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Mechanical Engineering
Ingersoll Rand Security Technologies
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Job Summary

Co-op Work Assignment

For the second term of my co-op with Ingersoll Rand, I was employed at a manufacturing facility that assembles various products for their Security Technologies division, mainly door hardware and exit devices. I was under the supervision of an operations manager, who functioned as an overseer and engineer for two assembly lines in the plant. My role during my co-op could most accurately be described as industrial engineering. I participated in projects to re-organize assembly lines layouts, re-develop the assembly processes of different products, and improve the logistics of component delivery. My time was divided between working at my desk, where I made spreadsheets and tracked inventory, and working on the production floor, where I observed and optimized assembly lines. My role involved interaction and communication with a broader range of people than a typical engineering position, as I spent a great deal of time talking with assemblers to understand their needs and ideas. The training for my job was provided partly by online videos and interactive tutorials that are required of all employees. However, my most useful training was done ad hoc, by whoever I was working with when I started on a new task. I was not specifically assigned a mentor during my co-op. I generally directed questions to my supervisor, who was always able to either answer directly or tell me who to talk to for an answer.

Assessment of Learning and Development

My academic background is almost entirely in mechanical engineering, but I have had interest in operations research and engineering in the past. This position allowed me to further investigate this interest without redirecting my academic career. It also gave me experience working in a large corporation, and taught me the advantages and disadvantages of working in a company of this size (and age). In these types of companies, there are many established practices that are done simply because they have always been done that way, whether or not it is still necessary or relevant. Companies of this size also tend to strongly resist change, because
changing anything will often indirectly affect many people, and it is easier to keep with a familiar routine. My experiences during both of my co-op terms have led me to think that I might enjoy working in a smaller company more than a large company. Although a smaller company wouldn’t have the resources or job security of a corporation like IR, I would enjoy having a more direct impact on the company and a closer working relationship with my co-workers. I’ve also discovered that operations engineering is not as well-suited to my skills and interests as I had previously believed. After my co-op experiences, I now believe that I am most aptly suited to a position focused on quantitative analysis or design.

**Life Outside of Co-op**

To find housing for the summer, I consulted several websites with apartment listings and got in touch with the other interns employed with Ingersoll Rand in Indianapolis. I settled on an apartment complex in Castleton, about 20 minutes from my workplace. There were 4 other interns staying in the same complex (Core Riverbend Apartments), which made it very easy to get together on weekends. I would recommend finding housing on the North side of Indianapolis, as neighborhoods near my workplace tend to be less safe. A car is almost certainly necessary to get around Indianapolis, although carpooling with other interns is a valid option during the week. Between the Ingersoll Rand facilities on Tobey Drive and in Carmel, there will likely be enough interns and/or co-ops with whom to organize social activities. The Broadripple area is popular for its bars and clubs. Ingersoll Rand also offered a few opportunities for community service in the city during the summer.

**Evaluation**

What I appreciated most about this job was learning the importance of designing products for easy manufacturing. If an engineer only designs his product in an office, using CAD, it’s likely to be difficult or even impossible to manufacture cheaply. My job had me out on the assembly line every day, seeing what makes a product easy and cheap to manufacture. What I did not enjoy about my job was that it didn’t give me any challenging intellectual problems and I felt that I didn’t use any real engineering knowledge.