

## Philosophy 131.01 Introduction to Engineering Ethics

### Syllabus

Time: Tu/Thurs 3:30 – 5:18.

Place: McPherson Lab 2017

Instructor: Tim Fuller

Office: 214 University Hall

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Office phone: 292-3663

Office hours: Monday 1:30-3:30 and by appointment

Textbook: *Engineering Ethics: Concepts and Cases* (Paperback) 4<sup>th</sup> edition, Harris, Pritchard, and Rabins.

**Prerequisites:** There are no prerequisites for this class, just a willingness to think rigorously.

**Course description and goals:** This course is an introduction to engineering ethics, which stresses analytical reasoning and emphasizes clear thinking regarding the application of professional ethical codes to specific cases. Our particular focus will be on the National Society of Professional Engineer's (NSPE) ethical code but we will also look at the professional codes of other professional engineering organizations. In addition, we will briefly survey some of the major ethical theories proposed by philosophers and discuss the general relationship between advancing technology and society's ethical standards.

By the end of this class you will have a feel of what it is like to think systematically and analytically about particular ethical dilemmas. You will improve your ability to clearly express and support your thoughts on ethics as well as analyze and criticize the ethical thinking of others. The overall goal is to gain familiarity with professional ethical codes and different philosophical approaches to ethics such that you can apply both to specific cases that might arise in an engineering career.

**Course requirements:** Your final grade will be determined on the basis of participation during class, in-class quizzes, a midterm, a cumulative final exam, and a short final paper. Study guides for the midterm and final will be posted to carmen during the quarter. The final paper assignment is given below. Quiz dates will be announced in class. If you miss class, you may miss the announcements.

These requirements will be weighted as follows:

Participation 10%

Quizzes 15%

Midterm 25%

Final 35%

Final paper 15%

There will be no make-up exams or quizzes except for cases of documented medical or family emergency. Categorically, no late paper will be accepted. Your numeric grade will be converted into a letter grade according to the standard OSU scale:

A = 100 – 93, A- = 92 – 90, B+ = 89 – 87, B = 86 – 83, B- = 82 – 80, C + = 79 – 77, C = 76 – 73, C - = 72 – 70, D + 69 – 67, D = 66 – 60, E = < 60.

**Expectations:** Every student is expected to comply with the University Code of Student conduct. (<http://studentaffairs.osu.edu/pdfs/csc.pdf> ) Violations of the Code will not be tolerated. Any

violation will be reported to the appropriate university officials.

Your participation is essential to creating an optimal learning environment. Promptly notify the instructor of any circumstance that may interfere with normal performance in the class.

**Disabilities:** Any student who feels s/he might need accommodations based on the impact of a disability should contact me privately to discuss specific needs or contact the Office for Disability Services at 614-292-3307 (office: 150 Pomerene Hall). They will coordinate reasonable accommodations for students with documented disabilities.

**Miscellanea:** Here are further things you should know about this course:

- Changes in the assigned readings in the course schedule might be announced during class, though any alterations to the schedule below will typically also be accompanied by an email notification.
- Office hours are primarily intended for clarification of course material and for discussion of your performance in the class. Students should come to office hours with specific questions in mind. Such question would normally arise from the lecture or from reading assignments on your own. Office hours are not a substitute for the lectures.
- You can count on there being a quiz every other week. The quizzes will generally cover the readings assigned for (and topics covered in class) that week. They will be short (approximately 20 minutes) and at the top of the hour.

**Schedule.** This is a schedule of readings, exam times, etc. We might deviate a little from the readings, depending on class discussion. You will receive an updated schedule if it's clear we aren't going to cover all of the materials or if we have time to cover different materials.

Date	Readings, class exams, quizzes, etc.
3/30	Introduction + Syllabus
4/1	Chapt. 1 <i>Why Professional Ethics</i>
4/6	Chapt. 2 <i>Responsibility in Engineering</i>
4/8	Chapt. 2 <i>continued</i>
4/13	Chapt. 3 <i>Framing the Problem</i>
4/15	Chapt. 3 <i>continued</i> – Utilitarianism in more depth
4/20 **	<b>No Class</b> – Your instructor is speaking elsewhere.
4/22	Chapt. 3 <i>continued</i> – Deontology in more depth
4/27	Chapt. 3 <i>continued</i> – Alternative ethical theories.
4/29	Chapt. 4 <i>Resolving Problems</i>
5/4	<i>Chapt. 4 continued</i>
5/6 **	<b>Midterm Exam – in class</b>
5/11	Chapt. 5 <i>The Social and Value Dimensions of Technology</i>
5/13	Chapt. 5 <i>continued</i>
5/18	Chapt. 6 <i>Trust and Reliability</i>
5/10	Chapt. 7 <i>Risk and Liability in Engineering</i>
5/25	Chapt. 8 <i>Engineers in Organizations</i>
5/27	Civil Disobedience and Whistleblowing – handout to be uploaded to carmen
6/1	Chapt. 9 <i>Theories of Whistle Blowing</i>
6/2	Last Day of Class - Chapt. 9 <i>Theories of Whistle Blowing</i> continued
6/3	If you'd like comments on a rough draft of your final paper, must submit by 6/3.
?	Review Session for the Final?
6/8 **	<b>3:30 p.m. Final Exam, same room. Final paper due – Bring Hard Copy</b>

## Final Paper Assignment

**Length:** 3-4 pgs. (roughly 1,000 words).

**Due Date:** At the final. A hard copy submitted at the final is preferred but emailed attachments will also be accepted on the day of the final.

**Topic:** You have considerable flexibility in selecting paper topics but your paper should conform to the following structure:

- Select an engineering case that involves a dilemma. That is, choose an example that raises an ethical question where more than one answer could be defended. The case could come from the textbook or some other source (such as the NSPE's online cases before the Ethical Review Board). You may also discuss cases you have encountered during an internship or have heard about from other engineers.
- Outline the case in your own words and highlight relevant design issues, choices by the participants, and any relevant sections from a professional engineering code of ethics that might bear on the case.
- Characterize at least two competing viewpoints toward the dilemma case. Present these viewpoints as charitably as you are able and give the strongest reasons for adopting each viewpoint.
- Argue for your preferred viewpoint over its competitor and support what you believe is the best course of action in the dilemma case.

### General Prose Suggestions:

1. Include an introduction and conclusion paragraph. In the intro, state a thesis and identify what you intend to accomplish in your paper and briefly how you intend to do so. Your concluding paragraph should briefly summarize and reiterate these accomplishments.
2. Write as clearly and directly as you can. The goal is for clarity and concision, not profundity or "academic" language. Avoid rhetorical questions. Consider splitting long sentences (e.g. more than 2.5 lines) into multiple sentences.
3. If you directly quote material, provide a cite. If you are drawing information or ideas from the textbook or handouts, a cite is not necessary. If you are drawing ideas or information from sources outside the textbook or handouts, however, provide a cite.
4. Above all, give reasons for your positions and present the strongest arguments for the positions you are criticizing. It is much less important what your positions are than the arguments you present in favor of them.
5. This is not an English class so you will not be graded on spelling or grammar. That said, you may wish to seek my help or use the University's support system if you are having trouble communicating and/or if English is not your first language.