

Becoming a World-Class Engineer

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Introduction:

What is a world-class engineer? What attributes do they possess and what skills do they bring to the field of engineering? These questions have no direct answer. Each individual will have their own idea of what constitutes a world-class engineer. Through out the course of the term, we examined every aspect of what makes a great student, and a great person, and a great engineer. Everything from goal setting and community building, to academic and personal development was studied and discussed. Before entering the college world, my understanding of engineering was slim. I thought of an engineer as someone who is good at math and science and makes a lot of money. This course opened up a wealth of knowledge regarding what engineers do, how they contribute to society, and how they act, think, and collaborate with others in order to achieve their goals. This helped me learn how to transition properly from a high school to a college environment. I was introduced to the vast resources available to engineering students such as study tables, the "mole hole", and Kelly Engineering Center. Time management became a critical component to success, and I learned how to prioritize classes and assignments. Perhaps one of the most valuable lessons I took away from this course came near the end when reading about what the best college students do. It stated that the most successful students in any major don't learn for the sake of graduating and finding a job, they learn because they have a love for knowledge, and for the sake of expanding their future opportunities.

1. Goal Setting:

Setting Your Goals-

Goal setting is a necessary component to progressing along the path of becoming a successful engineer. The first step that I took when setting goals for myself was to create a "bucket list", or a list of goals that I wanted to accomplish along my path of becoming an environmental engineer. This list consisted of short term, mid-term, and long term goals, and was delineated as follows:

Short Term:

1. Look into ecological engineering
2. Obtain a greater understanding about the field of engineering
3. Talk to my professors about the difference between ecological and environmental engineering
4. Join a engineering study group
5. Join an engineering club
6. Attend an engineering based career fair
7. Make use of the help and resources available to me on campus

Mid Term:

1. Make a decision to switch to ecological engineering or stay in environmental engineering
2. Maintain good grades
3. Participate in an undergraduate research project
4. Find someone working in the field of engineering who can serve as a mentor
5. Take classes that will challenge me to use problem solving and critical thinking skills
6. Stay focused and motivated

Long Term:

1. Learn to love my field of study
2. Graduate with a engineering degree from OSU
3. Find a job in my area of study
4. Develop my skills and knowledge through real world experience
5. Return to school and obtain a Master's degree in engineering
6. Find a stable job that I enjoy
7. Make an impact on the world around me

Strengthening the Commitment to Your Goals-

Through out the course of the first term, I have already accomplished most of my short term goals, and am making good progress on my mid and long term goals. This list will be a helpful guide in the next two terms and in the coming years to make sure I am staying on track and heading where I need to go. The evaluation process that I went through was tedious and assessed many aspects before I arrived at the reasons I want to be an environmental engineer.

Engineering is the use of science and creativity to develop products and systems that will improve society's way of life. The engineering field works with modern products, and designs ways to improve the strength, efficiency, and sustainability of those products. Engineers are on the cutting-edge of technological advancement, and are responsible for designing systems and tools which propel human-kind into the future. Who wouldn't want to be a part of the next big thing?

As a child, my parents immersed me in the outdoors. Whether it was fishing, camping, biking or traveling, they exposed me to nature in nearly every aspect. As I grew, so did my affinity for the outdoors. When I wasn't in school or playing a sport, I was outside. Through high school, I excelled in all of my classes, but particularly science. As I reached my senior year of high school, I knew two things; that I loved nature and the outdoors, and that I was good at science related problems and classes. After high school I looked for something that would combine my passions and my skills, and found environmental engineering. When thinking about a career in environmental engineering, there are three main things that I view as the most important aspects to consider. These three things are job satisfaction, financial security, and environmental impact.

