Personal Statement

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Growing up, I wanted nothing to do with engineering. My biggest goal was to be nothing like my mom. She and I have very different perspectives on life and career paths. She always talks about her job so negatively, saying she wishes she had studied something else. She is miserable in her current job and has had trouble in the past paying off student loans from the multiple colleges she attended. Learning about her struggles during and after college pushed me away from anything engineering-related. While I tried my best to study other subjects and spent a good chunk of my teenage years avoiding a path like hers, I found myself drawn continuously to chemical engineering topics, specifically to process improvement and sustainability within chemical processes through the few chemistry classes I had in high school, and now the classes I have taken in college.

In high school, when asked, "What are you going to be when you grow up?" I answered hesitantly, "I want to be an EMT or maybe a teacher." My aunt, an elementary school teacher, sparked my interest in teaching. When I was younger, I used to create my own classes, mostly English or science-related, and have my family be the "students." Going into middle and high school, that love for teaching kind of disappeared as I took an interest in other things, specifically the medical field. I took a dual enrollment class called "Drug Use: Personal and Social Impact" at Western Michigan University in my junior year of high school, and learned that I didn't enjoy the subject as much as I expected, which disappointed me and led me to consider a new career path. In my senior year of high school, though, I took an advanced chemistry course. It was one of my favorite classes and sparked a genuine interest in chemistry and chemistry-related fields. After a conversation with my teacher about college and potential careers in chemistry, I learned about Kettering University and its co-op program, which ultimately led me to apply to the chemical engineering program.

Since enrolling at Kettering, the most influential things I've learned have come from the University's unique structure. Due to the fast-paced academic environment and co-op program, it's imperative to adapt during the first year. While the courses are packed into three-month increments, they provide full-time work opportunities for the alternate three months, providing a

more hands-on learning experience. The school also requires completion of a thesis project through a co-op, which provides a strong head start for entering the workforce after graduation. Initially, I found the structure extremely stressful. I fell behind in many of my classes because I hadn't developed good study habits in high school. However, I quickly adapted as professors gave more advice on study habits, and I gained a few friends who had already applied them. Now I apply the same time management and routine to my daily life.

Throughout my time at Kettering, I discovered that my interests lie in process improvement and lean methodologies. After taking many chemical engineering courses, such as process control and reaction engineering, and their labs, I learned the importance of safety in chemical processes and how some processes are designed with efficiency and sustainability in mind. To prepare for a future career in these fields, one of the most impactful classes I took was the Lean Six Sigma course, where I learned the formal and technical aspects of the practice and how to apply it to manufacturing processes. During my freshman year, I obtained a co-op at Avient Corporation, a colorant and plastics manufacturing plant. I had the opportunity to co-run a Lean Six Sigma project on an extrusion line to optimize the procedures. I learned a lot about how challenging it can be to implement bigger changes when operators have followed the same procedures for many years. We had to determine which changes were valuable and which added complexity without significant improvement. This was determined through countless meetings and extensive time on the production floor. Overall, this project, combined with the Lean Six Sigma course, further piqued my interest in developing more efficient, well-organized procedures for manufacturing environments.

Then, during my sophomore year at Kettering, I obtained a new co-op at Vibracoustic, an automotive company focused on reducing noise, vibration, and harshness in vehicles, and gained experience across a variety of departments. The role that had the greatest impact on me was in application engineering. There, I took on responsibilities similar to a project manager for smaller projects, including a global testing verification project. This experience challenged my ability to communicate complex information clearly and concisely across teams, and I was ultimately recognized by my manager for problem-solving and project organization. Not only was I able to practice my project management skills at my co-op, but also at my Facility Manager role at the

Recreation Center at Kettering. There, I have taken on three to four employees, assisted with training, earned a CPR and first aid certificate, and helped resolve any problems patrons brought to my attention. I also had the opportunity to work on the Green Rubber Project for my thesis at Vibracoustic, where I helped develop three additional sustainable, recyclable rubber compounds for automotive applications. I gained knowledge of the importance of sustainable raw materials and a better understanding of how they affect rubber's chemical, mechanical, and thermal properties through training from the Material Technologies Lab technicians. This project taught me how easy it is to make mistakes, but also how to avoid them in the future. In the first few days of testing on my own, I had to retest samples for a compression test multiple times because I misinterpreted some key information provided during training in the Material Technologies Lab. By the third test, I took that experience as a learning curve for the next test procedures I had to run, double-checking values against ASTM standards and the instructions I had noted during training. Even though I ran into some testing issues, I still completed the project on time and provided valid data for my managers to review and apply to future research and development.

While I once resisted a career in engineering because of my mom, my experiences in the workplace and at Kettering have changed my perspective. They have both taught me that engineering can be more than just a career path, but also a way for me to problem solve, improve systems, and promote sustainability in and out of the workplace. With my interest in process improvement and Lean methodologies, I want to contribute to the sustainability movement and improve efficiency in chemical processes while continuing to grow as a leader. My goal is to continue learning about new processes, such as nuclear, oil, and other chemical processes, and how they can be improved, to define a more specific career path after graduation. Although I’m still creating my own path, one very different from my mom’s, I now recognize that my career should be shaped by my own goals and experiences, not just hers.