Engineering Methods for Biological Systems BSEN 2210

The Engineering Methods for Biological Systems course was an excellent introduction to the basics of excel and Computer Aided Design via Fusion 360. It was also a very team-oriented course, where we had two large projects that had to be completed with an assigned team. Both involved using the CAD program Fusion 360 to design and print a model. The first project involved designing and printing a fidget spinner, as seen below in Figure 1. A fidget spinner was the model of choice for this course, as it is small enough to not take an extensive amount of time or material to print, and the general design is familiar to most students.

Figure 1. The Final Fidget Spinner Design 3D Printed

My group cooperated very well, and we all were motivated to work together, but it was a challenge still for us to all meet up due to our schedules. The fact that COVID-19 had affected our semester meant that some people in my group stayed home and were not in Auburn often. Regardless, we made sure to take advantage of the resources Auburn has and made sure to have Zoom meetings and completed our written reports in a Google Doc that everyone could access at any time regardless of whether they were on campus.

The hardest thing for me to learn for this course was how to use Fusion 360. Prior to this course I had only used Tinker CAD to design some basic channels for my undergraduate research project, but I have never taken the time to try and learn an actual CAD program. While Fusion 360 was not any easy program to get used to using, I was extremely motivated to learn it well because I already knew it would be useful for me. Now all I can think of is how much easier and faster my research could have gone if I had learned Fusion 360 earlier. Regardless, I'm very glad to be familiar and comfortable with the program now, because anytime I can use it in a future course or research I'll be sure to do so. The Fusion 360 design sketch of the fidget spinner is included below as Figure 2.

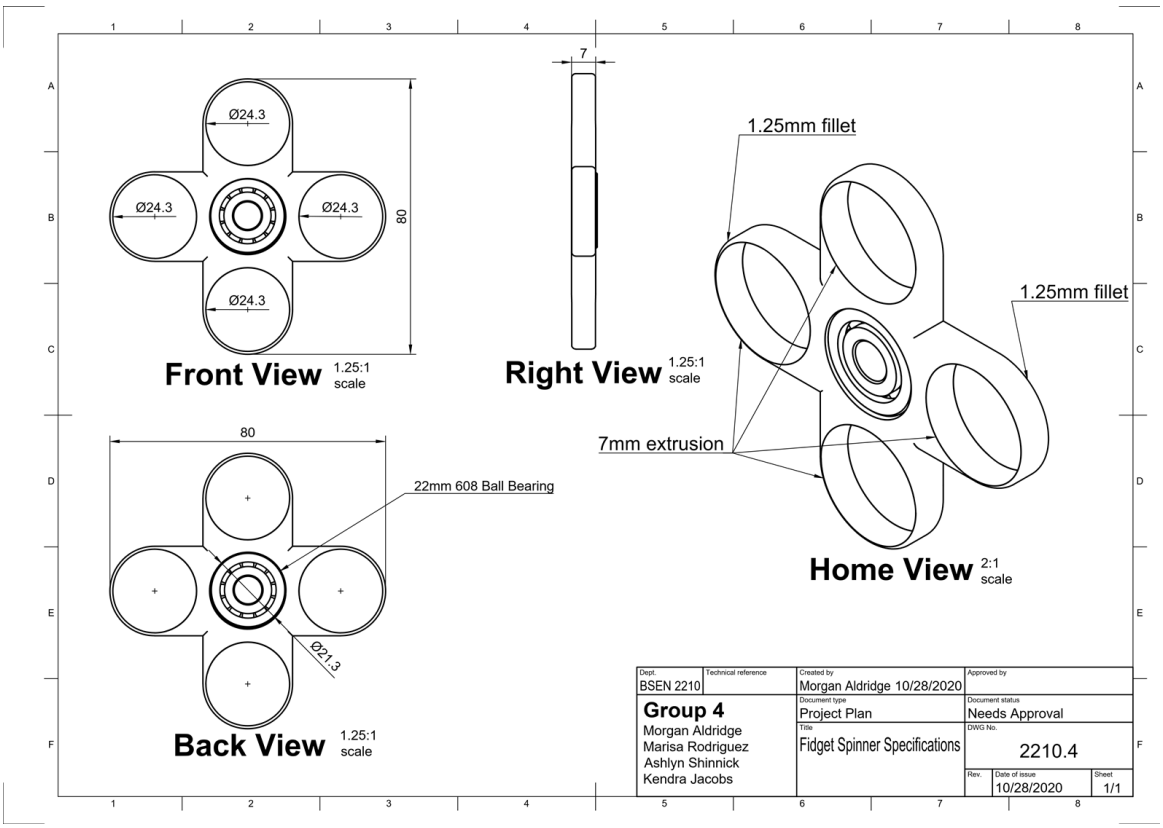

Figure 2. Fidget Spinner Design Sketch from Fusion 360

A program like Fusion 360 is very practical because there are many times where you need a small model for a project- or depending on the size of the project you may even be able to print the full scale final design. And if I'm not able to complete my project using Fusion 360, the program is similar to AutoCAD which is widely used, and I feel confident that I could pick it up. In fact, I'm interested in learning AutoCAD now that I feel confident in my Fusion360 skills.