I consider job satisfaction the most important quality of any career. Job satisfaction is the level of pleasure and fulfillment that someone receives from a career. There are numerous surveys and reports that depict how satisfying various careers are (engineering usually being ranked near the top), but in reality, if you find your passion and find a job in which you can implement your

passion, you will achieve a high level of job satisfaction. Job satisfaction is important to me personally because I believe that happiness is the key to success. If you have a career you despise and have a low job satisfaction, then you will not be happy and therefore you will not be successful. Environmental engineering will allow me to implement my passion into my career. It will provide me with challenging work and stimulate intellectual development. Hopefully, these features will provide me with a high level of job satisfaction and reward me with a successful career.

The next most important quality in a career is financial security. Everybody wants to make money. A job with financial security is a job that provides you with a stable income and enough money to pay for your desired lifestyle. This varies from person to person. For some, a job at the grocery store may be enough to provide financial security, but for most, financial security necessitates a stable career requiring a college degree. Environmental engineering is a career that pays well and will provide me with financial security because I do not desire a sedentary lifestyle. I want enough money to travel the world, to try new things, experience new cultures, and develop new hobbies without being restrained by the burden of money. The average wages for an environmental engineer are about \$83,000 per year, and starting wages range between \$50,000 and \$60,000 per year.[1] Environmental engineering is also one of the fastest growing fields, projected to increase by 22% from 2010 to 2020.[2] A large amount of available jobs and high wages make a career in environmental engineering ideal when concerned with financial security.

Environmental impact is the third most important attribute of environmental engineering. Pollution, deforestation, and consumption of fossil fuels are just a few examples of the problems faced by environmental engineers which impact our world. The goal of an environmental engineer is to develop procedures and products which increase efficiency and sustainability while reducing the environmental impact. The significance of this attribute dates back to my childhood. I grew up in nature and it has helped shape my life and develop my character. It has been my solace and my playground. My hope is that a career

in environmental engineering will help to preserve the outdoors and prevent it from being ravished by industrial opportunists. By doing so, I hope that one day my children share my childhood experiences, and that we pass on an earth to the next generation that is in better condition than when we found it.

There are many more factors to consider when choosing a career in engineering. Job satisfaction, financial security, and environmental impact stood as the most important to me, and were the main criteria I thought about when evaluating why I want to be an environmental engineer.

Setting Up a "Road Map"-

If I ever hope to reach my goal and become an environmental engineer, then I need to advance my academic development, and to do that it is important to stay organized. I created a weekly schedule and a schedule for the entire term to keep me focused on what needs to be done each day and over the course of the term. I wrote new assignments on a calendar which I referenced frequently in order to avoid missing deadlines for homework and projects. It is also important to keep track of where I'm at, compared to where I need to be. The requirements to advance into engineering pro school are met by obtaining a cumulative GPA around 3.2, and by passing all of the core pre-engineering classes. Right now I am on track to meet these requirements. I know where I need to go, and these tools I've created will serve as my road map to get me there.

Understanding the Essence of Engineering-

The engineering profession has been around for a long time, and has seen many brilliant minds through out its history. Well accomplished engineers stand as some of the most prestigious and highly respected people in today's society. These accomplished individuals give us developing engineers something to strive for. They give us a goal that we know can be reached by others, so we believe may also be reachable for ourselves.

After looking over some of the most accomplished engineers from a list of "Engineers Among the World's 200 Wealthiest Individuals" in the book *Studying Engineering: A Roadmap to A Rewarding Career*, I found Eric Schmidt to be the most interesting.[3] Eric Schmidt was the CEO of Google and is estimated to be worth \$8.3 billion, making him the 138th richest man in the world.[3] He graduated from Princeton University with a degree in electrical engineering.

