

Kalista Shields

### Creative Technologies Reflection

I started at Berry College as a dual degree engineering major in 2018. The first Friday of my college career I went into Hackberry Lab for CRT100 with Dr. Grout. He showed us around the lab and explained what Creative Technologies was. Immediately after that class, I called my mom on my way back to my dorm and told her I wanted to study Creative Technologies. I have always been interested in design and product development and Creative Technologies has given me the opportunity to learn those processes.

In CRT 101, Introduction to Prototyping, I started my path of designing biomedical devices with my intermediate project, Over the Counter. Over the Counter was a pill counter that told me to call the doctor when I was running out of ADHD medication. I created it with an Arduino, two buttons, and a LCD screen. I remember how it felt the first time I got that LCD screen to display “Hello World”. I was overjoyed at being able to take the first steps of creating something I could only imagine doing. Chris Whitmire helped me a lot during this process, as he would throughout my entire Creative Technologies career. He spent countless hours with me, showing me how to debounce buttons and how to use Arduinos to help me in prototyping. CRT 101 taught me how to use the many tools in the lab which I would continue to use over the next 5 years such as the laser cutter, 3D printers, vinyl cutter, and the many tools in the wood shop. CRT 101 also taught me the importance of failure in the design process, fail fast and fail forward became my mantra. My second project, Rock and Roll Initiative, a wooden table for Dungeons and Dragons, failed spectacularly. This table would be the first of many carpentry projects that were unsuccessful throughout my career and taught me how important proper joinery is when constructing tables.

Chris continued to be an important instructor for me in CSC 235, Physical Computing, the class that made me confident in using lab tools and using Arduino for prototyping. Physical Computing introduced me to NeoPixels and the sheer power of Arduino. In this class, I made one of my favorite projects, the “Boomy the Cat” arcade cabinet. Chris’ instruction in this class helped me feel confident using Arduino, even over Zoom when Covid sent everyone home.

When I was home over Covid, I would use my knowledge of Arduino to make several personal projects. One of them being a science fair project for my younger brother. I was able to teach him how to use an ultrasonic range finder to make NeoPixels change color. He implemented this in a mask that would change from green to red if you were closer than 6 feet to the ultrasonic range finder.

Physical Computing helped me feel more comfortable in the lab and, going into my Junior year, I felt comfortable enough to use the laser cutter on my own to create a large line of anime lamps. I created over 50 lamps and developed a setting on the laser cutter that reduced fracturing in acrylic etching. I would spend hours in the lab making these lamps, and through this became friends with Luke Steele who showed me how to use the Plasma Cutter and how to further use Arduino to make more powerful programs. Luke also showed me how to properly use lap joints when making things out of wood which led to my first successful carpentry project. A simple table with storage underneath.

During my junior year I also took CRT399 as well as Advanced Prototyping. This was also the first time I had Dr. Zane Cochran as an instructor. Zane pushed me to be the best programmer and creative technologist I could be. He didn’t let me off easy and let me make my own mistakes. I made some of my favorite projects in Advanced Prototyping such as the Pop-Art PCB and MIDI Mixer. I was able to soar creatively in these classes and use the skills I had

learned throughout my time in the Creative Technologies program. I also took Robotics with Chris as well, where I made my favorite project of all time cosplAID. CosplAID is a mobility aid that doubles as a guitar prop. It was designed in Fusion 360 and fabricated with the Crawlbot.

This project led me to have a directed study with Chris, where we continued to research mobility aids and conducted a survey regarding disability at cosplay conventions. We created brackets that would be able to attach to canes, which allowed props and signs to hang off of it. I was able to delve further into my interest in creating mobility aids while being mentored by Chris.

While all of the classes mentioned above improved my skills and confidence, my favorite Creative Technologies class was CRT 330, Vehicles. In this class, Jason Bell, Mia Rozeboom, and myself created a go kart and a self driving car called the Ottobot. We use these cars to complete a number of challenges. Being able to bond with my classmates while competing was the most fun I've ever had in a class. I enjoyed doing track days and dressing up like anime characters to compete against my other classmates. This class also inspired my love for creating merchandise with the vinyl cutter as I made hats for each track day that corresponded with the anime we were representing.

Being in Creative Technologies has also coincided with my time as a communications minor. The two programs feed into each other well, as I was better able to articulate my ideas and present my projects. My time in the Berry College Forensics Union inspired my project the Debatinator. A website that uses Javascript and MySQL to generate debate resolutions for practice.

Hope Willoughby and Matt Delzer have served not only as coaches for me on the forensics team, but as valuable mentors who were instrumental in encouraging me to get clean after

relapsing in fall of 2021. They have encouraged me to do my best not only in speech in debate, but in Creative Technologies as well. They have heard out my craziest ideas and pushed me to further create and better myself and my craft. The Berry College Forensics Union has saved my life on multiple occasions and I would not have had the amazing experience I had at Berry without it. I am now a National Champion debater, a state champion public speaker, and a more confident, well rounded person because of forensics. This team was instrumental to my academic growth, my success in the Creative Technologies program, and my quality of life.

Between Matt, Hope, Chris, and Zane I have been surrounded by people who push me to be my best in every discipline. I would not have grown as a student without them or without the Creative Technologies program. I have learned to create, and that is the most valuable skill I could ever ask to learn. Zane once told me creativity can be learned, and he was right. I have learned to be a more creative person because of Creative Technologies. This program and Berry College has changed my life for the better. I would have never thought that walking into a trailer the first week of my freshman year of college would improve my life so much.

Add future career plans.