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## SCHOOL OF ENGINEERING

### COURSE SYLLABUS

**COURSE TITLE:** Engineering Ethics

**TERM:** Spring

**COURSE:** ENGR 4402

**YEAR:** 2012

**SECTION NO.:** 001

**TIME:** W 8:00-8:50 pm

**PLACE:** M 133

**INSTRUCTOR:** Dr. M. A. Karim, P.E.

**OFFICE LOCATION:** M 162D

**OFFICE HOURS:** M 04:00-06:00 pm

**OFFICE PHONE:** (678) 915-3026

W 04:00-07:00 pm

**E-MAILS:** [mkarim@spsu.edu](mailto:mkarim@spsu.edu)

\*Other hours by appointment

[makarim@juno.com](mailto:makarim@juno.com)

**DEPARTMENTAL PHONE:** (678) 915-4220

**NUMBER OF CREDIT HOURS:** 1-0-1 (Lecture-Lab-Total)

**PREREQUISITS:** None

**COREQUISITS:** None

**COURSE DESCRIPTION:** This course looks at the practice of engineering in the context of ethics and ethical theory. Issues of safety, liability, professional responsibility, legal obligations are considered in the context of case studies. Particular emphasis is given to the application of the Professional Engineering Code of Ethics published by the National Society of Professional Engineers. Students will consider the resolution of ethical dilemmas through the development and evaluation of various courses of action related to specific case studies.

**REQUIRED or ELECTIVE:** Required

**REQUIRED TEXT:** **Engineering Ethics: Concepts and Cases** by Charles E. Harris, Jr., Michael S. Pritchard, and Michael J. Rabins, Fourth Edition 2009, Wadsworth Cengage Learning, ISBN: 978-0-495-50279-1.

**REFERENCES:** Hold Paramount: The Engineer's Responsibility to Society, by P. Aarne Vasilind and Alastair S. Gunn, Second Edition 2011, Cengage Learning, ISBN: 978-0-495-29586-0.

**OTHER MATERIALS:** Handouts may be provided as needed. It is recommended that students take notes in a three ring binder since they may be receiving handouts throughout the semester. **SPSU email** and **GeorgiaView/Vista** systems will be used for messages and content delivery, respectively. Students should access these sites regularly.

**COURSE LEARNING OUTCOMES:** Upon successful completion of this course, students shall be able to:

- discuss the Code of Ethics published by the National Society of Professional Engineers;
- identify ethical conflicts in the work environment;
- articulate the ways in which ethical decisions conform to or conflict with the Code of Ethics;
- discuss the concept of professional responsibility with respect to relevant constituents (clients, profession, society, and peers); and
- develop reasonable responses to work-place situations that require ethical choices.

**COURSE REQUIREMENTS:**

1. **Attendance:** Students are expected and encouraged to attend class. Advance notice of an absence should be provided whenever possible. Makeup exams and acceptance of late assignments will be considered only for documented medical reasons, emergency circumstances, or other university sponsored activities.
2. **Homework:** All problem assignments must be submitted in the next class following the class in which the topic is discussed. Late homework WILL NOT be accepted. Exceptions may be considered in case of illness, serious emergencies, or other university sponsored activities. However, appropriate evidence must be presented in order to qualify for exceptions. All homework must be submitted on 8½"x11" white paper or on engineering design paper (preferable) with a cover page. Cover page should include student's name, course number and name, assignment number, assignment date, and due date. Show the detail work for full credit.
3. **Exams:** All exams are closed books and notes unless advised otherwise. NO make-up exams will be given. Exceptions may be considered in case of illness, serious emergencies, or other university sponsored activities. However, appropriate evidence must be presented in order to qualify for exceptions.
4. **Cheating:** Cheating on assignment and particularly on the examinations will not be tolerated. If you are caught cheating, you will get zero on the exam. You will be asked to move if you are caught looking at another student's work.
5. **Term Paper/Presentation:** A group project will be assigned that needs to be prepared and presented at the end of the semester.
6. **Class Decorum:** No cell phone use, eating, and/or multitasking are allowed during the class. For emergency, cell phone can be operated in vibration mode; however, students can receive an emergency call only stepping out of the class room.
7. **ADA Provisions:** "Students with disabilities, as defined by the Americans with Disabilities Act (ADA) of 1990, should contact the instructor during the first week of the semester regarding the accommodations necessary to complete the requirements of this course. The instructor will make reasonable adjustments to take into consideration the specific handicap of each student covered under the ADA. The students can also contact SPSU ADA coordinator at 678-915-7244 for additional help."

