

PHL 215 Engineering Ethics – Final Paper Project

Due Date: Monday November 26th, 2018

Length: Minimum: 1,800 words

Topic: Choose from the list of topics on the back.

Once you choose your topic, we will organize into groups based on the topics. Each individual will then write their own unique paper. Then, during the final weeks of class, each group will give a brief presentation to the class based on each individual's research.

Method: Papers should adhere to the following format:

- Introductory paragraph(s) with a **clear thesis statement**
- Background information (no more than 2 pages)
- Identifying/discussing main ethical issues (at least 2 pages)
- Evaluating solutions to the issues (at least 2 pages)

Papers will be evaluated for (in order of greater to less weight): 1) philosophical content (i.e. the use of the ethical theories and "ethics toolkit" analysis tools learned in class), 2) written style and presentation, and 3) the mechanics of presentation including spelling, grammar, and punctuation.

The grading breaks down as follows:

Final Paper – 150 points

References – 25 points

Presentation – 25 points

Late papers will lose 5 points for each day they are late.

Papers will have a **minimum** of 3 sources. And Wikipedia is NOT a valid source. Valid sources include the textbook, other books, peer-reviewed journal articles, government documents, technical society documents, etc.

All papers should be typed and double spaced with one-inch margins on the sides, top, and bottom. Papers will also have a Works Cited page and will follow the MLA standard citation guide. Also include a cover page with your name, the course title, date, and a paper title.

The point of the paper projects is not to relate the facts about the cases but to do a deep dive on the ethical/moral issues that permeate these cases. To use the real-world factual situations as a jumping off point to discuss the ethical/moral issues and to use the tools we've learned this semester (specifically the three moral theories) to solve the issues making the best possible case we can.

Paper Topics

- **AI:** Artificial intelligence (AI) is becoming more prevalent in a range of uses and applications, from so-called driverless vehicles to facial recognition and many others. Discuss the ethical issues involved with this technology. For instance, how will these systems be programmed to make ethical decisions on the fly? How can this be done to most effectively ensure public health and safety?
- **Privacy:** One of the most prevalent issues in technology is the eroding of privacy and intrusions on privacy by both government as well as private companies. Investigate the ethical issues at play here. What kind of a social value is privacy? What responsibilities do engineers and tech companies have when developing technologies that impact people's privacy? (Possible cases to explore; Facebook, surveillance (both government and private companies))
- In the summer of 2017, a fire broke out at The Grenfell Tower in London, England that caused dozens of deaths and hundreds of injuries. Examine this case and explore what happened. What bearing did engineering and design decisions (relating to building and construction codes) have on the outcome? How can such incidents be avoided in the future? What role should engineers play?
- Water quality and access to clean water has been getting a lot of attention lately. From the water crisis in Flint, Michigan and the related problem of aging lead pipes to algae blooms in Lake Erie and recent questions over the levels of chromium in Cleveland's drinking water supply. What ethical issues are at play here? What are engineers' roles in helping to solve these problems? What can be done to prevent future problems? (Choose to focus on one of these areas; Flint, Cleveland, Lake Erie algae blooms, etc.)
- In August of 2018, a bridge failure in Genoa, Italy caused the deaths of 43 people and injured many more. Examine this case and explore what happened. What bearing did engineering and design decisions have on the outcome? Were there other forces at play in this case? How can such incidents be avoided in the future? What role should engineers play?
- Software plays a central role in many if not most systems and devices in today's technology. There are also a number of unique ethical issues associated with software. Recent cases include backdoors in encryption as well as Apple phones designed to run slow without users knowledge. Discuss the ethical issues raised by such cases and the best way to resolve these issues.