PHIL 4540 Engineering, Ethics, and Society
Spring Semester 2020
MWF, 9:40-10:30am; BU C 211

Instructor: Kaitlin Pettit
Email: Kaitlin.Pettit@utah.edu
Office Hours: After class and by appointment
Office Location: CTIH 405
Preferred Method of Contact: Email (see below)

Required Materials
All required readings will be posted on Canvas.
Suggested Materials:
- *Robot Ethics 2.0*, edited by Lin et al
- *Here Be Dragons*, by Olle Häggström

Course Description
Every time you make a technical choice as an engineer, you are also making an ethical one. Ethical concepts such as risk, privacy, and responsibility permeate our professional lives, yet not much attention is given to their consequences. In this course, we will explore the technical, social, and ethical ramifications of the choices engineers make, from how to quantify a data point to who deploys their technology. Through class discussion, case studies, and exercises, students will learn the basics of ethical thinking in engineering and study the distinct challenges associated with ethics in their field of study.

This course is designed to investigate how and when engineers make ethical decisions. As it is an applied ethics course, our readings and discussions will focus on such topics as autonomous cars, stopping the eruption of the Yellowstone supervolcano, and Elon Musk’s plan to colonize Mars. By the end of this course you will have a better understanding of how to make ethical decisions and apply ethical theories in a contemporary engineering setting, particularly within a group.

No pre-requisites. Class counts for 3 credit hours. See your academic advisor for which requirements are met.
Teaching and Learning Methods
My aim in this course is to help you develop skills as an engineer or philosopher to help you maneuver your way through the various ethical decisions you will encounter in your career. To do this, you will need to be familiar with the range and scope of those decisions, and be able to clearly articulate various positions on each of the topics covered in this class. To aid in that, this class will address a new subtopic each week. We will use the three class periods each week to consider a new angle of the week’s topic, and use the readings to help illuminate our discussions. Discussion of the topics will be done through online and in-class activities, as well as writing assignments and presentations. Students will apply their knowledge of the debate each week to real world examples to better help them understand the topic and how it relates to their field.

I hope to address various learning styles through the setup of this class. If you feel like your learning style could be better met, please meet with me to discuss ideas of how I can better engage you in this course.

I aim to make our classroom a safe, welcoming environment for you, and require that you do the same for your peers. While disagreement and debate is encouraged, hostility and aggression will not be tolerated. Please read and follow the University’s Code of Conduct: https://www.hr.utah.edu/ethicalstandards/. We will also follow the norms outlined in the Course Etiquette document on Canvas.

Course Policies
Participation: Students are expected to participate in class discussions, and any online assignments. Part of your grade will reflect your participation.

Please be respectful of others during in-class and online discussions. We will be discussing controversial foundational philosophical issues. You may feel strongly about these, and disagree with your fellow students (or me!). Disagreement is fine, ad hominem attacks are not. Refer to the Course Etiquette handout for more concrete expectations.

Food & Drink: Food and drink are allowed in class as long as they do not pose a disruption to other students or the instructor. Sharing is encouraged.

Canvas: Students are expected to check Canvas weekly (minimally). Assignments and notifications will be posted on Canvas. It is your responsibility to maintain your computer and related equipment in order to participate in the online portion of this course. Equipment failures will not be an acceptable excuse for late or absent assignments.
Assignments
Daily Assignments: 35% of final grade
Students will receive a short quiz at the beginning or end of each class or will participate in a class activity. 50% of the grade for each assignment will count as an attendance grade; the other 50% will reflect the accuracy of your answers. I will not count your four lowest quiz grades in your final score.

These quizzes are not designed to trip you up. They are instead a measure of your reading or discussion comprehension and an opportunity to refine your writing skills. The class assignments are designed to facilitate group ethical discussion, which is key to making professional ethical decisions.

-Designed to meet Course Outcomes 1, 2, 5, 6, and 8.

Canvas Discussions: 35% of final grade
Students will be required to participate in online discussions each week to prep their understanding of the material and to develop their writing skills. Students will be asked to further these ideas in in-class discussion. See link on Canvas for Keyword Assignment descriptions and expectations.

-Designed to meet Course Outcomes 1, 2, 3, 4, 6, and 8.

Presentations: 20% of final grade
Students will have two presentations over the course of the semester. The first is a presentation of your proposed topic for your final presentation. The goal of this presentation is to get feedback from the class to better formulate your argument in your paper. The second is a presentation of your finished argument. The goal of this presentation is to practice presenting your work to a group of your colleagues, and to share the progress you’ve made on your chosen topic. See link on Canvas for presentation descriptions and expectations.

-Designed to meet course Outcomes 1, 2, 3, 4, 5, 6, and 7.

Final: 10% of final grade
Students will have one final assessment, available to them from the beginning of the semester. In it, you will be asked to create a code of conduct for your specialty in your field. Each aspect must be argued for and explained. See link on Canvas for Final description and expectations.

-Designed to meet Course Outcomes 1, 2, and 7.

Grading Policy
Writing assignments will be graded using the Philosophy rubric, found on the Canvas website.
I use the standard University of Utah grading scale, though I reserve the right to change this scale if it will be in everyone’s favor:

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Course Schedule

I recommend that you complete the any reading for the week over the weekend before class on Monday, as we will reference all the readings for the week on all three days of class and you will rely on the week’s reading for the Canvas Discussions. Links to all readings can be found on Canvas. Please refer to this syllabus each week for any changes to the readings.

Week 1: Introduction
Required Readings:
• Syllabus

Week 2: Ethical Frameworks
Required Readings:
• Writing Tips document
• Utilitarianism: Crash Course Philosophy video
• Kant & Categorical Imperatives: Crash Course Philosophy video
• Aristotle & Virtue Theory: Crash Course Philosophy video

Week 3: Rights and Duties
Required Readings:
• TBA
Monday, January 20th: No class

Week 4: Responsibility
Required Readings:
• Ch. 9, Robot Ethics, “Responsibility for Military Robots” – Gert-Jan Lokhorst and Jeroen van den Hoven

Week 5: Privacy and Autonomy
Required Readings:
• “Debating the Constitution: Technology and Privacy” Intelligence Squared Debate
• “How Pleasure Lulls Us into Accepting Surveillance” – Eric Schewe

Week 6: Harms
Required Readings:
• “Would you sacrifice one person to save five?” – Eleanor Nelsen
**Week 7: Risks**
Required Readings:
Monday, February 17th: No classes on campus

**Week 8: Informed Consent**
Required Readings:
- TBA

**Week 9: Topic Presentations**
Required Reading:
- None

**Spring Break March 9-13**

**Week 10: Global Concerns**
Required Reading:
- “Algorithmic Wilderness” – Henry Mance
- Chapter 2 from *Here Be Dragons* (p 14-37), “Our planet and its biosphere” – Olle Häggström
  - Skim or skip Section 2.2-2.6 if you’re already familiar with climate science

**Week 11: Explanation**
Required Reading:
- “Scientists on science: explanatory power and predictions” – John Timmer

**Week 12: Power Structures**
Required Reading:
- TBA

**Week 13: Codes of Conduct**
Required Reading:
- Chapter 4 “Codes of Ethics and the Challenger” from *Thinking Like an Engineer*
  - Required reading: p 51-58
  - Secondary reading: the rest of the chapter
**Week 14: Student Presentations**
Required Reading:
- None

**Week 15: Wrapping Up**
Required Reading:
- None

*The final exam period (Friday, April 24th from 8-10 am) is reserved for any makeup work, study sessions, or missed lectures.

Note: This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and/or posted on Canvas under Announcements. I will do my best to give you at least one week’s notice of any changes.