Schmidt had several jobs throughout his early career, including positions at Bell Labs and Xerox. His first notable career was with Sun Microsystems, which he joined in 1983 and eventually rose to the position of president of Sun Technology Enterprises.[4] In 2001, Eric Schmidt was recruited by Google to become their new CEO, where he remained until 2011 when he was replaced by Larry Page, one of Google's original founders.[4] Today, Schmidt continues to work for Google as the executive chairman and an advisor to the company.[4]

I chose to research Eric Schmidt because he works for a company that we are all very familiar with. The Google search engine is by far the largest search engine on the internet, boasting over 1 billion searches per month.[5] Google Inc. however, is much more than a search engine. It is a vast network of services, all with the purpose of providing us with a simple, smarter, and more complete internet experience. Google maps, Gmail, and Google play are just a few of the non search engine services provided by Google Inc.[6] YouTube and Android Inc. are also owned and managed by the Google juggernaut.[6][7]

During his time as the CEO of Google Inc., Eric Schmidt advanced the company towards many notable achievements. One of the biggest advances for the company was the creation of AdSense. AdSense is an easy way for websites, both personal and commercial, to earn money. The websites do this by allowing Google to post advertisements from various companies onto the site.[8] The advertising companies pay Google, which collects some of the profits and in turn pays the owner of the website.[8] AdSense is a massive money-maker for Google Inc. In the fourth quarter of 2010, this service accounted for 30 percent of Google's profits; a total of \$8.44 billion.[8]

Two more notable advancements during Schmidt's time as CEO were the purchasing of YouTube and Android Inc. YouTube is the leading video streaming and sharing site on the internet and, at the time, Android Inc. was the best selling smart phone platform.[8] The purchase of these companies greatly expanded Google's assets. Google Inc. also formed partnerships with Apple Inc. and Verizon Wireless to further expand their resources into the mobile phone industry.[8]

One of the most utilized resources created during the time of Schmidt's role as CEO was the tool Google Maps.[8] Google Maps is one of the most extensive and detailed consumer web based mapping services available on the internet. It possesses an extensive array of features such as satellite imaging, terrain maps, weather reports and road maps for almost anywhere in the world. It can also provide the user with street level photographs in many densely populated locations. Google maps is the primary mapping and GPS tool in Android smart phones, and is an intuitive and simple tool used by both large corporations and everyday people.[8]

Eric Schmidt stepped down from Google's CEO position on April 4, 2011, but remains the executive chairman of the company and continues to drive technological innovation.[4] Schmidt says that in the coming years, mobile technology is going to be a large focus of Google Inc.[7] Along with mobile technology comes the consumer desire for new and innovative applications, or apps, and Google plans to be on the forefront of this research.[7] Eric Schmidt helped advance Google Inc. to become one of the largest technological industries in the world. Whether we are consumers, engineers, or entrepreneurs, the work done by Eric Schmidt has affected our lives. He is someone who advances the present into the future, and is the epitome of what an accomplished engineer should be.

2. Community Building:

Building Relationships with Your Peers-

The study of engineering and the engineering profession is rarely a solo endeavor. All of the great engineering accomplishments throughout history have been accomplished in groups, collaborating and working together. Just like in the engineering profession, teamwork is an essential part of success in the rigorous engineering curriculum. Learning someone's name is the first step to making any connection. In our class, we tried to learn the names of all of our peers. After learning each other's name and making connections, you develop a sense of comradery with those around you, especially in a smaller class. This comradery can lead to developing friendships, forming study groups, and numerous other benefits that will help you along your engineering path.

Forming a study group is one of the most beneficial things you can do to find assistance in a class. The reasoning behind a study group is simple; multiple brains are better than one. Everyone knows a small piece of the puzzle, and when they come together, the group is able to take on much larger problems than an individual could have. Study groups allow other students to teach you what you don't know, and allows you to teach other students information which you have a solid grasp on, further solidifying the information in your brain.

Participating In Co-Curricular Activities-

As new college freshmen, we are constantly being told about the importance of networking and making connections. The best way to do this is to get involved in the campus community through clubs and activities. I joined the Adventure Club which is an outdoor club full of people who share similar interest to me. Through the club, I've met older students who have been around the college atmosphere for years and given me valuable advice. Clubs specific to one's major are a great way to connect with faculty members and can open up the doors to internships and undergraduate research opportunities.

3. Academic Development:

My Academic Plan for Environmental Engineering-

This list is a map of the classes I will be taking through out my college career. It shows be what to prepare for before each term, which terms will be the busiest, and which classes I will be taking in future terms.

