

Canada College – Science and Technology Department

ENGR 100 - Introduction to Engineering - Spring 2014

My Process to Become a "World-Class" Engineering Student

by



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Introduction

From the very first day of Engineering 100, I did not know what to expect from the class. I had honestly expected a content driven course and was surprised to discover that the class focused on mainly life and study skills. I was initially disappointed. I flipped through our textbook Landis, Raymond B., "Studying Engineering: A Road Map to a Rewarding Career", 4th Edition, Discovery Press, Los Angeles, California, 2013 and was discouraged by the frequent clip art and cartoon quality. However, now that I have reached the end of the semester, I am quite thankful that I decided to stay until the end. This course has been a journey for me and many of the skills and lessons discussed may not have directly applied to me, but forced me to think about who I want to be as a person and a student.

Last year was a difficult year for me. Before I started attending Canada College, I was in the Navy. I had served for 3 years before deciding to end my contract prematurely. I had left because of many different reasons, but only one has resonated in me to this day. When I was separated from my husband, I began a relationship with an officer. Since I was enlisted and he was an officer, the relationship was illegal. The ship soon discovered what had happened and I went to captain's mast. I received a punishment of 45 days restriction to the ship, 45 days extra 2 hour duty, reduction in rank, and half month's pay for 2 months. The punishment for my indiscretion was never the issue; I knew that I was not following regulation. I had a problem with the way people treated me after they had found out. I was called the most awful, derogatory names to my face and behind my back. The crew only consisted of 300 people and everyone made their opinions known to me on how I had wronged the Navy, ruined lives, and

became “whore”. I could not handle being in that toxic environment, so I severed my contract early and went home. I get asked all the time, “How long did you serve in the military?” and I usually answer in a lie. If I told people the truth, they would ask me why I did not serve my entire contract. I was not ready to talk about the emotionally traumatic events that I had undergone.

When I came home, I did not know what I had wanted to do. I was stuck between working, applying to various universities, or going to the local community college. At first I decided that I wanted to apply to different schools, but I realized I was not ready to leave the security of my home. I was so incredibly depressed and unsure of myself and antisocial. Consequently, I went online and registered for spring 2014 classes at College of San Mateo and Canada College.

I started this course in a very different place than I am now. I am fairly social, participating in the robotics club and chess club and genuinely feel good about the person I am and the choices I make. My grades are pretty good, an expected A- average for this semester. I recognize now that my success is derived from myself, this course, and my instructor, Nick Langhoff.

Building Relationships and Socializing with Peers

I think the biggest and most difficult aspect of myself that I needed to overcome was my unwillingness to socialize outside of class. It was very difficult for me to not only relate to people, but to actively engage myself with others. I had this mindset that I was solely going to school to learn and I was not interested in talking to people. Also, I think that I was so scared

that I would regret letting people into my life. I had been so incredibly hurt by my shipmates that I did not even want to interact with other students.

One of the chapters in "Studying Engineering: A Road Map to a Rewarding Career" talks about why students and people needed a social life. Socialization creates balance to our life. It is a medium for us to engage, learn, talk about ideas, etc. Nick Langhoff in class was also talking about why engineers need to be good communicators. He said that many times, engineers will be working in groups and need to learn to collaborate with others. I scoffed at him when I heard this, but when I was presented with the opportunity to be part of the chess club, one of my favorite games in the world, I could not refuse. We had weekly meetings, so it was not a huge commitment and it forced me to talk to other students. As much as I was reluctant by the initial idea of socialization, I started to look forward to playing and talking to the guys.

Co-Curricular Activities

The club then became a conversation piece to others in my classes and before I knew it, I was connecting with people. I started a project with one of my classmates making a television antenna just for fun. One of my instructors eavesdropped a conversation about making an antenna and he invited me to join the robotics club. This was exactly the opposite of my initial goals of the semester and yet it felt good to engage in different projects and learn about different areas that I have not been exposed to previously. I would have never expected that I would be the person who would be the president of the Robotics Club in the fall or a tutor in the learning center on campus. I am so thankful that I made an initial leap to venture outside

my comfort zone to join the chess club. Opportunities have been sprouting up all over the place because of it.

Negative Mindsets/Changing Negative Behavior

One of the really unfortunate parts of leaving the military and changing back to civilian life was my attitude. I was extremely arrogant in January. I think it is derived from a feeling of superiority to civilians while in the service because civilians would never understand our hardships, sacrifices, and trials. This mindset is very common in the Navy and naturally, that pompous and condescending attitude was very contagious. When I started my classes, I sat in the back row of desks and in the corner. I sat there with an over-confident grin plastered to my face. I think my lab group mate, Jeremy, really changed my mind about the intelligence and depth of knowledge that young kids have these days. I could not believe that he is 18 years old, knows how to program in different languages, and is taking higher level math classes than I am. I am 6 years older than him and yet he continuously shows me how smart and capable he is. My arrogance quickly turned to humility in a matter of a few weeks.

A successful engineering student needs to reflect on his/her own personality and behaviors and reflect on whether this is a beneficial or damaging aspect of themselves. I think that everyone needs to take the time to think about what kind of person they would like to be. From there, people need to try implementing those changes to their lives. I realized that my arrogance is not helpful in any way and I did not want to be that kind of person; I changed.

Goal Setting

I have many skills that I picked up while in the service that many students do not possess. I learned some of these skills out of survival or just making my life easier to manage. Firstly, I learned the necessity of goal making. When I was on deployment sitting in the middle of the ocean, I kept looking toward the future just to keep sane. There was always a piece of equipment I wanted to get qualified to use or an area of study that I wanted to know more about. In order to head in a direction that I wanted to go, I needed to make and maintain a set of goals. These goals were not written down, but they were a mental guideline of where I wanted to be after a certain amount of time. I think that every student, not just engineering students should have a relatively good idea of what their goals are and how to accomplish those goals. At this point in time, I want to get a bachelor's in electrical engineering and go to some kind of graduate school afterwards. First I need to take the classes that are required of me to transfer to university. Then, I need to take classes at university to fulfill the requirements of graduation. Even a basic plan such as that is vitally important to figuring out direction and maintaining motivation to complete the goals.

