Job Summary

I returned to Primet Precision Materials Inc. this summer after a semester of classes. Primet Precision Materials is a company focusing on improving electrical energy sources with their own nanotechnology and processes. My primary role during the summer was data analysis and compilation.

My role required the same roles as last term plus more. I was asked to calculate the capacities of the battery materials, calculate particle size densities, view samples under a stereomicroscope, and analyze samples viewed under SEM. This information was uploaded to the database and the server for the requester. Any worker who knew the instruments or processes provided direct training. The stereomicroscope was left for me to learn on my own because the previous user was no longer with the company.

Primet Precision Materials is a smaller company focused on advancement in the battery field. This means that the focus and priorities change quickly. My old project, a prototype condenser for the production line, was no longer considered an immediate need, and I was reassigned to other projects. Most of these projects didn't relate to my major as a Chemical Engineer as the condenser project did, but the company needed them done. Many of these projects included learning new instruments for analyzing the product. I was often asked to help other coworkers...
with their tasks because the company would quickly require more product or creation of a new product.

With a staff of about 30 full time employees, Primet Precision Materials has many of their staff able to work with multiple instruments and procedures. I was asked to write manuals on the instruments and procedures I learned for newer employees to resume my projects after I left.

The smaller staff size also allows a greater chance of interaction with anybody here. I was able to learn more about the business side of the company by asking a coworker in a nearby cubicle. The CTO is often available to speak if you ask, as well as the CEO when he visits. Everybody is accessible if you have questions.

The company’s location in Ithaca is also very comfortable. One of the biggest concerns I have seen in the co-op process is finding housing at the new site as well as subletting housing in Ithaca. I was required to do neither because I could just live in the apartment I leased for the year. I also took the Tcat bus system to work. The route 30 becomes the route 11 at Senaca and will go to Ithaca College Circle. From there, you can walk to South Hill Business Camp, which is the company’s location, in about 5 minutes. The same route also goes to South Hill Business Camp depending on the time and alternates between. The site lists all of the times. Also, because I was living near Cornell, I had access to all the facilities such as the gyms.

Working at Primet gave me an understanding of how quickly a smaller company develops. Many changes occurred during my time here, including changes
in staff as well as the company potentially being bought by a larger one. Overall, working at Primet helped me clarify my interests in the industry.
Job Summary

This fall, I worked at Primet Precision Materials. Primet Precision Materials is a company based on nanotechnology and currently focusing on improving lithium ion batteries. My primary roles at Primet were data analysis and R&D.

My data analysis role required me to view the capacities of the battery materials, analyze the results, and submit them to a database so the requester could see them. Training required learning the calculations and the analysis process.

My role in R&D was more independent and involving. My project was to develop a prototype condenser to remove water vapor from the outlet of the production line while minimizing energy costs. The project was a continuation of two previous co-op students. I was given the notes of the previous co-op students and spent the beginning of my term understanding the thought process behind the condenser while researching other condensers and the microphysical properties of water. While working with the condenser from the previous co-op and modifying it, I ran into many obstacles that I consulted with the CTO of the company. Later it was determined that the current model would not be sufficient for the task, and I was asked to design a new model. However, the obstacles ended up too difficult for both of us, so a consultant was hired to assist me.

Since Primet is a smaller company, I was able to work with many of my fellow co-workers. Sometimes I helped in the manufacturing process as well as
helping with other projects currently in development. Many of the projects involved concepts that I did not have prior experience with, but my co-workers were eager to explain the goal of the project and teach me the science. This experience made Primet seem to be one group, rather than a bunch of individuals with their own agendas.

Working at Primet gave me an insight on how a business runs in a real-world situation rather than classroom idealized one. I was able to learn how to design and test developmental projects while managing deadlines. I came to understand my potential and limitations in a company based on my education. Overall, working at Primet provided a great understanding of an engineer’s role in the industry.
Rujuta Natu

Ran65

Materials Science & Engineering

Primet Precision Materials

Spring 2012

Job Summary

I completed my final term of my co-op during the spring semester. Primet Precision Materials is a start-up company located in Ithaca itself, so in terms of housing and socializing, my life was pretty similar to what it is during the regular semester. For transport, I took a bus.

The first thing that struck me when I returned was all the subtle changes that had occurred at the company since the summer. There were different people, different products, and new equipment.

Upon my return to Primet, I learnt that I was to continue with my old project. The last term, I had had a chance to make a decent start on it, but this semester, I needed to refine the results. The project involved synthesizing a material that was essential to the company’s production process. I think that I managed to make quite a bit of headway, and the results (although I’ve only seen the intermediate results) look very promising. I also had a chance to get involved with smaller side projects, and learn more about what Primet does as a whole during this longer co-op term. Some of the projects helped me acquire useful skills – such as characterization techniques and visual basic. I was also exposed more to the company’s culture, and its future direction, which was an interested insight to get during my work experience.