Freshman Year (2013-2014)

Fall 2013	Credits	Winter 2014	Credits	Spring 2014	Credits
Chemistry 231	4	Chemistry 232	4	Chemistry 233	4
Chem Lab 231	1	Chem Lab 232	1	Chem Lab 233	1
Math 112	4	Math 251	4	Math 252	4
CBEE 101	3	CBEE 102	3	Physics 211	4
Engineering 199	2	Communications 114	3	Life Fitness 231	2
		PAC	1		

Sophomore Year (2014-2015)

Fall 2014	Credits	Winter 2015	Credits	Spring 2015	Credits
Organic Chemistry 331	4	Organic Chemistry 332	4	Geology 221	3
Math 254	4	Math 306	4	Math 256	4
Physics 212	4	Physics 213	4	Engineering 212	3
CBEE 211	3	CBEE 212	3	Engineering 213	3
Engineering 211	3	Geography 105	3	CBEE 213	4

Junior Year (2015-2016)

Fall 2015	Credits	Winter 2016	Credits	Spring 2016	Credits
Chemical Engineering 331	4	Chemical Engineering 332	3	Technical Writing 327	3
Chemical Engineering 311	3	Music 206	3	Chemical Engineering 333	3
				Chemical Engineering Lab	
CBEE 320	3	Hydraulic Engineering 313	4	334	2
Graphics and Design 201	3	ENVE 322	3	Microbiology 230	4
History of Mexico 270	3	Psychology 201	3	Hydrology 412	4

Senior Year (2016-2017)

Fall 2016	Credits	Winter 2017	Credits	Spring 2017	Credits
ENVE 421	4	ENVE 422	4	ENVE 456	3
Bioreactors I 457	3	ENVE 431	4	ENVE 425	3
CBEE Lab 414	3	ENVE Lab 415	3	Environmental Ecology 306	3
				Sustainable Engineering	
Social Problems 206	3	Engineering Elective	4	305	3
Engineering Elective	3			ENVE 490	4

Internships and Undergraduate Research Opportunities-

An internship or undergraduate research project is one of the best ways to set one's resume apart from everyone else's. At OSU there are numerous internships and research projects available for engineering students who are willing to reach out and put a little extra work in. These opportunities not only look excellent on a resume, but they give the student real world experience in their area of study, and are a valuable tool for discovering both what you like to do, and what you don't like to do.

Two of the most popular internships available are the Johnson internship, which is provided to many freshman and sophomore students, and the MECOP internship program, which consists of two, six-month paid internships. At some point through out my college career, I hope to get a MECOP internship. This would make me stand out among the other engineering students, and would be a valuable asset to have when searching for a career. I have also been searching for an undergraduate research project to participate sooner then that, preferably during winter or summer break of my freshman or sophomore year. I contacted the staff who are working on OSU's wave energy research project outside of my hometown of Newport, Oregon. So far they only employ graduate students but I made connections with some of the staff and will be among the first to know should any undergraduate opportunities arise.

Navigating the University System-

Oregon State University provides a swath of recourses available to it's students, and utilizing these resources is often times the difference between passing and failing a class. Some of these resources include tutoring centers for math, science, and writing, job placement centers, academic success advisors, counselors, a stress management center, study tables, personal tutors, and a personal advisor for each student. One of the biggest tools I've used this first term was a math study table to get me through my Math 112 class. This table consisted of a student tutor who assisted and explained concepts to myself and a group of five other individuals. This asset boosted my confidence in the class

and helped me obtain better grades on last midterm. I also utilize the chemistry help center in the library, where a tutor can help me with specific problems or lessons.

Understanding Teaching and Learning Styles That Work for You-

Academic development is an individual's progress as they are introduced to new information, and their strategies for retaining this information. After going online and taking a learning styles quiz, I discovered a great deal about the ways I best process new information.[9] The quiz determines what type of learner you are by comparing two different options for four different categories; active and reflective learners, sensing and intuitive learners, visual and verbal learners, and sequential and global learners. After answering a series of 44 questions, you were ranked on a scale of 1-11 towards one end of each category.

