ENGR 0011/0711 • Writing Assignment 3 • Fall 2018/2191

Due in your ENGR 0011 class Thursday, November 1 (Wednesday, October 31 for ENGR 0711)

The assignment, overall:

**How is innovation X in development by company X aligned with concepts/applications of "integrity?"**

**What is the "sum" of the nature and makeup of a company + an innovation/product that company is developing + specific definitions/applications of "integrity?"**

For Writing Assignment 3, you will write an approximately 2000-word paper focused around 3 interrelated components/elements:

**a recent (2010-2018) engineering innovation/product or process < > a real company that is developing or has developed this innovation/product or process < > the "integrity" of the innovation and of the company that engineered or is engineering the innovation/product or process.**

**Note that for this Assignment, "integrity" does not *only* mean "honesty."** See the Questions and Answers for further information about and sources relevant to "integrity." Though the suggested sources might not specifically use the term "integrity," the issues discussed in these sources can be seen as contributing to the understanding and application of "professional integrity" in engineering/technology related companies and innovations.

* You will present your view on *how* the innovation/product or process *and the company that is engineering* that innovation are aligned with issues/criteria related to " integrity." In this paper you will have an opportunity to discuss, in further detail, and via a particular technology/company, some of the issues surrounding "integrity" that you have been discussing on ENGR 0011/0711 throughout the semester.
* Read through (*all* the way through) the following Questions and Answers to better understand your research and writing tasks.
* **Note**: reading through the Questions and Answers **will provide you with plenty of information to begin thinking about, researching, and even drafting Writing Assignment 3**. Once you have read through (and reread and continued to refer to) *all* of these Questions and Answers, get in touch with your **Writing Instructor with any additional/continuing questions you might have**. We will continue to provide advice on the process and outcomes of Assignment 3 over the next 2 weeks, and your particular questions will help us orient this advice towards the particular concerns many of you are having.

**The (ESSENTIAL!) Questions & Answers:**

**Q. Do I look for an innovation first or do I look for a company first?**

**A.** You may proceed either way. For example, if there is a particular innovation/product/process you are interested in, you might start your research by gathering information about that innovation. As you are researching your innovation, you will most likely discover a company or companies that are engineering the innovation. You will then "stick with" that company (and that particular innovation) throughout your Assignment 3.

**OR**

**A.** You might begin by searching for a company that innovates and produces products within your area of engineering interest. Once you have located a company that you find intriguing/significant, you will focus on an innovation/product the company has engineered or is in the process of engineering. That company and their innovation will be the company and innovation that you will discuss/assess in terms of "integrity."

**Q. But what kinds of innovations/products am I looking for? What kind of company?**

You will write about any innovation that is interesting to you and that you believe is very important, in some way, globally, and/or to a particular area or group/population. You will write about a company engineering and "selling" or providing that innovation.

**FOR EXAMPLE**,

* you might research and write about the Hemolung RAS being developed by ALung Technologies, or you might research and write about the Vflex Safety Harness currently in development at MSA Safety
* or you might describe and assess the Yubikey and Yubico, the company that makes the Yubikey
* or you might write about the LifeStraw Flex or the LifeStraw Mission and the company, LifeStraw, that developed and that sells these water purifiers.
* or you might write about the self-deliverable RNAi technology and the company developing this technology, RXi Pharmaceuticals.

**Q. How much do I write about the innovation and how much do I write about the company and how much do I write about integrity?**

**A.** There are no "hard-and-fast" rules/quantification for how much information you will provide about the innovation and how much information you will provide about the company and how much information you will provide about integrity. A *guideline* for "how much" is that you will ***not***be writing 80% of your paper about an innovation/product and 10% about the company that is engineering that innovation and 10% about integrity. This 80/10/10 composition would not provide enough "room" to substantially discuss/assess the company and integrity. Keep in mind that your discussions and assessments will be intertwined in important ways. It is useful to think about this your task as a **simultaneou**s description/assessment of the innovation, the company, and the innovation.

**Q. How does "integrity" enter into the discussion/assessment of my selected innovation/company?**

A. In her article, "Success Will Come and Go, but Integrity is Forever," for Forbes magazine (available in your Course Materials), entrepreneur, investor, and blogger Amy Rees Anderson writes about a plaque in her office that states “Do what is right, let the consequence follow” [1]. For Assignment 3, you will be describing what the "actions" of a company are, and you will be assessing the consequences of those actions.

**Q. The main task of my paper, then, is to write about an innovation/product and assess whether or not that innovation product is "good."**

**A.** Not exactly! While you *will* be assessing the "integrity" of an innovation/product, you will also be assessing the "integrity" of the company that is pursuing this innovation, *and* you will be assessing how the product represents the company and/or how the company affects the type of innovation/product it is pursuing.

