

SYLLABUS

Kennesaw State University
ELECTRICAL & COMPUTER ENGINEERING
ENGR 4402: ENGINEERING ETHICS
SUMMER 2025

Course Information

Class meeting time: no in-person meetings – all course material is on D2L

Modality and Location: Online Syllabus is posted in D2L

Instructor Information

Name: Sheila Hill

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Office Location: Q337C

Office phone: (470) 578-2408 Office Hours: Posted on D2L

Preferred method of communication:

- For general questions about course content, assignments, due dates, etc, use the Ask the Professor a Question discussion board (you may post anonymously if you wish).
- For specific questions, whether they are personal questions concerning absences, extensions, etc OR if you want me to check your work to see if it's correct before submitting it, email me directly.

Communications will be answered within 24 hours on weekdays and 48 hours on weekends, but in general responses from me are much sooner than that.

Course Description

1 Class Hour 0 Laboratory Hours 1 Credit Hour Prerequisite: Engineering Standing

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 so that you can apply both to specific cases that might arise where you will live and practice your profession.

Course Materials

Required Text:

• Engineering Ethics by Charles Fleddermann, 4th edition ISBN-10: 0-13- 214521-9 & ISBN-13 978- 0-13-214521-3

Learning Outcomes

By the end of the semester, you will demonstrate the ability to:

- 1. Discuss the Code of Ethics published by the National Society of Professional Engineers
- 2. Identify ethical conflicts in the work environment (whether industry, academia, or other)
- 3. Articulate ways in which ethical decisions conform to or conflict with the Code of Ethics
- 4. Discuss the concept of professional responsibility with respect to relevant constituents and do so in an interdisciplinary manner (clients, profession, society, and peers)
- 5. Determine reasonable responses to work-place situations that require ethical choices.

The course objectives listed above represent the overall learning objectives of this course. You achieve a course objective by achieving the module objectives related to that course objective. The instructional material and activities found within a module are designed with the intent of assisting you in achieving the module objectives.

Course Requirements and Assignments

Types of Assessments: (individual and group)

Participation: (individual)

Six short quizzes are on D2L after each chapter of the book to check reading participation. No reading quiz is given for the final two chapters in the book.

Homework: (individual)

Two short homework quizzes will be on D2L and will cover an ethical issue related to engineering.

Discussions: (group)

You will be assigned to an interdisciplinary team on D2L and will be participating in three group discussions with your group. Typically, these groups have 4-5 students.

Midterm Test: (individual)

The midterm will consist of several multiple-choice questions chosen from a pool

Case Study Paper: (group)

Information concerning the case study research paper will be provided on D2L and will be due Sunday of Week 8 (the last full week of class). This is a group project carried out with your discussion group. Details concerning the paper are presented after the Course Schedule

Final Exam: (individual)

The final exam will be comprehensive and will be available on D2L for a range of time during final exam week.

Evaluation and Grading Policies

Midterm Grade:

A midterm grade will be assigned by the midterm grade due date identified on this semester's academic calendar. This midterm grade is for assessing mid-semester performance prior to the last day to withdraw without academic penalty. You may view your midterm grade in Owl Express. Note that only your final grade will be officially recorded on your academic transcript.

Final Grade:

Your final grade will be determined based on participation, discussions, homework assignments, a midterm, a cumulative final exam, and a short Research paper. The final grade assignment is given below. Due dates and assignments are listed in the Course Outline at the end of the syllabus.

Grading Scale:

The grading scale that relates your final grade percentage to the letter grade you will be awarded for this course is presented in the table below:

ENGR 4402 Grading Scale			
Final Grade Percentage	Letter Grade		
90 – 100	Α		
80 – 89	В		
70 – 79	С		
60 – 69	D		
0 – 59	F		

Final grades will be rounded up to the nearest whole number.

