

Capstone Reflection

Looking back at the last four years of my life, it has been a series of me crossing things off my list, whether that be once-in-a-lifetime opportunities or deciding to go a different route in my career. When I first came to college, all I knew was that I liked physics and wanted a career in the STEM field, but I wasn't sure as to what I wanted to do with my life. I have been fascinated by physics and astronomy ever since I was five years old when I visited the U.S. Space and Rocket Center in Huntsville, Alabama. My passion for space had only grown stronger throughout all of those years, and I have revisited the Space Center at least once a year every year, always learning something new each time. I started off my college career at Olivet Nazarene University in Bourbonnais, Illinois as a Physics major. I was the only physics student out of roughly 5000 students, so unfortunately the Physics major at Olivet was changed to "Physical Science." Right away I was unsure of how to continue my college education, and had started to look for other majors that I could potentially pursue as a career. My only options at Olivet that were somewhat close to Physics included Chemistry, Engineering, and Geology. Continuing on my freshman year, I was discouraged and I felt stuck. Although interesting, none of these majors made me excited to get my degree. I started to get involved with the campus planetarium and soon realized that I needed to focus on my love for the space sciences. After consulting with my academic advisor, Dr. Stephen Case, I made the difficult decision to transfer to another school. Upon reflection, Olivet Nazarene University was a great school, but just was not the right fit for me. The school just didn't have the opportunities or classes I was looking for at the time, even though I wasn't sure what that was yet.

I transferred to Carthage College my sophomore year of college and I began this new journey to find a career in physics very timid and introverted. I knew I wanted to be a part of the microgravity team, but I did not know how to put myself out there and associate myself with the other physics majors. I started going to the Society of Physics students (SPS) meetings my first semester at Carthage, but never participated in any events or talked with the upperclassmen. After a semester of little involvement, I became incredibly overwhelmed because I had not chosen a direction for my career path. I noticed that another physics major, Taylor Peterson, was in five of my classes during my second semester. Befriending Taylor gave me the opportunity to join the microgravity team, and gave me the courage to get more immersed in the space sciences program and lab environment overall. This led me to being introduced to Dr.

Kevin Crosby, which led me to a place on the microgravity team. Soon after joining this team, with all the excitement going on throughout the projects, I decided that I wanted to pursue a career path in mechanical engineering. I spent a summer working on the Modal Propellant Gauging (MPG) project, preparing it for a Blue Origin launch later that year. Through this experience, I was able to gain several skills that would benefit me no matter what career path I chose, like technical communication, problem solving and teamwork. I participated in a lot of public and media outreach with the MPG technology, which helped me in my shyness. However, these projects were incredibly challenging and it took a long time to overcome the hurdles and troubleshoot all of the problems. I learned that nothing is ever truly finished and I also learned how to manage my time effectively. While participating in the projects, I was able to take part in multiple parabolic flight campaigns, a rocket launch through Blue Origin, and win a national competition. Looking back on this, I am extremely humbled and find this somewhat normal, even though looking at the bigger picture, these are incredible things that not many people can say they have done in their entire lifetime. I believe that the opportunities that I have had are graduate level research in an undergraduate setting.

As I got more involved with the projects, I began to realize that I did not want to pursue engineering any further in my career. I enjoyed being on the projects, but I had no interest in mechanical or electrical engineering, and at the time I thought that in order to be on the projects you had to be an engineer. I consulted many of my advisors, essentially asking them to choose a career path for me because I was so overwhelmed and felt behind my physics classmates. One of my advisors, Dr. Crosby, told me that I need to explore as many possibilities as I can in the next few months. I started to work at the planetarium on campus, revisiting the spark that led me to the space sciences. I also took a Project Management class, and soon learned that my skill set was well-suited for this career. This class allowed me to stay involved in the space sciences program and take on more responsibilities on the team such as Mission Team Lead and Project Manager. I found out quickly that I really enjoyed leading the projects and organizing the overall layout of it. It allowed me to understand the significance of documentation and the importance of communication. I felt like my project management capabilities started over my first summer working on the MPG project because I remember always writing down what needed to be done and being in constant communication with the team about their tasks. As I continued pursuing my interest in Project Management, I realized that I developed many of the skills by simply being a

physics major, such as problem solving, communication, team work, time management, and leadership skills.

When I initially figured out that I wanted to become a Project Manager, I jumped head first into it and took on three projects at once, as well as being a full time student with two other jobs. I began to take courses that I knew would help me in my potential career, including management and finance courses. I also asked my fellow colleagues and teammates about my performance as a Project Manager and got their feedback on how I could improve. I am always looking for ways to make things easier and manage people and things more effectively and efficiently. Currently, I am studying to take the Project Management Professional (PMP) Exam in order to get my certification in Project Management that will hopefully give me a boost in job applications. My goal is to become a Technical Project Manager in the aerospace industry in hopes of leading and inspiring the next generation to advance space exploration. Looking back at my time at Carthage, I had many epiphanies on what I didn't want to do with my life, and looking back on all that I've accomplished, I realize that without doing all that I did, I would be in a completely different situation and would potentially be stuck with something I'm unhappy doing for the rest of my life. My college experiences have allowed me to grow professionally, personally, and academically, and looking back on it, I wouldn't change anything because of the endless skills I learned along the way.