DATE: **March 29th, 2021**

TO: **Dr. Deirdre Hunter**

FROM: **Michael Tang**

SUBJECT: **Self-Reflection**

My name is Michael Tang, and I am a current sophomore studying electrical engineering. However, I also really enjoy computer science and math and have been considering majoring in one or both of those instead of the past few semesters. Hence, I decided to take ENGI 120 to try and get a better idea of whether or not I would enjoy engineering and, in turn, to help in my decision of what major to declare.

I think that this class has influenced my interests quite a bit. Before taking ENGI 120, I was leaning towards switching majors to computer science and math. To be honest, I did not think that I would actually enjoy prototyping. However, I have enjoyed the process of brainstorming and testing out solutions in ENGI 120 much more than I expected, and realize that I can see myself enjoying this in a future job. I ultimately decided to declare electrical engineering as my major last week.

My future career is something that I have been uncertain about since matriculating to Rice. I don’t think there’s a particular industry or job that I am super passionate about doing; I think that I simply enjoy solving problems. Before taking ENGI 120, I thought that I only enjoyed solving theoretical problems, but my experience in this class has shown me that I enjoy solving engineering problems as well.

It’s a little hard to say how this class will benefit my future career, given that I don’t have much of an idea of what that will be. However, I think that the engineering design process framework we have been learning will be useful in any field. In particular, before this class, I thought that the process of brainstorming and coming up with solutions was something that just had to come naturally, and was easier for creative people. However, going through this process has shown me that giving a rigorous framework to the ideation process actually gives more room for creativity and allows for much more productive meetings. I also think that I have gained a lot of prototyping skills in building our incubator, which will aid in almost any engineering job if I end up pursuing one.

I think I have a better idea of what engineers do. As I mentioned earlier, I think that going through the engineering design process so rigorously was really helpful. I had always wondered what exactly engineers do in the time between when a problem is introduced, and an actual viable solution is ideated; I had originally assumed that the main task of the engineer was to come up with the solution almost immediately and spend the rest of their time ensuring a successful execution. However, studying the engineering design process has shown me how large the brainstorming process is as an engineer. Furthermore, I have realized that engineers rarely work on tasks alone, but rather, as a team.

I thought at the beginning of the course, and still do, that one of the biggest aspects of being an engineer is wanting to solve real-world problems. I think taking this class has made me feel more capable of being able to solve real-world problems. However, I enjoy just as much solving problems with absolutely no real-world applications (for instance in some math classes I’ve taken), which is a sentiment I rarely see shared by my electrical engineering classmates. In this regard, I still feel like I am in the process of adapting to the image of an engineer. On the other hand, there are plenty of other aspects of engineering that I have found myself really enjoying. I think the biggest example is teamwork; through this class, I’ve realized not only how important teamwork is in the engineering design process, but also how much I enjoy actually working in a team. I have found the experience of brainstorming in a group and building off others’ ideas, in the pursuit of a mutual design goal, to be a hugely rewarding experience. In this regard, I feel like I not only fit the image of an engineer, but also truly enjoy what it entails.