Based on my results, I learned that I am very evenly balanced between being an active and a reflective learner, and also between a sequential and a global learner. The results also showed that I am much more of a sensing learner than an intuitive learner, and much more of a visual learner than a verbal learner.

As a sensing learner, I am adept at learning facts and solving problems with well-established methods, as opposed to dealing with theories and ideas. I will tend to be more attentive to details and enjoy practical courses and problems which have some real world application. Even though being a sensing learner has its advantages, it is necessary to also be able to learn intuitively. A good way to do this when dealing with obscure ideas or theorems is to find some way to connect the information to the real world. Once a practical use is found for the concept, memorization and understanding will become much easier.

It seems that most college courses are taught with verbal learners in mind, yet most students tend to learn best through visual aids and presentations. I am a visual learner, and find classes where the professor talks, or simply writes words on a board without the use of pictures or diagrams, to be utterly unengaging. To help reinforce information from verbal lectures, I should implement

as many diagrams and flow charts into my notes as possible. Videos and websites can be found online that will present information visually and help one to understand any concepts not adequately explained by the professor.

Every student obtains knowledge in different ways. By understanding what learning styles work best for you, and using these to your advantage, you can increase your learning efficiency and the amount of information retained from your studies. If I can use some of these strategies to better suit my courses to my learning style, then I will be a better prepared, more engaged, and a more successful student.

4. Personal Development

Enhancing Your Self-Awareness and Academic Success Strategies-

Through out my first term at OSU, I've learned that adapting to the new and unknown is absolutely vital. The transition from high school to college is often times one of the most eye opening events in a student's life. Someone who was popular, smart, or athletic in high school has no social standing in a large college university such as OSU. Each student starts with a clean slate, and you realize that no matter how good you were, there are thousands of people here who are better, brighter, and more talented. This change can either be embraced, and motivate you to work harder, or it can overwhelm you.

The social environment is not the only transition to be made. The college academic environment also differs greatly from that of high school. In high school, classes were easy and the concepts taught were basic. Good grades could be obtained by remembering information in your short term memory. Most of your grades were based on homework, participation, and projects. Tests accounted for a much lower percentage of your overall grade in high school than in college. High school classes are generally smaller and the teachers know the majority, if not all, of their students. Lessons usually included graphics and diagrams as well as lectures given by the teacher, to accommodate both visual and verbal learners.

In college, understanding the concept of what is being taught is the key to success. You will need to recall much of the information being taught again next

term, next year, and years in the future so it is imperative that you develop a complete understanding of the subject. This task is made much more difficult by the fact that many of the classes are comprised of anywhere from 100-300 students, and the professors present much of the information verbally, with little or no visual aids.

Perhaps the greatest change between college and high school is the amount of responsibility that has been bestowed upon you. No longer are you required to go to class. No longer are professors constantly badgering you about upcoming assignments. You are directly responsible for your actions. Due to this, it becomes very easy to fall behind in your studies and, unlike high school, once you are behind, it is exceedingly difficult to catch back up.

Outlining What Attitudes and Behaviors You Need to Change-

In the book, "Studying Engineering: A Road Map to a Rewarding Career," by Raymond B. Landis, there is a section devoted to mistakes students make when transferring from high school to a college-level engineering study.[3] The list contains twelve different criteria, but two in particular stood out to me. Those two mistakes were failing to take notes, or taking notes but failing to use them properly, and studying 100% alone. I am guilty of both of these mistakes.

When it comes to taking notes, I am very proficient. My downfall is using the notes I have taken to reflect and gather information. More often than not, they sit in my notebook and are never looked at again. Analyzing your notes is a valuable skill, and one that I need to develop in order to have greater success in my classes. To do this, I must develop a system. The book delineates an effective method for reviewing lecture notes. First, I must organize the notes I've taken by filling in, cutting out, and summarizing the material. Then I need to start at the beginning of my notes and re-read everything the professor went over. Reciting notes out loud will help the brain retain information better. After reciting my notes, I should reflect and review by asking myself what I learned, and establishing the key points. If I start doing this process, then I will retain the course information easier and will have obtained a valuable asset in my studies.