**GRADING POLICY:** All exams and assignments must be completed satisfactorily in order to pass the course. The evaluation process described below is subject to change by the instructor. Changes will be announced in the class.

<u>Class Work:</u>	<u>Total Grade:</u>
1. Class Discussion/Presentation - 55%	<b><u>Scale, Letter Grade, and GPA</u></b>
2. Mid Term 1 - 20%	90% - 100% A 4.0 (Excellent)
3. Final Exam (Comprehensive) - 25%	80% - 90% B 3.0 (Good)
	70% - 80% C 2.0 (Satisfactory)
<b>TOTAL - 100%</b>	60% - 70% D 1.0 (Passing)
	< 60% F 0.0 (Failure)
	-- -- WF 0.0 (Withdrawn after deadline)

The following symbols are approved for use in the cases indicated, but will not be included in the determination of the grade point average.

**"I"** This symbol indicates that the student was doing satisfactory work but, for non-academic reasons beyond his control, was unable to meet the full requirements of the course. The requirements for removal of an "I" are left to the respective institutions; however, if an "I" is not satisfactorily removed after three quarters of residence, the symbol "I" will be changed to the grade "F" by the appropriate official. (See Southern Tech policy - Removal of an Incomplete "I", on page 2).

**"W"** This symbol indicates that a student was permitted to withdraw without penalty. Withdrawals without penalty will not be permitted after the mid-point of the total grading period (including final examinations) except in cases of hardship as determined by the appropriate official of the respective institution.

**"V"** This symbol indicates that a student was given permission to audit this course. Students may not transfer from audit to credit status or vice versa.

**"K"** This symbol indicates that a student was given credit for the course via a credit by examination program approved by the respective institution's faculty (CLEP, AP, Proficiency, etc.).

**SCHEDULE:** One **50-minute** class per week.

**TENTATIVE LECTURE TOPIC/OUTLINE:** The following lecture topic/outline is subject to change by the instructor. Changes, if any, will be announced in the class.

<b>Class/Week</b>	<b>Tentative Lecture Topic/Outline</b>	<b>Chapter</b>
<b>Week 1</b>	Introduction to ethics.	Chap 1 + Handout
<b>Week 2</b>	Discussion and review of Code of Ethics published by the National Society of Professional Engineers.	Handout
<b>Week 3</b>	Continued the topic from week 2.	Handout
<b>Week 4</b>	Discussion and review of case studies related to identification of ethical conflicts in the work environment.	Book + Handout

<b>Class/Week</b>	<b>Tentative Lecture Topic/Outline</b>	<b>Chapter</b>
<b>Week 5</b>	Continued the topic from week 4.	Book + Handout
<b>Week 6</b>	Discussion and review of case studies to find the ways in which ethical decisions conform to or conflict with the Code of Ethics.	Book + Handout
<b>Week 7</b>	Continued the topic from week 6. <i>Review for Mid Term Exam 1.</i>	Book + Handout
<b>Week 8</b>	<b>Mid Term Exam 1</b>	---
<b>Week 9</b>	<b>No Classes – Spring Break</b>	---
<b>Week 10</b>	Professional responsibility – clients, society, and peers.	Book + Handout
<b>Week 11</b>	Continued the topic from week 10.	Book + Handout
<b>Week 12</b>	Continued the topic from week 10 and review of related case studies.	Book + Handout
<b>Week 13</b>	Continued the topic from week 12.	Book + Handout
<b>Week 14</b>	Review case studies related to work-place situations and develop reasonable responses with ethical choices.	Book + Handout
<b>Week 15</b>	Presentation of the group project. <i>Review for the Final Exam.</i>	---
<b>Week 16</b>	<b>Final Exam - Comprehensive</b>	---

**ABET CATEGORY:**    Engineering ethics:    100%