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How Involvement in SHPE Motivated My Interest in Civil Engineering

Ever since senior year of high school, while I explored various universities to pursue a bachelor's degree in civil engineering, I was interested not only in the engineering majors offered, but the types of extracurricular activities I could become involved in. Upon touring the UNLV College of Engineering in 2015, I was captivated by the number of nationally recognized student organizations on campus, catering to a multitude of career interests. Interestingly, I was most drawn to the multicultural clubs, because the members seemed to be incredibly close-knit and supported each other throughout their individual educational journeys. As a result, during my freshman year at UNLV, I joined the Society of Hispanic Professional Engineers (SHPE), a national student leadership organization dedicated to promoting awareness of the increasing importance of science, technology, engineering, and mathematics (STEM). We support underrepresented Hispanic communities through our community service efforts, attend professional leadership conferences, as well as encourage Hispanic engineering students to achieve their full potential in STEM fields. As an active member for over one year, having undertaken two leadership roles, including historian and vice president, my experiences in SHPE have truly motivated me to continuously strive for success, in both my civil engineering major, and interests in pursuing an internship and/or co-op position at an engineering firm during summer vacations and post-graduation.

During my first semester in SHPE, I was an active member, and took part in many of the community service events they offered. Our first community outreach program was held at Rowe

Elementary School, where we assisted with lessons and activities for their afterschool science and robotics club. The club started out small, with about ten to a dozen students, during which my officers and I taught them scientific principles through hands-on experiments, such as viscosity by having students create slime using one teaspoon of borax, glue, water, and various food colorings. As for the robotics component, my team and I purchased LEGO Mindstorms kits, which enabled the students to learn how to build and program small robots by guiding them using the instructions provided. By the end of the semester, the club grew by nearly ten additional members, and many students developed a passion for experimentation and scientific inquiry, which some claimed they would not have gained from a conventional science curriculum alone. Since the school was mostly characterized by Hispanic students, this community service program was meaningful to my chapter, because we were encouraging young Hispanic minds to appreciate STEM fields, particularly engineering. At the same time, being able to assist the elementary student community by teaching the concepts I have learned in my classes at UNLV through hands-on exercises have greatly increased my appreciation for the study of civil engineering.

Subsequently, another considerable benefit of being involved in SHPE is having the opportunity to attend multiple leadership conferences, which included numerous technical workshops, career fairs, as well as group project sessions. My first SHPE conference, the April 2016 Regional Leadership and Development Conference (RLDC), was hosted at Arizona State University. Notably, I was able to meet Hispanic engineering students from SHPE chapters across the country, participate in several technical workshops presented by Hispanic industry professionals, interact with recruiters for Southwest branches from major companies attending the career fair, as well as learn the benefits of “arduinios” in creating electronic products by

engaging in a group video project with students from UC Irvine and Pasadena City College. While the career fair at ASU was particularly small, the most recent conference I attended this past November, the SHPE National Conference, boasted an unforgettable career fair comprising over 200 national and local companies. The national conference was held at the Washington State Convention Center in Seattle, WA, and had many similarities with RLDC, but was much more anticipated and immense. The conference consisted of dozens of technical workshops presented by professionals from some of the most relevant national corporations seeking candidates for internships and full-time positions, including NASA, Autodesk, Jacobs Engineering, Ford, Intel, Boeing, and even the US Navy Civil Engineer Corps. It was an incredibly rewarding experience to speak with the representatives at the both the workshops and at each of the two days of the career fair because they provided insight regarding civil engineering positions as well as various qualities they search for in potential applicants to open positions. Furthermore, the career fair also featured numerous well-known graduate engineering schools in attendance, including USC, MIT, Stanford, ASU, and UCLA. By reaching out to representatives at each of the schools' booths, I had the opportunity to learn about the process of applying to graduate school, tips on obtaining a master's degree and up through company-sponsored programs, as well as receive literature regarding the importance of undergraduate research. Most importantly, the information I gained from attending the career fair will justify my academic efforts at UNLV and inspire me to make educated decisions about my future career and how I plan to attend graduate school by obtaining a sponsorship from an engineering company and considering summer research experiences.

As the external vice president for my chapter, having been elected to the position this past fall semester, I was responsible for promoting meetings and outreach held throughout the term,

and communicating with the executive board to ensure steady development in our membership, both academically and in terms of the club's size. Our president, Diego, would always encourage members to place school as the foremost priority before extra-curricular activities, holding steadfast to our mission statement to encourage our members to achieve their highest potential in their engineering majors. Although I am currently at a junior class standing, there are still a few pivotal courses I must take prior to achieving advanced standing, which means there will be certain meetings and events I will miss in order to make time to study for exams. Therefore, the most noteworthy aspect of both SHPE conferences I attended this past year would be the two career fairs, because they not only enabled me to speak with recruiters and apply for summer internships; they also motivated me to prioritize gaining the necessary knowledge from my civil engineering classes to accurately perform the tasks involved in a future internship program. Understanding what today's industry expects of recent graduates with civil engineering degrees is essential as I begin to visualize the purpose of the abstract concepts I have learned in my classes at UNLV, and their professional applications, become elucidated.

Likewise, as a vice president, being a role model for members is an indispensable trait of demonstrating leadership. For instance, a great deal of motivation for freshmen engineering students, especially when they hit those difficult "walls" while taking lower-division math and science courses, stems from viewing the success of an upper-classman engineering peer who has taken and passed those challenging calculus and physics courses. The same encouragement and support applies when providing resources to members during SHPE general body meetings to guide their career search as members begin to consider internships and summer jobs. Indeed, attending leadership conferences and receiving exclusive knowledge about the industry's

expectations has the potential to inspire SHPE members to construct realistic end goals for their future pursuits.

Finally, being devoted to SHPE has provided me with countless opportunities to build my résumé, meet like-minded students across the country, engage with prominent engineering industry professionals at conferences, and give back to my community in the form of applied STEM education. When I notice just how motivated my peers and SHPE members are to achieve success in their engineering studies, it brings me fulfillment because it exemplifies the model values of encouragement and positivity I continually display during club meetings, outreach events, and conferences, which has made a strong impact on my fellow members' drive to succeed. As Epictetus, a Greek philosopher, once stated, "It's not what happens to you, but how you react to it that matters." In conclusion, while SHPE de UNLV is progressively growing as a chapter and more importantly, as a representation of the growing presence of SHPE in Nevada, the effort my officers and I have dedicated to encouraging a strong commitment to STEM programs, engineering peers, and younger students has compelled me to strive for success. Attaining success in both academics and accomplishing the well-defined goal I have established in becoming a professional civil engineer, while giving back to the community in a fulfilling way has occurred due to my proud involvement in UNLV's flourishing SHPE chapter.