The second mistake is studying 100% alone. Breaking this habit has proved to be a great challenge. When working in class on a project or a problem I am happy to work in groups, but when it comes to reviewing, analyzing, or working on homework, I always choose to work in solitude. Through out my first four weeks at college, I've been told countless times that group study is a more effective method than studying alone. I still don't know why this is, but have made a conscious effort to work with at least one other person when studying or doing homework. I also joined a study table for my Math 112 class. This is a scheduled study time that will force me to work in a small group with around ten other people. Hopefully this will get me accustomed to the idea of collaborating better and working with others comfortably. Once I work to improve in these two areas, I will be a better prepared student and will have adequately set myself up for success.

Managing Time and Tasks-

Time management was a huge problem that I faced upon entering college. In high school assignments were short and simple. In college I found that I always have something I could be working on. There is always something that needs to be done. To sort out what I need to do and when I need to do it, I created a priority matrix for 20 school related tasks that I needed to attend to. The tasks and matrix were as follows:

1. Study for math
2. Study for chemistry
3. Study for CBEE
4. Complete online work for math
5. Complete online work for chemistry
6. Complete final project for ENGR 199
7. Sleep
8. Exercise
9. Eat healthy

10. Meet new people
11. Find a study group
12. Investigate internship opportunities
13. Register for Winter classes
14. Buy various school supplies
15. Investigate undergraduate research
16. Consider switching to ecological engineering
17. Talk to my professors
18. Get tutored in enthalpy concepts for chemistry
19. Attend a club meeting for CBEE requirement
20. Reflect on first term

<p>Quadrant 1 Urgent and Important Study for math Study for chemistry Register for Winter classes Get tutored in enthalpy concepts for chemistry</p>	<p>Quadrant 2 Not Urgent and Important Study for CBEE Complete online work for math Complete online work for chemistry Complete final project for ENGR 199 Sleep Exercise Eat Healthy Investigate internship opportunities Investigate undergraduate research Attend a club meeting for CBEE requirement Reflect on first term</p>
<p>Quadrant 3 Urgent, Unimportant</p>	<p>Quadrant 4 Not Urgent, Unimportant Meet new people Find a study group Buy various school supplies Consider switching to ecological engineering Talk to my professors</p>

After deciding upon and prioritizing 20 school related activities, I noticed some surprising results. Each activity was placed in one of four categories, based on its importance and its urgency. I ended up with four items being urgent and important, five items being neither urgent nor important, zero items being urgent but not important, and eleven items being important but not urgent. One

of the questions asked in the assignment handout was, "how can I move items into category two (important but not urgent)?" I don't think this is an issue for me.

Through out the past couple weeks, I have been increasingly pressed for time. With finals fast approaching, all of my time seems to have gone to my urgent school work. This has kept me ahead of schedule in most of my classes but has left little time for anything else. Items that aren't urgent or important have been pushed out of my mind, and most likely wont be addressed until the end of the term and Christmas break.

Everything that is important but not urgent has been put on the backburner, at least until finals are over. The three most important things in this category are sleep, exercise, and a healthy diet. These things need to be addressed on a daily basis, but the times for these activities can be easily changed or even removed if necessary. The rest of the items on this list can be put off until the end of the term, but they are still important. I need to keep all of the information for internship and undergraduate opportunities available. This way I can easily investigate and pursue these options when I have some spare time.

Overall, I think that my priorities are reasonably organized and that I should keep doing what I am doing. I need to study for my midterms and take care of my urgent homework and projects first. Getting adequate sleep, exercise, and a healthy diet are all essential to one's learning ability, so these need to be my next priority. My less urgent but important items need to be kept track of because, if forgotten, deadlines for those projects will overwhelm me during the end of the semester when I need to be focused on studying for my finals.

