

A Year In Review

Alex Muir

2015 Edition

University of Cincinnati Honors Program



INTRODUCTION

Welcome to another edition of A Year in Review! This time around, we will be dissecting the June 2014 – July 2015 timeframe. It's been a wild 12 months, and to be honest, I had trouble picking what to write about! I have a pretty big bank of things that have impacted me significantly since I last sat down to write one of these. In the end, I have decided to focus on two main things: Inquiry to Innovation, and my experience as a teaching assistant. Get comfortable, grab a cup of coffee, and get ready to dive in.

A STEP INTO THE PAST

THE BURNET WOODS PROJECT

Moving in chronological order, my journey began in the Fall Semester of 2015. It felt good to be back on campus and get back into the swing of college life. After the first two weeks, I had my schedule figured out, and was ready to get down to business. This semester, one of my electives was called Inquiry to Innovation, an honors seminar that focused on – you guessed it! – methods of innovation. I had absolutely no idea what to expect when I walked into class on the first day. After all, 'methods of innovation' is about as broad a category as I can imagine. Upon arrival, we were informed that we would be looking into the Burnet Woods Problem. The problem (described to us as a 'hairball') can be boiled down to the fact that almost everybody in the community surrounding Burnet Woods has a stake in what happens to the park, and therefore it is difficult to make any concrete changes. Furthermore, despite the fact that the UC student body is one of the largest groups of people in the area around Burnet Woods, the students have never had a formal stake in what happens to the park. To address the problem, our class broke it down and analyzed the situation from every angle imaginable. In the end we decided that a formal survey of the student body was in order. The class was split into groups, and each group was tasked with finding a unique way to measure student opinions. My partner and I attempted to measure what students need without asking or observing them directly. Throughout that process, we reworked our goals and methods numerous times before stumbling upon our final project idea. I'm not going to spoil the ending here, and if you'd like to hear the whole story, I have an entire webpage devoted to this project¹. For the purposes of this document, I'd like to reflect on the central idea of the class. The professors continually focused on whether we were *asking the right question*. We were asked this almost every class period, and every class period I was forced to thoroughly evaluate my progress and future plans in order to determine if I was still on

¹ <http://carbotelluris.weebly.com/inquiry-to-innovation.html>



track. This skill has proved invaluable not only in my academics, but also during my work experience (my Spring Semester co-op). I was able to analyze every problem from as many angles as possible, and to make a decision based upon the root cause of the problem, and not solely the symptoms. This made me a more effective team member and employee. It also forced me to learn more deeply, because I had to look further into each concept to understand what was really going on. This skill is my greatest take away from this Inquiry to Innovation.

TEACHING ASSISTANCE

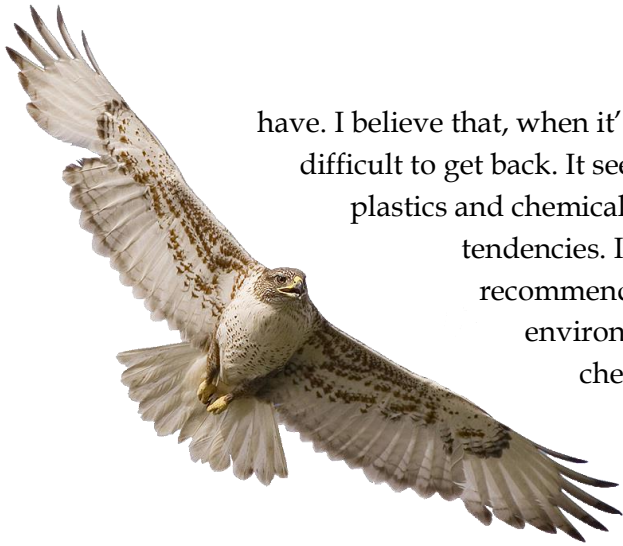
At about the same time that Inquiry to Innovation was happening, I was also a teaching assistant for the UC College of Engineering and Applied Science. I worked in the engineering tutoring center, as a pseudo-group leader for a learning community, and with an Engineering Models class, which focuses on basic programming for engineers in an environment called MATLAB. Each of these roles turned out to be a profoundly rewarding experience. I developed relationships with students that I assisted, and I was able to use my experience in programming, calculus, and chemistry to fill the gaps that lecture and recitation left behind. By the end of the semester, students were comfortable approaching me for help in any class they were enrolled in, and they knew that I would do everything in my power to help them understand. In doing so, I was able to develop my teaching and communication skills. I became increasingly apt at breaking down complex ideas into simple pieces that were easy to digest. In addition to this, I made it clear that I would not do problems *for* students, but that I would instead work through problems alongside them. In a majority of cases, students were able to discover the answer themselves instead of me feeding it to them. Those moments were some of the most rewarding of the semester.