ENGR 4402 Course Assessments				
Assessment Category	Grade Composition			
Participation Quizzes (6)	15%			
Discussions (3)	20%			
Homework (2)	20%			
Midterm Exam	15%			
Case Study (Research Paper)	15%			
Final Exam (cumulative)	15%			

Course Policies

Accommodations:

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.

Honor Code:

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.

Technology Requirements:

- You MUST have access to a computer with reliable internet access, sound and video capabilities. Some of the activities may be completed with a tablet, but that should not be your only way to access course materials since some activities, quizzes especially, sometimes don't work properly.
- You will need a word processing program such as MS Word in order to complete the final paper.
- You must check your campus email regularly sometimes important information about the class is dispensed this way.
- The assignments that require Dropbox submissions should be submitted ONLY in pdf format. If you
 have images that need to be submitted, put them into a Word document and save as a pdf file.
 Images by themselves are not acceptable because they can be very difficult to read.
- You MUST have access to a webcam for use during the midterm test and the final exam.

Course Software Skills

Students are expected to be familiar with Microsoft Word.

Attendance Policy:

- Each student is responsible for the lecture content covered on D2L.
- No make-up tests will be administered, unless a credible excuse is given prior to your absence, or in the case of an emergency, on the day of your return to class.
- Students are solely responsible for managing their enrollment status in a class; nonattendance does not constitute a withdrawal.

Appealing a Grade:

- You may appeal any grade received.
- All appeals for re-evaluation of a grade must be made within one week of the assessment being returned to you.
- The instructor reserves the right to re-grade the entire exam, homework assignment, or project.

Netiquette Guidelines

- Kennesaw State University's netiquette guidelines can be found here
- Basically, treat people well and everything will be fine.

Feedback in a Timely Manner:

The following table lists the maximum turn-around times on the different types of assessments used in this course.

ENGR 4402 Feedback Times				
Assessment Category	Max. Turn-around Times			
Exams	1 week			
Final Exam	1 week			
Reading Quizzes	Immediate			
Homework Assignments	1 week			
Discussion Assignments	1 week			

Institutional Policies

Federal, BOR, & KSU Required Syllabus Policies

KSU Student Resources

This link contains information on help and resources available to students: <u>KSU Student Syllabus</u> Resources

Course Schedule (KEY: VT = VoiceThread RQ = Reading Quiz HW = Homework)

ENGR 4402 Course Schedule Summer 2025						
Week	Dates	Content Covered	Reading Assignment	Due Dates		
1	05/28 – 06/01	Start Here, Syllabus, Course Schedule		Syllabus Quiz due Sun 06/01		
2	06/02 – 06/08	Introduction to Ethics	Chapter 1	RQ 1 and VT Group Intro due Sun 06/08		
3	06/09 – 06/15	Professionalism	Chapter 2	RQ 2 and HW 1 due Sun 06/15		
4	06/16 – 06/22	Understanding Ethical Problems	Chapter 3	RQ 3 and Group Discussion 1 due Sun 06/22		
5	06/23 – 06/29	Ethical Problem Solving	Chapter 4	RQ 4 and HW 2 due Sun 06/29		
6	06/30 – 07/06	Risk, Safety and Accidents	Chapter 5	RQ 5 and Group Discussion 2 due Sun 07/06		
7	07/07 – 07/13	Rights and Responsibilities	Chapter 6	RQ 6 and Midterm Test due Sun 07/13		
8	07/14 – 07/22	Ethical Issues	Chapters 7 & 8	Group Final Paper & VT Presentation due Sun 07/20 / Individual VT Comments on Presentations due Tue 07/22		
	07/23 – 07/24	Final Exam				

Details Concerning the Final Paper:

Final Paper Assignment Length: 3-4 pgs. (roughly 1,000 words).

Topic: Your group will be provided with a list of IEEE Case Studies to choose from - each group will cover a different topic and your paper should conform to the following structure:

- Select an engineering case from the provided list each case involves some type of ethical dilemma
- 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:

- 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.
- 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.
- 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.
- 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.
- 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.