Engaging in Good Health and Wellness Practices-

Often times, students are so caught up in their school work that things like personal health and well-being often go overlooked. These thing however, are necessary in order to operate at maximum efficiency in the classroom. Things like physical, social, and emotional wellness all need to be looked after and

managed along with school work. I personally need to focus on improving my social wellness. Sometimes I get so caught up in studying and homework that I lose the opportunity to interact with those around me. To change this, I need to put myself in situations that force me to talk with others, such as studying in the group lounge instead of the dorm room or the library.

Developing a Sense of Personal and Professional Integrity and Behavior-

Integrity is something that can't be taught. It is learned over time and defines who you are as a human being. A person of integrity will always give their best effort, they will work in an adverse or undesirable situation if it means benefiting the greater good, and they will always do the right thing, even if no one else is around to judge their actions.

Professional behavior is also something that is learned by being around responsible and respectable individuals who know what they are doing and who make the right choices. The book *What the Best College Students Do*, by Ken Bain, talks about the choices and behaviors of some of the best college students, and how they approach their education. These students are described as student who keep an open mind and are willing to accept new ideas. They immerse themselves in their classes in order to nourish their creativity. I believe that highly accomplished students are ones who have developed an overall love and passion for knowledge, and greatly value anything that will allow them to expand their knowledge to new areas.

Conclusion:

The skills learned through this class aren't all specific to the engineering profession. Most of them can be implemented in any major, and in many situations through out life. Working hard to change my current habits, and develop new ones, will greatly benefit me during my years at college and through out my professional career. I need to take advantage of the numerous opportunities available at Oregon State University, and get involved in the campus community. By getting involved, maintaining a good GPA, and

expanding my education outside of the classroom, I will give myself the best chance to achieve my goal of obtaining a degree in environmental engineering, and be on my way to becoming a world-class engineer.

References:

- [1] "17-2081 Environmental Engineers." *U.S. Bureau of Labor Statistics*. U.S. Bureau of Labor Statistics, May 2012. Web. 04 Dec. 2013.
- [2] "Environmental Engineer Job Outlook." *Engineers Guide*. Proquantum Corporation, 2005. Web. 04 Dec. 2013.
- [3] Landis, Raymond B. "Appendix C." *Studying Engineering: A Road Map to a Rewarding Career*. 4th ed. Los Angeles, CA: Discovery, 2013. 280-81. Print.
- [4] "Eric Schmidt." *Wikipedia*. Wikimedia Foundation, 13 Nov. 2013. Web. 15 Nov. 2013. <http://en.wikipedia.org/wiki/Eric_Schmidt>.
- [5] "Top 15 Most Popular Search Engines | November 2013." *Top 15 Most Popular Search Engines*. eBizMBA Inc., n.d. Web. 14 Nov. 2013. <<http://www.ebizmba.com/articles/search-engines>>.
- [6] "Our products and services â Company â Google." *Our products and services â Company â Google*. Google Inc., n.d. Web. 14 Nov. 2013. <<http://www.google.com/about/company/products/>>.
- [7] PTI. "Mobile is the next big thing: Eric Schmidt." *The Economic Times*. Bennett, Coleman & Co., 20 Mar. 2013. Web. 15 Nov. 2013. <http://articles.economictimes.indiatimes.com/2013-03-20/news/37872540_1_mobile-applications-android-smartphones>.
- [8] Newman, Jared. "Top 10 Google Accomplishments Under Eric Schmidt." *PCWorld*. IDG Consumer & SMB, 3 Apr. 2011. Web. 14 Nov. 2013. <http://www.pcworld.com/article/224079/top_10_google_accomplishments_under_eric_schmidt.html>.
- [9] Soloman, Barbara A. "Index of Learning Styles Questionnaire." *Index of Learning Styles Questionnaire*. North Carolina State University, n.d. Web. 03 Dec. 2013.
- [10] Bain, Ken. *What the Best College Students Do*. Cambridge, MA: Belknap of Harvard UP, 2012. 199-203. Print.