

## **PHIL 334 – Engineering Ethics**

Spring 2024  
TR 10:00am – 11:20am  
KUPF 205

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Office Hours: TR 1:00pm – 2:00pm

### **Generic Course Description**

A philosophical examination of the nature of engineering practice and applied technology. Considers such questions as: How do the societal functions of engineers and the practical application of technologies relate to basic moral and intellectual values? What moral obligations are implied by the uses of technology? What are the ethical duties of engineers in the practice of their careers? How are technological practice and engineering related to questions about knowledge and reality?

### **Prerequisites**

HUM 102 with a grade of C or higher, and one History and Humanities GER 200 level course with a grade of C or higher.

### **Student Learning Outcomes**

By the end of the course, students will be able to:

- Identify ethical issues
- Describe different ethical decision-making approaches
- Analyze engineering ethics cases
- Apply different ethical decision-making approaches to engineering ethics cases
- Recognize the ethical responsibilities of engineers
- Evaluate the broader societal and environmental impacts of engineering
- Develop and defend positions about issues in engineering ethics

### **Classes**

Classes will revolve around discussion of the readings or homework assignments. I will talk; however, I expect questions and contributions from students. I also expect you to have done the assigned readings *before* class. I encourage you to go back and re-read assignments after class.

The readings will introduce you to ethics, including various approaches to ethical theory, ethical decision making, engineering codes of ethics, and engineering ethics cases. We will also read about and discuss engineering in its broader societal and environmental context. The readings will spur your own thinking and provide you the tools necessary to develop and defend your own positions about issues in engineering ethics.

Reading philosophy is different from reading other subjects. Many of the readings are challenging, and you will have to work to understand them. Often, this will require *hard work*.

One of the best ways to begin to understand the readings is to write about them. Try to restate the author's claims and arguments in your own words. Start by trying to restate the author's conclusion – the claim they are trying to establish. Again, you may find this difficult. Keep working at it, and please do come see me during my office hours when you experience difficulty.

Another good way to begin to understand the readings is to discuss them, both inside and outside of class. I have chosen readings that are likely to provoke thought and discussion. For this reason, I expect regular attendance in class. I also expect everyone to show respect for the opinions of others. I encourage you, however, to find respectful ways to disagree. The point of the class is not to reach a consensus, but rather to provoke thinking.

I encourage you to participate actively in discussion. It is in your own interest if I know your name. There will also be opportunities for discussion (as well as writing) on the class Canvas site. The class will have its own discussion forum to which students will be expected to contribute.

### **Attendance Policy and Participation**

I expect you to attend all classes and to have legitimate excuses for any classes missed. I also expect you to catch up on whatever you miss if you are absent for any reason.

You will receive a **class participation grade**, described in greater detail below. Failure to attend class or participate actively in course activities will negatively affect your grade for the course.

### **Makeup Policy**

In the event of an unexcused absence, you will *not* have the opportunity to make up any graded assignments. If you show up late for an exam, you will *not* be given more time to complete the exam.

### **Other Course Policies**

I expect you to arrive on time to class and keep disruptions during class to a minimum. Do *not* use phones, tablets, and other similar devices to chat/text/or talk with family and friends during class.

Please bring some sort of electronic device that will allow you to access the internet on campus. Since I may ask you to do some writing in class, it will be better if you bring a laptop or tablet, rather than a smartphone, unless you're some sort of texting whiz.

Phone/tablet/laptop use is permitted in class only for class purposes (taking notes, Googling something I said, carrying out a writing assignment, etc.). If you choose to use your device for purposes other than those related to the class, it is your loss. If you distract other students in doing so, it is their loss, as well. I expect you to respect your fellow classmates and your instructor enough not to distract yourselves and others. With this policy, I am attempting to treat you as an adult. As with all other policies, I reserve the right to change my mind or make exceptions for specific individuals.

The best way to contact me is via email or to visit me during office hours. I check email less frequently on the weekends. You are, of course, encouraged to ask questions before, during, or after class or schedule a time to meet.

### **NJIT Code on Academic Integrity**

You are expected to abide by the NJIT University Code on Academic Integrity at all times (for details, see: <http://integrity.njit.edu/index.html>). You must write and sign the following pledge on your exams:

On my honor, I pledge that I have not violated the provisions of the NJIT University Code on Academic Integrity.

