standard of professional behavior which requires adherence to the highest principles of ethical conduct.

I. Fundamental Canons

Engineers, in the fulfillment of their professional duties, shall:

1. Hold paramount the safety, health and welfare of the public.
2. Perform services only in areas of their competence.
3. Issue public statements only in an objective and truthful manner.
4. Act for each employer or client as faithful agents or trustees.
5. Avoid deceptive acts.
6. Conduct themselves honorably, responsibly, ethically and lawfully so as to enhance the honor, reputation and usefulness of the profession.

ENGINEER'S CREED

As a Professional Engineer, I dedicate my professional knowledge and skill to the advancement and the betterment of human welfare.

I pledge . . .

- To give the utmost performance;
- To participate in none but honest enterprise;
- To live and work according to the laws of man and the highest standards of professional conduct;
- To place service before profit, the honor and standing of the profession before personal advantage, and the public welfare above all other considerations.
- In humility and with the need for Divine Guidance, I make this pledge.

For further information visit the NSPE web site: http://www.nspe.org
Rights and Responsibilities of Professional Conduct

Professional conduct is the expectation for this class. This entitles each of you to certain rights and binds each of you to certain responsibilities. These include (but are not limited to):

1. **the right** to be treated with respect (professional employees are worthy of respect for no other reason than their status as a professional); the **responsibility** to treat others with respect no matter who they are and how you feel about them,

2. **the right** to be rewarded for exemplary performance; the **responsibility** to perform to the utmost of your capabilities,

3. **the right** to expect that class will begin and end on schedule and will be worth your time; the **responsibility** to arrive on time and participate to the best of your ability,

4. **the right** to timely feedback on your performance; the **responsibility** to meet all deadlines to the best of your abilities,

5. **the right** to know if the instructor will be absent; the **responsibility** to inform the instructor of your absence in a timely fashion.

6. **the right** to a clean and orderly work environment, and the **responsibility** to do your best to keep the work environment clean and orderly.

Gender, race, age and other discrimination or harassment is against the law and is not tolerated in the work place or in this class (remember the legal definition of discrimination or harassment starts with what the other person believes—if it makes them uncomfortable then it is wrong and possibly illegal—it simply is not relevant what you intend).

Everyone has bad days when their treatment of others falls short of desired intent. The legal definition of discrimination or harassment therefore focuses on patterns of treatment.

If someone is doing something that makes you uncomfortable, you should first talk to that person. If it does not stop, then talk to your manager (the instructor). If the instructor is unable or unwilling to help, you should go to the next level of management (Dr. Mark Harrison, Dean of Mathematics, Engineering, Sciences and Health, 475-7701). Everyone has the right to be free from discrimination and harassment in the work place, and the responsibility to confront it if it happens.