



Department of Electrical and Computer Engineering

ECE 391 – Introduction to Senior Design
Spring 2020

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Final Report

Due on Friday June 5, 2020 by 5:00 PM

Due to the importance of the topic of this week's homework, it will be graded as if it was a Final Exam

Ethics, Technology, and Justice

An engineer's first and foremost responsibility is to Society. As engineers we are responsible for the power grid, the Internet, communications, bridges, highways, clean water, and the environment among other things. That is why you will be required to address the impacts of your senior design project on Society. Some of the considerations you should have as you are engaged in your project are:

- Who is affected?
- What is the effects of your project on natural resources?
- Is the project safe during development, manufacturing, and use by the public?
- Is the project ethical?
- What are the effects of your projects on human rights?
- Is it possible that your project, in the wrong hands, could be used unlawfully?
- What are the risks and potential liabilities?
- **What could go wrong?**

We should all try to act ethically in all situations, but often there are conflicting constraints and finding the correct path is not obvious. And more often than not, there is no one correct path but many alternatives. Thinking about your own personal ethic and moral compass can aid you later on when you may have these difficult decisions to make.

One of the most distinguished professors in the United States, Harvard Professor Michael Sandel, has put together a series of lectures with the overarching title – **Justice**. This has become the most popular course at Harvard and is taken by 2000 students each year. The topics of each lecture will get you thinking about the subject and your own moral compass. The lectures are available at www.justiceharvard.org. There are also many of the lectures on YouTube. The lectures run approximately 1-hour and are free.

Assignment

Select any one of the lectures and view it thoughtfully. Write a report on the content of the lecture, the ethical topic presented, the constraints or contradictions, the conclusions (if any), and *your personal opinion about what the most ethical or just path you would approve of*. The quality of your writing and presentation as well as the quality of your insights will be the determining factors in your grade.

Lectures

(in no particular order)

- Free to Choose
- The Moral Side of Murder
- Debating Same-Sex Marriage
- The Claims of Community
- Mind Your Motive
- A Lesson in Lying
- Arguing Affirmative Action
- Hired Guns
- What's a Fair Start
- Putting a price Tag on Life
- This Land is My Land
- The Good Citizen
- The Case for Cannibalism
- How to Measure Pleasure
- Who Owns Me?
- Consenting Adults
- For Sale: Motherhood
- A Deal is a Deal