

Prerequisite There are no prerequisites for this class, just a willingness to think rigorously and apply yourself. Thinking is what you get paid for as an Engineer.

Required Text *Engineering Ethics* by Charles Fleddermann, 4th edition [online versions!]
ISBN 10 # of 0-13-214521-9 & ISBN 13 # of 978-0-13-214521-3

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Course Outcomes By the end of the semester you will demonstrate the ability to:

- Discuss the Code of Ethics published by the National Society of Professional Engineers
- Identify ethical conflicts in the work environment (whether industry, academia, or other)
- Articulate 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 and do so in an interdisciplinary manner (clients, profession, society, and peers)
- Develop reasonable responses to work-place situations that require ethical choices.

Course Description and Goals: EE4402 is an introduction to engineering ethics. It stresses analytical reasoning and emphasizes clear thinking regarding the application of professional ethical codes to specific scenarios. The focus here will be on the National Society of Professional Engineer's (NSPE) ethical code; however, attention will be placed on the professional codes of other professional engineering organizations. Additionally, a brief survey of some of the major ethical theories proposed by philosophers will be conducted and the general relationship between advancing technology and society's ethical standards will be discussed.

By the end of this course, you will have a feel for 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 where you will live and practice your profession.

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 Research paper. Study guides for the midterm and final will be posted to D2L during the semester. The final grade assignment is given below. Quiz dates will be announced in class. If you miss class, you may miss the announcements.

| Course Evaluation | Grade Composition | Grade Scale |
|----------------------------------------------------|-------------------|--------------|
| Participation, Recitations & Homework | 20% | 100 - 90 = A |
| Tests | 25% | 80 - 89 = B |
| Case Study (Research Paper) and Formal Assignments | 25% | 70 - 79 = C |
| Group Team Work | 20% | 60 - 69 = D |
| Final Exam | 10% | 0 - 59 = F |

Attendance Attending class is highly suggested either in person or online. I will note who is absent each day. No makeup work will be given unless previous arrangements are made. Further, **you are responsible** for any missed notes, handouts, or assignments, etc. Otherwise, a grade of zero will be recorded for any missed grades. In the case of extreme emergencies, contact me as soon as possible. (call or email or leave a message). If you have a borderline final grade average, your attendance, effort, and

participation will determine your final letter grade.

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|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Tests | These will be announced during any given time in D2L, as well as an occasional pop quiz. These may vary from 10 to 20 minutes or so. |
| Research Papers | Information on case study research papers & assignments will be communicated promptly. |
| Group Team Work | You will be working in interdisciplinary teams. |
| Final Exam | The final examination will be comprehensive. It will cover all topics discussed in the class. |

Students with disabilities who believe that they may need accommodation in this class are encouraged to contact the counselor working with disabilities at 678 -915-7244 as soon as possible to ensure that such accommodations are implemented in a timely manner.

KSU has an Honor Code and a procedure for handling cases when academic misconduct is alleged. All students should be aware of them. Information about the Honor Code and the misconduct procedure is at <https://web.kennesaw.edu/scai/content/ksu-student-code-conduct>.

Additional Instructions :

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 (or D2L) attachments will also be accepted on the day of the final. **No late Homework is acceptable after 7 days.**

Topic: You will be guided, but you will also 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 citation. If you are drawing information or ideas from the textbook or handouts, a citation may not be necessary. If you are drawing ideas or information from sources outside the textbook or handouts, however, provide a citation.
4. Above all, give reasons for your positions and present the strongest arguments for the positions you are criticizing. It is less important what your positions are, than the arguments you present in favor of them.
5. 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.