Co-op Job Summary

For this co-op term, I worked for a startup medical devices branch of C.V. Holdings called SiO2 Medical Products in Auburn, Alabama. As a mechanical engineer, I came in with some knowledge of physics as it applies to materials and mechanical systems. I was also familiar with SolidWorks and other computer programs from required classes. Because of my experience, I was often asked to use SolidWorks to design and draw different mechanisms or parts for the research and development process. I also designed and fabricated some parts as preliminary concepts for the engineers and scientists to consider and test.

As a co-op student, I was to learn the different aspects of the company in addition to helping where possible. To that end, I shadowed someone in each part of the company for at least a week. I wrote documents, designed experiments and ran them, and helped run tests on the final products. This experience taught me the physics and chemistry behind the processes, in addition to the quality assurance and documentation necessary for an ISO compliant company. I also worked in the maintenance shop, learning about different tools used in both fabrication and repair of the equipment we used, and with the executive secretary, learning about purchase orders and helping to file documents. Beyond the weeks during which I worked for specific departments of the company, I consolidated and analyzed data, did research on government standards and technical papers, ordered equipment, developed a database on Microsoft Access, and helped with anything else needed.

I was able to do such a variety of jobs mainly because of the work environment of the company. I sat in an office with a physicist and a chemical engineer, both of whom kept me busy with most of the different projects I ended up completing. Also, it was very easy to ask the relatively small and friendly staff if anyone needed help with whatever they were working on at the time. After a few weeks, most people came to me with requests. If I did not understand how a process or piece of equipment worked, there was always someone around willing to explain it to me so I could do my job. The pace of the company was also a significant factor in my experience. Everything happened as quickly as possible; when a question was raised or a new concept was introduced, ideas and experiments were formed within the week to solve the problem. This fast-paced environment that encouraged new ideas from all employees meant I was always doing something new and interesting.

Outside of work, Auburn is a typical college town. It is very similar to Cornell except that it has a bigger focus on sports, has no hills, and is about 10 degrees warmer on average. Football is a major subject around town during the season and home games draw large crowds, creating an atmosphere like a festival. Socially, the town caters to college students including bars, restaurants, shopping centers, and more.

In terms of transportation, the best way to get to and from work is definitely by car. Since I could not bring a car down to Alabama, the company rented one for me for the semester. There is also a bus system that covers the area in and around the university (not sufficient to get to work, but good for exploring). Overall, Auburn is a pleasant, fun place to live, especially if you are a fan of warmer climates.
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For this co-op term, I worked for a startup medical devices branch of C.V. Holdings called SiO2 Medical Products in Auburn, Alabama. As a mechanical engineer, I was asked during my previous term to utilize SolidWorks to design and draw various components of machines or tools for research and development processes. This term, I continued to use SolidWorks for various departments, mainly R&D, quality, and maintenance.

As a co-op student, one of my goals was to develop skills working on a team of engineers. To achieve this goal, I created DOE's and carried out various tests to determine the feasibility of the product with regards to the functional specifications set out by the company, government, and customer. I also created a technical package and wrote reports for the R&D Director. This goal including data mining and analysis as well. To this end, I learned the statistical analysis software, JMP, and wrote a program in it to analyze large amounts of data. Additionally, I worked to update the Microsoft Access database which I created the previous semester. I also led a training to ensure the numerous new employees would be able to use the database. Beyond these larger projects, I helped with anything else people needed throughout the summer.

This session was different from my previous session mainly because of the number of new employees. The company more than doubled in the time I was away and a new branch, Capitol Medical Devices (CMD), was started. This new startup is a molding operation which provides the parts used by SiO2. CMD was in the same facility as SiO2 and they worked closely with one another to develop a successful product. Many of the tests I ran, including all of the DOE's, were technically for CMD because my supervisor is the manager for the new company. Most of the smaller odd jobs I completed were for employees of SiO2. I worked easily between the two companies and eventually received work requests from both.

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