I think that one advantage of working at a start-up company was that I was given more exposure than I otherwise would have been. I also feel like the pace at which things progressed, with my project, and in terms of projects at the company in general, was much faster, so I was able to see my project through its entire course. I am not sure how many other companies would have enabled me to gain that much experience during a semester.

In terms of atmosphere, the work environment at Primet was quite casual. I found that even the most experienced engineers and technicians were very approachable, and happy to help any time I needed help or guidance. I enjoyed my experience here immensely and feel like I have learnt a lot during these 30 weeks.

Before this experience, I had no idea what to expect in the real world. I blindly applied to any company remotely related my major. Now, however, I know the type of work environment I am interested in, and have a better vision for what to look for as I approach my graduation. I would definitely recommend this work experience for any future student trying to decide what they would like to pursue after graduation.
Sally Shi
Sls398
Materials Science Engineering
Primet Precision Materials
Term 1, Fall 2011

Job Summary

Primet is a start-up company focused on research and development of battery materials, and it has about 30 employees. Thus, I don’t have a working group within the company because of how small it is. Instead, I work with various people in the company to get what I need, and usually someone in the company will be able any questions I have.

My co-op work assignment included one major project in setting up a reactor and testing out catalytic reactions, which required a lot of research and reading. Then, I learned to use various characterization techniques and focused on surface area calculation. Training was provided on an individual basis. There was a brief orientation, but a lot of it was getting trained by specific people who already knew how to work the machine. Some training was done at Cornell to use the SEM, XRD, and Raman technologies.

My mentor for my reactor project is a PhD engineer who had experience with reactors. I approached various people with different types of question. I would approach the person most experienced with a piece of equipment if I was having trouble with it. For general questions regarding work, I asked my supervisor, Sandy, because she knows where to find information and what is going on in our company.

My work is directly related to my educational background. I learned many important characterization techniques that are key in Materials Science. I also learned about the industry culture in general through working with different people and talking to the CTO. I learned about how important it is to understand a company’s culture and how to work together with others. I learned that no one is perfect but most people are good-hearted and generous, at least at Primet. This position has encouraged me to go into industry. This position has also encouraged me to always strive to be more mature and aware of others’ needs, because making other people happy will result in your own happiness. I would ask more questions if I had to go through this experience again.

My Co-op was in Ithaca so I just lived in colletegown. The bus can be used for transportation, but I recommend bringing a car for convenience. Social life is the same as in college, since I live with all my college friends. The best feature of this job is the people. I’ve learned so much through talking with people and even though I have a lot more to learn, I feel like I understand a lot more about making the right choices. The worst feature of this job is that I deal a lot with powders, so putting on masks can get tiresome. Also, sometimes it gives me allergies.
Rujuta Natu (ran65)  
Materials Science & Engineering  
Primet Precision Materials  
Summer 2011  

Job Summary

I worked at Primet Precision Materials for my co-op experience. Primet is a small company - with around 30 people - that specializes in battery materials. It is located in Ithaca, NY. As a result, my co-op experience is probably atypical – unlike most co-op students, I did not have to make any separate arrangements for my housing, and I socialized with the same friends that I would have at school anyways. Furthermore, my first term was the shorter summer term, and my second term will be the spring term. As a result I only had 11 weeks in which to get myself oriented, settled, and make headway on my project.

My first day, I headed to Primet with no real idea of what to expect – I was not sure how formally to dress, what I would be doing, or even how I was to sustain waking up at 7 a.m. – an hour typically unfamiliar to me while at school. As is turns out Primet is quite informal – jeans and sneakers is usually accepted. As for the work itself, well, my very first day, I was given my project.

Since most of the information is proprietary, I cannot delve into the details of what I was assigned. Essentially, I was to design a process to synthesize a material that was a necessary raw material for Primet’s production process. I was given the task, and a few other instructions – quite unlike the experiments at school, where each and every step was outlined. This intimidated me at first, as I had assumed that I would, at least initially, be working under somebody’s supervision. However, after I had done some research, I felt reasonably assured that I understood the basic concepts involved, and I managed to produce an outline.

Having only a theoretical understanding, I was still quite uncertain of how it would work in practice. However, I soon discovered that every time I was stuck, the engineers and technicians around me were quite ready to help and point me in the right direction. Everyone at the company had a different specialty, and, one advantage of working at a small company was that everyone was aware of whom to go to for what specific problem.

It also meant that I was in frequent contact with the more experienced engineers, including the CTO and founder, which would have been unlikely at a larger organization. I found this co-op experience very rewarding, even more so...
than I had anticipated. While being assigned an independent project was certainly intimidating, it broadened my skill set, and also allowed for creativity, which made the whole experience more interesting.

Primet’s continual focus on improvement creates a dynamic, and more efficient work place. I found the people approachable and friendly. Although the work was challenging, it also gave me more hands-on experience than I could hope for. More importantly, I am now confident in my ability to apply my classroom skills in a workplace.