In the context of this course, unless group work is specifically authorized by me, all work should be completed on your own without any unauthorized aids. *All* writing, including on your Canvas entries, is expected to represent your own work, completed on your own specifically for this course. This means that you cannot copy text from other papers, websites, encyclopedias, or any other source without quoting any copied material and fully and accurately citing your sources. In addition, if you refer to, use, or build upon ideas from other work, even if you don't quote that work exactly, you should fully acknowledge your sources. When citing an online article, a link to the relevant webpage will suffice as a full citation on Canvas.

I take plagiarism and citations very seriously and do not enjoy having to question whether a document constitutes plagiarism. For all our sakes, please take care to cite all referenced material. For any questions involving these or any other Academic Integrity issues, please consult me.

### **Students with Disabilities**

NJIT offers accommodations to students with disabilities. If you need some sort of academic accommodation, please provide me with the appropriate paperwork before/after class, during my office hours, or email me to schedule a meeting.

### **Basic Needs Security**

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so.

### **Requirements and Grading**

This course is graded according to the requirements specified and weighted below.

Class participation	50%
Midterm assignment	25%
Final assignment	25%

**Class participation (50%):** participation includes discussion in class, possible occasional quizzes, in-class assignments, attendance, and Canvas Discussion Forum/blog postings.

You may have noticed that class participation is 50% of your final grade. That's a lot. There's a reason for it. Unlike some other types of thinking, philosophy is essentially exploratory and intellectually risky. You will need to develop the habit of taking risks in class in order to succeed in developing and defending your own positions about issues in engineering ethics. This means you will need to practice. You should practice at home by completing the assignments and writing about them before coming to class. At home, you can take large intellectual risks, since you won't have the added pressure of being in front of the classroom when you do so. The Canvas Discussions are meant to be a safe place for you to practice taking the intellectual risks necessary for good philosophical thinking.

When you attend class, you will already have done some thinking about the issues we will discuss that day. Some of your fellow students may have responded to your blog entry with questions or comments. They might disagree with you. That's good, because discussion is really boring if everyone agrees about everything. Come to class prepared to defend or revise your thinking.

Class may be a scarier place for some students to take risks; but it is also a safe place for you to explore your own thinking. As long as what you are saying relates to what we are discussing in class, and as long as you are respectful of your classmates and instructor, feel free to say what you want. No single relevant statement you make in class will negatively affect your grade. So, it doesn't matter if, during class discussion, you misidentify an ethical issue, mischaracterize the ethical responsibilities of an engineer with regard to a particular case, or cannot remember that dude Plato's name. Readings, blog posts, and class discussion are the places for you to make mistakes so you can get things right on your exams.

#### Canvas Discussions

Students will post blog entries on the assignments for each class, unless otherwise noted. As long as you engage the assignment, and as long as your blog entry is posted before class, you will receive credit for that blog post.

Blog entries should generally consist in your own reflections on the assigned readings: What is this person saying? What is at stake in their argument? What is the conclusion of the argument? What claims are used to support that conclusion? Whom/what are they arguing against? How does their position relate to what others have said? Do I agree or disagree with their point? Why?

**N.B.** – This means there should be two parts to every blog post:

1. Restating the author's position (about ethical issues, how to make ethical decisions, engineering ethics cases, ethical responsibilities of engineers, engineering's societal context, etc.)
2. Stating your own position about the author's position

Since I assign readings relevant to the course learning outcomes, each blog entry provides you the opportunity to practice the skills necessary to achieve one or more of the course learning outcomes.

Occasionally, I will provide a more specific prompt for an assignment. When I do, please follow the more specific directions, as well.

To be abundantly clear, entries must be completed *before the beginning* of each class. In general, entries will be "graded" on the basis of whether students have successfully engaged the assigned reading, and whether they have been turned in on time. So, missing a deadline will mean no credit for the assigned entry. Not engaging the reading will mean no credit for the assigned reading. Addressing the assigned reading and posting your entry before the beginning of each class will earn credit for the assigned reading. At the end of the semester, the discussion forum/blog portion of your participation grade will be calculated as a percentage of assignments turned in. If you complete and turn in all blog assignments on time, you will receive 100% for 50% of your class participation grade, or 25 points toward your final course grade. If you skip the discussion forum altogether, the highest grade you can receive for the class is a C.

