

SEAS 001 – Homework 1 – Case Studies in Engineering Ethics

Instructions: Answer the questions in bullet list form, some questions may require no more than a few sentences. You may need to turn to “google” to do some research for these questions. This assignment is to be turned in at the beginning of the next class lecture.

- 1) If you were working for Ford Motors as an engineer designing portions of the gas tank, and upon further testing you found a flaw in the design that could potentially lead to the harm or even death of a customer, what would you do? What if after reporting your findings to your boss, he told you that he would take the matter to the president immediately, but after a few weeks nothing happened, what would be your ethical responsibility as an engineer? What courses of action are appropriate to take? Would you report this information publicly if it meant that you would most likely be fired and perhaps “blackballed” by your industry making it very difficult to find work as an engineer again?
 - I would report it to the project head or whomever my boss is in order to receive further instruction.
 - I would then, if nothing happened, go straight over his head to his superior.
 - Make sure I am properly reporting and confronting people about the issue so it can be solved.
 - If the issued is ignored long enough, I would go to the public because they are stakeholders in the issue and deserve to know what is going on. Although I’d be “blackballed”, it wouldn’t matter because I did the right thing ethically.
- 2) What is the definition of a whistleblower? What legal protection (if any) is provided to whistleblowers?
 - A whistleblower is someone who spills information to the public that was being kept secret by an organization that could’ve been endangering the public.
 - In the United States, the Whistleblower Protection Act protects Whistleblowers in the federal govt who share that organizations aren’t following federal regulations.
 - <https://fas.org/sgp/crs/natsec/RL33918.pdf>
- 3) According to the GWU code of academic integrity (<http://www.gwu.edu/~ntegrity/code.html>), if a student is reported to the academic integrity council for copying an assignment from another student, what is the recommended minimum sanction in such a first offence case? If the student repeats the same activity again, what is the recommended course of action from the council?
 - The minimum sanction is failure of the assignment in question for the first offense.
 - The second time, the student should fail the course and have a note made on their transcript as a minimum. Other disciplines may happen like expulsion or reduction of credit for the course.
- 4) Using the GWU code of academic integrity, give a general outline of the “Hearing Panel Procedure.”
 - The offense is recorded by an instructor, then the student has the option to accept the charge and sanction, contest the charge and sanction, or accept the charge and contest the sanction. If contested, the charge goes to a Hearing Panel to be scheduled, where people are chosen for the panel to determine whether the accused is innocent or guilty. The decision is shared with the provost and vice president of academic affairs and the trial is reviewed, and the decision is shared with both the student and professor. Appeals may be filed afterward.
- 5) If you were a teaching assistant for SEAS 001 and found two students with identical homework, what course of action would you take?
 - I would have to report the offenders, that would be my duty to uphold the Academic Integrity code. Otherwise I’d be facilitating academic dishonesty.

- 6) If you use an outside reference to complete your homework, or copy and paste some work from the internet into a report you are going to submit, what should you do to avoid being reported for plagiarism?
- Cite your sources using APA format.
- 7) Name the top professional organizations for the main engineering disciplines (Electrical Engineering, Biomedical Engineering, Civil Engineering, Mechanical Engineering, Chemical Engineering). As a student member of any of these organizations, what benefits are you entitled to? What obligations do you have as a member of these organizations?
- American Society for Engineering Management, American Society of Civil Engineers, American Society of Mechanical Engineers, Biomedical Engineering Society, Institute of Electrical and Electronics Engineers. <https://www.seas.gwu.edu/national-professional-societies>
 - Resources, job opportunities, networking opportunities, mentoring services, admittance to different events and meetings held, and access to news in the engineering world. <https://www.asme.org/membership/how-to-join/student-group-membership>
- 8) What is a professional engineer? Why does a civil engineer usually become a “professional engineer?” Can Electrical Engineers become “professional engineers?” Why would they do so?
- A professional engineer is an engineer that has been certified. Pretty much you are seen by peers and employers as more reliable, and more experienced. They are expected to continue to keep the public safe and continue advancement.
 - Civil engineers deal more in architectural terms, so becoming a professional engineer may make it easier for them to find jobs to make higher amounts of money since they design buildings and streets for things like the government.
 - Yes electrical engineers can become professional engineers. They would do so to receive the same credibility any other engineer would receive.

** **Note:** Remember, if you cite answers from an outside source, make sure to reference them at the bottom of your homework.*

What is a PE? (n.d.). Retrieved September 10, 2020, from <https://www.nspe.org/resources/licensure/what-pe>

National Professional Societies. (n.d.). Retrieved September 10, 2020, from <https://www.seas.gwu.edu/national-professional-societies>

Student Group Membership. (n.d.). Retrieved September 10, 2020, from <https://www.asme.org/membership/how-to-join/student-group-membership>

The Whistleblower Protection Act: An Overview. (n.d.). Retrieved from <https://fas.org/sgp/crs/natsec/RL33918.pdf>.

Writers, S. (2019, April 21). Electrical Engineering Degrees & Careers: How to Become an Electrical Engineer. Retrieved September 10, 2020, from <https://www.learnhowtobecome.org/electrical-engineer/>