

General Education Reflection

In my five years at Iowa State, I had the opportunity to take non-technical courses outside of my computer engineering degree called "gen ed's," or general education courses. These classes were required classes for their respective majors, so being an engineer among music majors, philosophy majors, design majors, etc. was definitely a fun experience. I was skeptical about gen ed's coming into Iowa State, but I can certainly say that they each provided an experience that no engineering course would have.

The first gen ed class I took was Music 102: Intro to Music Listening. This class also counted as my three "international perspective" credits for my major. It was all about analyzing characteristics of music as it evolved through time and how each culture developed music differently. There was very rudimentary music theory taught in this class as well, just so that we could all express what we were thinking in correct music terminology. The range of styles in each culture and time period was astounding. It was very fun to interpret and understand what made each of them unique. This out-of-the box thinking with a brand new topic I had never thought of before is something that happens in engineering all the time. Having gone through this class prepared me for being able to understand a vast multitude of mindsets and to consider each as its own.

I next took Philosophy 201: Intro to Logic and Scientific Reasoning. This was a fantastic class all about extracting conclusions from a set of premises using nothing but the rules of logic. We also dipped our toes into probability towards the end of the class. My biggest takeaway from this class was that sometimes a completely valid conclusion can be totally obfuscated until you work through the deductive reasoning, even with obvious premises. This taught me that I can never

assume to know the best solution to a problem, since a better solution might be (and probably is) less obvious.

I took the next two gen ed's in the same semester. I'll first talk about Arch 321: History of the American City. It was a class about the origin, evolution, and current state of cities in America spanning all the way from the Plymouth colonies to modern day. It was fascinating to see broad patterns that affected every city in a certain time period, mostly relating to the current mode of transportation at the time, but I was also intrigued by how different cities had different solutions to the same problem that worked best for them because of geography. For example, midwestern cities can use water towers because it's flat enough that a few can provide water pressure for a whole city, but it doesn't work as well for big cities on hilly terrain. I learned from this class that "one size fits all" solutions are extremely rare if not nonexistent. Solutions often need to be tailored to their local conditions.

Lastly, I took ARTIS 308: 3D modeling and digital photography. I signed up for this class because I was already interested in 3D rendering and modeling, and it's something that I really enjoy doing. I learned a lot of techniques for achieving realistic renders and many more techniques for creating good 3D models that don't cause the computer too much trouble. I can use this skill when creating a presentation about something that hasn't been built yet or a proposal to create such a thing. Modeling and rendering concept art to help others understand an idea will be very helpful.

In conclusion, these gen ed classes have given me skills that traditionally fall outside of an engineering curriculum, but that can be effectively applied in the engineering context. I have enjoyed my time at Iowa State and I look forward to graduation and using these skills I have acquired in the real world.