**N.B. – Plagiarism will be severely punished.** Copying someone else's work is cheating. Allowing someone to copy your work is cheating. Googling "Socrates" and copying from a website is cheating. Copying from anywhere is cheating. **You must read each assignment and write your own Canvas entry on that assigned reading before each class for which there is an assigned reading.**

The remainder of your participation grade will be based on attendance and discussion in class. I should definitely know your name well before the end of the semester.

### **Other assignments**

Both the midterm and the final assignments will consist of answering essay questions. I will provide you with sample questions before each assignment is due. Some of these questions will appear on the actual midterm and final assignments. By answering the questions on the midterm and final assignments, you will demonstrate your proficiency in achieving the stated course learning outcomes.

**Midterm assignment (25%):** the midterm assignment for this class will take place on **February 29**.

**Final assignment (25%):** the final assignment for this class is scheduled for **April 25**.

Letter and numerical grades are translatable on the following scale:

A = 90%+  
B+ = 87-89.99%  
B = 80-86.99%  
C+ = 77-79.99%  
C = 70-76.99%  
D = 60-69.99%  
F = 0-59.99%

### **Required Texts**

Reading assignments are posted on the course Canvas site or have links provided on the syllabus.

### **Class Schedule**

#### **Wk 1:** (Jan 16/18)

T: Class intro and expectations: "This week I resigned ..." (<https://archive.fo/68e8R>).

R: "The End of the University as We Know It"

(<http://www.the-american-interest.com/articles/2012/12/11/the-end-of-the-university-as-we-know-it/>)

#### **Wk 2:** (Jan 23/25)

T: Humboldt, "On the Spirit and the Organisational Framework of Intellectual Institutions in Berlin" (read up through page 250, where it says 'Here the manuscript ends').

R: "America's Great Working-Class Colleges"

([https://www.nytimes.com/2017/01/18/opinion/sunday/americas-great-working-class-colleges.html?\\_r=0](https://www.nytimes.com/2017/01/18/opinion/sunday/americas-great-working-class-colleges.html?_r=0))

#### **Wk 3:** (Jan 30/Feb 1)

T: The Belmont Report (<http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html>)

R: Beauchamp, "The Origins and Evolution of the *Belmont Report*"

**Wk 4:** (Feb 6/8)

T: "Principlism and its Alleged Competitors," (Beauchamp, 1995)

R: CITI module

**Wk 5:** (Feb 13/15)

T: Cases

R: Cases

**Wk 6:** (Feb 20/22)

T: Cases

R: Apperception Game

**Wk 7:** (Feb 27/29)

T: Review for midterm assignment

R: MIDTERM ASSIGNMENT

**Wk 8:** (Mar 5/7)T: Plato, "Euthyphro" <http://classics.mit.edu/Plato/euthyphro.html>R: Plato, "Apology" <http://classics.mit.edu/Plato/apology.html>**Wk 9:** (Mar 12/14)

SPRING BREAK

**Wk 10:** (Mar 19/21)

T: Rozzi, 2013 (Intro and chapter 2 only)

R: [STIR](#), & Fisher and Mahajan**Wk 11:** (Mar 26/28)

T: Canons

R: Stone, D., B. Patton, and S. Heen. 2010. "Learning: Listen from the Inside Out"

**Wk 12:** (Apr 1/2/4)

M: LAST DAY TO WITHDRAW

T: Listening

R: VA Tech Learning to Listen

**Wk 13:** (Apr 9/11)

T: Reports on Listening

R: Reports on Listening

**Wk 14:** (Apr 16/18)

T: Reports on Listening

R: Reports on Listening

**Wk 15:** (Apr 23/25)

T: Review for final assignment

R: FINAL ASSIGNMENT

**N.B. – Tuesday, April 30, FRIDAY CLASSES MEET INSTEAD**

**N.B. – Everything on the syllabus is subject to change. When changes are made, a new version or corresponding changes will be posted on the course Canvas site.**