Time Maintenance

Many people have difficulties managing their time. This happens, in my experience, because of not planning their schedule/organization, not realizing a commitment requires more time than expected, or a bunch of unexpected priorities consume a schedule. The last part cannot be changed, but the others can easily be remedied. I personally physically use a planner to plan out my schedule for the week, so I do not get any surprises that pop up. For me, I like to physically write events and deadlines down into a planner (as opposed to google calendar)

because the act of going through the motions of writing something down helps me remember better. Students are busy people; we have classes, clubs, study groups, dedicated time for homework, projects, sports, etc. Writing down times for commitments reduces stress and gives a reminder to actually follow through with commitments.

Prioritizing

Prioritizing really goes hand in hand with time management. Prioritizing is essentially giving certain tasks/commitments more weight and importance. Prioritizing allows me to accomplish more pressing tasks before relatively unimportant tasks. In order to be successful, students have to learn to finish their studies before playing video games. Before I joined the Navy, I had a huge issue with just attending classes. I would have rather played chess and listened to music in Santa Clara than sit in a classroom. Since then, I am pretty good at doing tasks that might not be especially appealing to me. I have learned to not complain because I always think now, "At least I am not cleaning the bathrooms for a month." In my case, going to class is now not an issue because of prioritizing my "needs" over my "wants."

Finding Motivation

My top 3 reasons to be an engineer are not only integral to the prospect of the engineering field, but they are also reasons why I wanted to return to higher education.

First, anytime in my life from now on, I need to be satisfied with what I am doing. I spent six years in an organization where I hated my life. I was so incredibly unhappy with the structure and authoritarian atmosphere that I was in. There was not any creativity, objections,

nor the notion of thinking for yourself. My only salvation was sitting in front of my equipment. When I sat in front of my gear, all I could think about was fixing a problem. I was not concerned with all the other problems in my life, just this one. The one I could fix.

It was so incredibly satisfying to actually fix a problem, even when my life was filled with them. When I left that job, I told myself that I would always abide by two standards for the rest of my life: I need to be happy and satisfied with my life and I need to be able to fix problems. Engineering happens to fulfil those two needs quite well.

Second, I love the fact that I have choices. As an engineer, I will have the choice to do almost any job that I can think up of i.e. lawyer, entrepreneur, inventor, doctor, economist, etc. Even as a student, I have so many choices. I could switch majors to something different. I could switch majors within the engineering college instead of electrical engineering. I am so happy with my life and I am so happy with the direction my life is headed. I do not ever want to be stuck, powerless to leave any situation.

This last reason is so essential to who I am as a person. I have this inherent need to learn new things. Building a solid base of knowledge is important to all aspects of my life. For my job, it was necessary to study electronics to advance in paygrade. Most people found it to be a chore; I found it invigorating. I bought a couple books on electronics to supplement my studies. I soon found that I did not understand many of the concepts due to my lack of electrical knowledge, so I bought some books on electricity. I believe in the fact that the entire world of thought and knowledge is a sort of web that connects one area to another. Electronics is connected to electricity, which is connected to physics, which is connected to math and

chemistry and so on and so forth. In order to fully try and understand one part, all parts must be partially understood. This creates a need in me to constantly try and understand everything.

In my social life, that same need is there. I want to be able to contribute to various conversations and I cannot do that if I do not have a base set of knowledge. This base comes from staying current with events, having a basic sense of history throughout the world, knowing some economics and government, etc. I want to get something out of most conversations.

Even on the other side of the spectrum, the need for knowledge in a social aspect is also why I watch a good deal of television, movies and play video games. These not only help me have a conversation about the media, but also exposes me to different trains of thought, places and cultures around the world and different problems that other people might face. Media can be extremely enlightening.

I just love learning and exposing myself to new things. My mother told me once, "The moment I stop wanting to learn new things, is the moment I get old." That one sentence has resonated in me my entire life. It is the phrase that used to motivate me to get out of bed in the morning. To me, nothing is more important than learning.

My motivations to become an engineer may be entirely different from another engineering student, but we all need to understand why we decided this field of study. This will help us realize why we are in these programs and allow us to reflect on whether or not we are happy with our major.

Summary

I enjoyed writing this report because it really demonstrated to me how much I have changed this semester. I was very stand-offish and did not want to talk to other students or participate in any outside activities. I was such a wreck emotionally that I did not want to let anyone into my life. This project forced me (in a good way) to really recognize how destructive that mindset actually was. I feel like metaphorically I was standing on the edge of a building in January ready to jump. This program was kind of my salvation, in a sense. This course gave me direction, reintegrated me into the college environment, and opened me up to socialize. I was so uncertain and lost.

As much as I would like to believe that I could have gotten to this point all on my own, I seriously doubt whether or not I could have in such a short amount of time. This course seriously changed my life on a grand scale and I will forever be thankful.

End Note:

I know that this report comes off more of a narrative than a report, but I feel that I maintained the spirit of the course and the requirements of the assignment. To me, writing a report about how this project changed my life this semester is just as important as comparing myself to the ideal engineering student. This report is essentially how I changed into a successful student which is just as motivational to me.

References

[1] Landis, Raymond B., "Studying Engineering: A Road Map to a Rewarding Career", 4th Edition, Discovery Press, Los Angeles, California, 2013