

“Inventions” were scraps of wood and cardboard were the permanent residents of my floor growing up. Building and finding creative solutions to problems put the idea of being a future engineer into my dreams. But these minor forays into engineering ended after I went to high school and encountered a new love: computer science. As a result, my short-lived engineering career was at an end before it could even start. Imagine my shock when my freshman year I ended up in the first general meeting for the Engineers Without Borders. I was initially hesitant about whether or not I could have an impact because I am not an engineering major. How could my brief experience with wood working and cardboard designs be applied to build a water distribution system for a real community? I gave it the benefit of the doubt and went to the first meeting for the Guatemala project and was quickly hooked and didn't want to stop going. EWB has ended up being one of the most rewarding experiences of my life and I now feel equipped to support an engineering project. So, how did I grow in EWB and what did it take to get there?

At the start I was scared that I would have nothing to contribute because I wasn't in the engineering courses that are generally relevant to the projects we work on. However, I soon realized that so much of EWB is learning the process by which engineering projects happen and developing skills that you can't get in school. Going into my third year in EWB, I now understand that it is about the way that we approach problems that defines us as “engineers” not the title on our diploma. Ultimately, the projects we design and implement affect hundreds of people, but it takes more than what you learn in engineering classes to ensure the success of the project. We still need finances, marketing, project management, and an understanding of the non-technical, social, and political aspects of engineering to turn those designs into a fully implemented system. Students with diverse majors benefit the success of our projects by lending different perspectives to make us less susceptible to oversight. EWB is really unique because of these focus areas. You can join other project groups at the U of M, but EWB takes the time to understand how and why we do our projects, and what it means to be engineering systems for other communities. There is a culture of care and intention within EWB that makes these projects work and builds soft skills everyone can utilize. This culture is due in part because everyone in EWB has had that moment when they felt like they don't have the skills to complete these projects, but they've gotten the support they need to gain those skills.

What are the opportunities to get these skills for general members? During project meetings we have professional engineers to supervise and teach students about concepts for design and assessment. Aside from documentation and theoretical knowledge, you can practice hands-on skills during construction seminars or our events with Habitat with Humanity. I love that you can get invested in a particular community and tailor and build a system for them, but you also have the opportunity to do independent construction seminars, work with Habitat for Humanity, and learn from professional mentors outside of project meetings. I wouldn't know how to do any of this if I hadn't joined EWB, but I wasn't at a disadvantage because I wasn't an engineering major. Everyone here is dedicated to making a difference and learning together and that's what I love about our culture. The care and passion we bring to our projects extends to all of our members and it's such a big focus that everyone feels like they are growing and developing skills that will help them in the future. It is okay to make mistakes and learn as we

go, that's what our mentors are here for and that's why we focus on training students with the skills they need regardless of where they start from. After my first year in EWB I had learned how to do alternatives analysis, product design, prototyping, and the construction of a full composting system with a miter saw, impact drills, and other tools.

Long story short, you are not defined by your major, and Engineers Without Borders is a great place to learn practical skills in an environment that fosters growth. I've learned a lot in EWB and my fears that I would have nothing to contribute were understandable, but not important in the grand scheme of things. If you are worried about not helping or that you don't have things to contribute but you are passionate about what we do, I'd highly recommend joining and taking the opportunity to learn as we go. I am a more well-rounded person because I joined EWB. I have gotten the chance to learn construction and surveying skills, which I wouldn't have gotten in computer science. I can honestly say that I will be taking what I've learned through EWB with me for the rest of my life, and that's not always something I can say about all of my major courses. No matter what club you end up joining or which opportunities you take, don't let your fears hold you back because there is so much more to gain in an area you don't have experience in!