A LEAP INTO THE FUTURE

When I reflect upon the experience I have gained and the progress that I have made in the past year, I can say that I am on track with the goals that I have laid for myself. I re-read last year's review, and one sentence that caught my eye says, "Next year, I'll do what I like, and like what I do."

Being on co-op for a semester allowed me to step back from the busyness of college life and ask myself if I am truly doing what I am meant to do. At the present moment, I believe that something related to the environment is what lays in my future. The health of our planet is close to my heart and my mind because I believe that, in the end, nature is all that we really





have. I believe that, when it's gone, it's going to be something that is extremely difficult to get back. It seems strange, then, that my first job involved making plastics and chemicals that are in contrast to my environmentalist tendencies. I spoke with my supervisor on the matter, and she recommended that I expand my professional skill set to include environmental topics while in school, instead of taking only chemical engineering courses.

At the present moment, the way I wish to achieve this goal is through UC's accelerated engineering masters program, ACCEND. Until recently, my plan had been to obtain a masters in chemical engineering.

However, the more I thought about it, the more I began to look towards an environmental engineering masters degree to complement a chemical engineering undergraduate degree. This will not only allow me to continue studying chemical engineering, but it will also allow me to connect my learning to the environment. This type of degree is the fusion of my passions in their purest forms. I will be able to use the industrial background that chemical engineering gives me in order to create large scale solutions to environmental problems. Each degree works with the other, and this will allow me to pursue my passion.

In the same regard, I have begun to expand my personal skill set. I wondered why I had limited myself to just the field of chemical engineering, and I could not come up with a good answer to that question. So, I branched out. I tried learning how to play the guitar (which is going well, by the way), and I am learning how to interface computers with hardware sensors and chips - something that I have wanted to learn all of my life. I have started reading as much as I once did, and am trying to learn how to play chess with some degree of competency. Even though none of these things relate to chemical engineering, they have given me an enormous sense of fulfillment. These exercises give me a break from intense calculation and theory, and allow me to develop my artistic and tinkering side. At the same time, because they give me a break from class work, I am able to keep my passion for my degree at full capacity.

In sum, this year has been a year of discovery. I have further defined my career path, and I have begun to expand my learning to anything and everything that interests me, no matter what discipline it is associated with. In the coming year, I will continue to develop and enhance these skills, and I'll probably pick up a few more hobbies along the way. My goal, then, for the coming year is to keep doing what I am doing now. Branching out has been one of the most rewarding experiences of my life, and I hope to keep this flame of discovery alive and burning brightly in the coming years and beyond. I'll see you in 2016!

A NOTE ABOUT STYLE

I chose the mountains theme for this year, with emphasis on one word: *climb*. In the past year, I have struggled to climb to higher levels of understanding in my classes, and have struggled up the steep learning curve of my new hobbies. At the same time, however, I have enjoyed the beauty of an expanded skill set and an increased understanding. Mountains are also relevant because, as I mentioned before, the environment is something I hold close to my heart. I wish to tailor the rest of my education to that topic. Mountains, in particular, harbor immense natural beauty and a varied, diverse ecosystem. They are some of my favorite exhibits of nature.