For the fall co-op term, I was a part of the Dispersion Technology group of the XCDTI - Xerographic Components Development Technology and Integration. There were two other people in the group besides myself: Lanhui Zhang, my supervisor, and Lin ma. The group deals with dispersions and other solutions related for use in photoreceptor production. Dispersions are processed in this group or in the plant and characterized by this group for formulation and process development or quality control. The quality control of samples are analyzed through various methods and instruments such as flow visualization, spectrophotometer, rheometer, particle sizer, and others. Other various experiments are conducted to address and solve related problems that come up and also the group works together with other groups to aid in the development of the photoreceptor technology. The work is mainly done in a research and laboratory environment. Sometimes I would need to go to another building on the Xerox Webster site to work in a different lab and I was able to get a tour and learn about the plant processing for belt photoreceptors.

I had couple of projects I worked on with the guidance and help of my supervisor and he would help me set up a plan. Whenever I had questions I could always ask Lanhui and Lin and they provided helpful hints and suggestions to help me with what I was working on. I also did some side lab supporting work for other groups and helped Lin or Lanhui when needed. A monthly report was required every month about the projects and work I had done. The reports helped me to learn how to analyze data and improve my writing skills for explaining technical information. For training, I had a general orientation on the first day about the company itself as well as general safety and security regulations. Most of the other required training from the company was done electronically through online learning courses and for the most part, they were pretty straight forward and easy to finish. No other formal training was required, but Lanhui and Lin taught me how to use the various laboratory instruments and the procedures and methods for performing measurements when the time came. My supervisor provided me with some readings about xerography so that I could learn about how photoreceptors work and how it is used with other parts to make a printer. Also, I was able to attend a seminar about photoreceptors to give me background knowledge for the work I did.

Since most of what I worked on was research based, the specific chemical engineering classes were not needed but some classes that were helpful were Physical Chemistry and general math as well as the lab classes. Before co-op I wasn't sure if I would be interested in a research oriented job, but after my experience I am more open to the idea when I look for a job in the future. Also, getting a tour of the plant was informative since I got to see all the aspects that come into play when working in a plant which is large scale compared to a research environment.

Xerox does not provide housing or stipend for the fall co-op but housing that was reasonably priced was not too difficult to find. During the summer I searched craigslist for places and there were quite a few options available. I drove up to Rochester one weekend to check out a few places so I could make sure the place was a safe neighborhood. Webster itself is a safe place but most housing was outside of Webster and in Rochester. I chose a sublet at a two bedroom
apartment near RIT and the other person living with me was a graduate student attending RIT. For transportation, I was able to get my own car. I am not sure how good the public transportation is but it was definitely much better having my own car. Also at work I needed to drive to other buildings sometimes and it would take quite a bit to walk since the company site at Webster is large. For activities, I went to a picnic and Christmas party at Xerox. I found a church that I attended on Sundays and sometimes my friends would visit or I would go visit them. It was nice having some time to just read books and watch movies and having a normal sleep schedule. Also Lin suggested some malls and shopping centers for me to check out. I didn’t get to explore much of Rochester, but there seems to be a lot of options for activities and things to do.

The experience of working at Xerox was memorable and informative. I enjoyed being in a research oriented setting more than I expected. Also, I could see that team work and working with others is always a necessity in an engineering environment since talking to others was useful and helps in tackling the project at hand. The work schedule was nicely paced and I was able to plan out what I needed to do. It was nice having a consistent work schedule and then being able to relax after work without needing to do any extra work. Most of the coworkers were older in age and I didn’t get to know some of them better when I could have, but I hope to reach out more when I come for the summer term.
For the summer co-op term, I returned to the Dispersion Technology Lab of XCDTI - Xerographic Components Development Technology and Integration located in Webster, NY. The main functions of the group include dispersion processing and characterization as well as photoreceptor devices coating. The group also works with and provides lab support to other research groups and the manufacturing plants such as XRCC – Xerox Research Center in Canada. Quality control of dispersions and their formulations are assessed with the help of other analytical groups as well as within the Dispersion Lab through spectroscopy, flow-visualizations, rheology, and others. I mainly worked on a project for replacement of the binder in the charge generation layer formulation due to discontinuation of the binder originally used. Dispersion preparation by various milling methods were tested and the dispersion quality and stability was assessed and analyzed as well. All experiments were useful for enriching the information database about the charge generation layer using the new binder. I would also provide other lab support help when needed. Since I was returning after working in the fall, I did not have to redo much of the basic safety and corporate regulation training besides a couple.

My educational background was useful for understanding certain basic aspects of the work better, but I learned most of the information about xerography and dispersions on the job. I was continually learning and building upon my knowledge from the fall term especially with the guidance and constant help of my supervisor Lanhui Zhang and coworker Lin Ma. Even though it was one main project, I worked on various experiments and sometimes more than one at the same time. I learned to be responsible about managing my time in order to finish the experiments in a timely manner while also making sure all needed materials and instruments were available for use. It was a valuable experience for my professional development of being responsible and taking into account the many factors that can affect an experiment and thus the results. My supervisor guided me with planning and approaching experiments that would be needed to carry out the next steps of the project as well as analyzing and drawing conclusions from the data obtained. Monthly reports and presenting the work I did at the end of the term developed my ability to express and explain technical information, which will be a vital professional trait in any industry.

For housing, Xerox gave the option of either receiving a stipend or living in the intern housing that they provide and pay for part of the rent. It was cheaper to find my own housing so I went with the stipend and sublet a studio at The Province near RIT. I commuted to work since I had my own car. I know some interns actually biked to work, but I do not know how far away they were living. The intern housing would be more convenient for those who don’t have cars since Xerox provides carpooling with the intern housing package. There were quite a lot of interns during the summer so Xerox had various activities such as attending a baseball game with managers and interns or going to the Seabreeze amusement park with interns. There were also events where speakers such as CEO Ursula Burns would provide information about their own experiences as well as the diverse aspects and work involved in Xerox Corporation. I shared my office room with another intern who was staying in intern housing so I was able to meet other
interns through her. They invited me to hang out with them and would let me know if they planned to do anything so even though I didn't live in the intern housing I was able to still get involved and interact with other interns. Besides events that Xerox provided, there were many other summer activities going on in Rochester such as concerts, festivals, and parades. Xerox sent out newsletters to interns and young professionals with a list of all the local events that were being held in case people were interested in going.

Overall, my coop experience at Xerox Corporation was extremely valuable. I was able to experience the real world industry and even though I was only working on one aspect or part of the bigger product, each part is important and needed to make up the whole but also teamwork is vital. The work environment was comfortable and friendly with help and guidance available whenever I needed it. Also, the group I worked with was encouraging, giving me advice and helping me to learn from my mistakes. It was helpful and challenging to be in an environment that is constantly seeking to be innovative and productive.