

EMIS 5390: ETHICS IN ENGINEERING

J-Term 2013 @ SMU-in-Plano

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Course Description: This Ethics in Engineering course is designed to:

1. Help engineering students recognize and understand ethical issues, including how to distinguish between and resolve different types of problems, such as factual issues, conceptual issues and moral issues;
2. Promote a sense of professional engineering responsibility;
3. Foster the development of analytical skills in ethics;
4. Help engineering students deal effectively with ambiguity and disagreement on ethical matters.

The main teaching methods for this course are case study analyses, research papers on important ethical prompts, and examinations.

Text: Martin, Mike W. and Roland Schinzinger (2004), *Ethics in Engineering*, 4th Edition, McGraw-Hill.

Office Hours: After each class and by appointment, or call/email anytime.

Email: Use “**SMU 5390:**” as the beginning of the subject of any emails that you send.

Course Requirements:

Students will engage in the following learning methods:

- Engineering-Oriented Case Study Analyses and Discussions (individually and in groups)
- Research Essays and Papers (answering prompts to ethical questions that might arise mainly in engineering environments)
- Examinations (to demonstrate understanding and recognition of ethical issues/dilemmas found mainly in engineering)

Exams/Grading: The course will consist of one midterm exam, one final exam, one research paper, and several in-class presentations/discussions. The exams may have some analytical problems, short answer/multiple choice questions, and essays. The midterm exam will account for 20% of your course grade, the research paper will count for 20% and the final exam will count for 35% of your course grade. Article summaries, class participation and presentations will count for the remaining 25% of your grade.

General Course Grading Guidelines:

A = 93 and more

A - = 90 to 92.9

B+ = 86 - 89.9

B = 82 - 85.9

B - = 76 - 81.9

C+ = 72 - 75.9

Research Paper: Students will be asked to prepare a comprehensive report and make a presentation on a current problem in engineering ethics (e.g., design innovations and protecting the public welfare). The report should be 10-12 pages double-spaced and should contain some original work and include proper citations of the work of others. All references/sources should be clearly identified. It should be concise, to the point and easily readable. Required format is: an abstract (or summary), an introduction, the main body of the paper containing your analysis of the situation, results and recommendations, and conclusion.

Class Schedule:

	<u>Topic(s)</u>	<u>Textbook (M&S)</u>	<u>Case(s)*</u>
Class 1 (Jan 7, M)	Engineering and Professionalism	Ch. 1 (1-31)	TV Antenna tower collapse
Class 2 (Jan 8, T)	Moral Reasoning/Frameworks	Ch. 2-3 (32-87)	tbd
Class 3 (Jan 9, W)	Engineering as Social Experimentation	Ch. 4 (88-116)	tbd

Class Schedule: (continued)

	Topic(s)	Textbook (M&S)	Case(s)*
Class 4 (Jan 10, T)	Safety/Workplace Responsibilities	Ch. 5-6 (117-188)	BP Deep-water Horizon
Class 5 (Jan 11, F)	Honesty (and Midterm)	Ch. 7 (189-218)	Academic Research
Class 6 (Jan 14, M)	Environmental Engineering	Ch. 8 (219-241)	Fukushima Power Plant
Class 7 (Jan 15, T)	Global Issues and Technology	Ch. 9-10 (242-298)	Google in China
Class 8 (Jan 16, W)	Research Paper Presentations (and Final)		

*Case studies to be determined will be assigned prior to each class session.

Additional Information

* Disability Accommodations: Students needing academic accommodations for a disability must first contact Ms. Rebecca Marin, Coordinator, Services for Students with Disabilities (214-768-4557) to verify the disability and establish eligibility for accommodations. They should then schedule an appointment with the professor to make appropriate arrangements. (See University Policy No. 2.4.)

* Religious Observance: Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

* Excused Absences for University Extracurricular Activities: Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue)

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**Student Information
(Please give this information to the instructors in Session # 1)**

Name:

Phone:

E-Mail:

Previous Degree and Discipline:

Employer:

Job Responsibility:

Years of service:

Objective for taking course:

What you expect to get out of this course (besides an "A"):