**A.** "Good" is, in many ways, a vague concept that you will need to define and exemplify in Assignment 3. If you are judging the development and potential use of an innovation/product as "good" (and/or "significant" and or "valuable"), you will need to specify the criteria you are using for that evaluative assessment of "good." For instance,

* in what ways, (specifically, in detail!), does the innovation/product align with the NSPE code of ethics?
* In what ways (specifically, in detail!), does the innovation/product align with concepts of "integrity" that you have been discussing this semester?
* In what ways (specifically, in detail!) does the innovation/product align with concepts/criteria related to integrity that you have found from doing further research on integrity and/or integrity in engineering?
* In what ways (specifically, in detail!) does the innovation/product align with *your* view of what an engineer who strives for maximum professional integrity should be doing?

**Q.** **I am now seeing how issues of the *innovation/product* and concepts/definitions of "integrity" might be related, but** **what about the relationship between the *company* and "integrity?**

**A.** Think of the sum of the nature and "makeup" of the company + the innovation/product that company is pursuing + specific definitions/applications of "integrity." For example:

* How might the particular leadership and "makeup" of a company affect the "integrity" of an innovation?
* Is the "integrity" of company's innovation potentially reinforced or potentially compromised by who the company's leaders are, and/or who its employees are, and or who its investors and/or advocates are and/or who its intended customers/users are?
* How might the leadership of a company, and/or the employees of a company, and/or the investors/advocates of a company, and/or the intended customers of that company reinforce or compromise the integrity of that company?

**Q.** **Help!** **I am still not sure about how to start thinking about what goes into the "integrity" of an innovation or a company.**

**A.** Here are some sources that might be very helpful to you as you think and write about what issues and actions might contribute to the "integrity" of an innovation and company. " Note that for this Assignment, "integrity" does not only mean "honesty."

https://blogs.scientificamerican.com/voices/diversity-in-stem-what-it-is-and-why-it-matters/

http://www.asme.org/engineering-topics/articles/diversity/new-formula-for-engineers-diversity-innovation

https://www.recode.net/2018/1/31/16944976/new-parents-tech-companies-google-hp-facebook-twitter-netflix

*also potentially informative/useful*

https://www.recode.net/authors/rani-molla

https://www.asme.org/career-education/media/early-career-engineers/video-economic-business-case-diversity

https://www.forbes.com/sites/bonniemarcus/2015/08/12/the-lack-of-diversity-in-tech-is-a-cultural-issue/#3f8c19ee79a2

https://www.wired.com/story/will-others-follow-microsoft-on-paid-parental-leave/

https://www.greenbiz.com/blog/2014/02/06/10-csr-ideas-retool-design-and-construction-industry

https://247wallst.com/special-report/2018/04/20/companies-with-the-best-and-worst-reputations-6/

https://hbr.org/2014/10/hacking-techs-diversity-problem

**Q.** **My research, then, involves an innovation/product and the company that is developing that product. My writing will be describing that product and that company while also assessing whether or not (and in exactly what ways) the company that is developing and marketing that product is acting with maximum integrity. My definitions of integrity and/or the criteria I use for assessing integrity must be applied to the company and the product.**

**A.** Yes, and you will need to be constantly thinking about the *relationships* among the makeup of the company, the innovation/product it is developing, *and* specific criteria for "integrity."

**Q. How many sources are required for Assignment 3?**

**A**. Do not, for the moment, be concerned about or focused on exactly how many sources are required.

* Begin your research.
* Pay attention to where your research is leading and the questions/issues raised as you begin and continue your research. Always be asking yourself, "what information (about the innovation; about the company; about "integrity" is needed to *fully* clarify and support my descriptions and assessments?"
* Remember that while sources such as https://www.howstuffworks.com or https://science.howstuffworks.com/engineering-channel.html or lists/articles such as https://www.popsci.com/top-engineering-innovations-2017 can be useful *starting points* for your research, such sources are not sufficiently or appropriately detailed/substantive for your university-level paper.

**Q. I am still not sure how to begin my research and/or writing for Assg. 3. What should I do?**

**A.** First (and you should do this *very* soon!), do at least a bit of preliminary research on an innovation/product or process that interests you. Having some preliminary information about what you *might* write about will give you a better idea of what your questions about the assignment are. Then, contact your Writing Instructor with your questions.

**How do I format Writing Assignment 3?**

The format requirements for Assignment 3 are exactly the same as they were for Assignment 2; use the EngrW\_Formatting Instructions for Papers 2, 3, 4\_2018\_2191 on your 0011 or 0711 CourseWeb page.

**Sources**

**[1]** A. R. Anderson. "Success Will Come and Go, But Integrity Is Forever." Forbes. 11.28.2012. Accessed 10.15.2018. https://www.forbes.com/sites/amyanderson/2012/11/28/success-will-come-and-go-but-integrity-is-forever/#5c0a6387470f