SUCCESS STORY

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FUEL Innovation Design & Manufacturing (FUEL) brings a depth of multidisciplinary experience to the life sciences table. They solve challenging engineering problems with a holistic go-to-market view, taking projects from a napkin sketch all the way to cost-effective commercial development.

University of Calgary Engineering students Gemma Hale Boyes (Biomedical) and Ethan Basanov (Electrical) both pursued internships with FUEL because of their interest in the engineering process and their desire to problem solve in a real-world setting. Working closely, Gemma and Ethan took on integral roles that were critical to meeting important project milestones and took on the kind of personal responsibility and accountability for their roles that an employer would expect from a long-term employee.

Students not only bring fresh perspectives and enthusiasm to FUEL, they also support ties between post-secondary institutions and industry – these connections are becoming increasingly important as the life sciences industry faces potential worker shortages through 2030. FUEL also highlights that they could not have hired Gemma and Ethan without WIL funding, and the benefit to the company was measurable: there was a significant increase to FUEL's work capacity, an increased ability to complete projects, and a healthy contribution to a positive work environment.

Gemma points out the "diverse array of projects and tasks, such as design work, prototyping, fabrication, problem solving, and customer interaction;" and Ethan notes his biggest takeaway is learning that "communication and teamwork are key to making successful projects." It sounds like both Ethan and Gemma had plenty of opportunity to improve both their engineering and soft skills during their time at FUEL. They fit in well with FUEL's creative mentality and certainly had a synergistic effect on FUEL's capacity to deliver quality work and create positive impact. We cannot wait to see what's next for Gemma, Ethan, and FUEL!

Read on for more about Gemma's and Ethan's WIL experiences in their own words…

Gemma Hale Boyes, Second Year Biomedical Engineering Intern

Looking at internships, I was especially drawn to FUEL's concept of taking someone's problem and creating a solution. During my time at FUEL, I got to go through the whole engineering process, identifying a problem, coming up with solutions for that problem, using shop tools as well as 3D printing software to make parts, installing the parts, then adjusting and testing as necessary. In addition to these more hands-on skills, I got to work on my human interaction and parts-sourcing skills by interacting with vendors as I ordered parts.

The most exciting parts about this job are the diversity of tasks, the amount of hands-on work, the collaboration with coworkers and all the critical thinking required. I have been thinking outside the box, exploring ideas from all different angles, and creating new solutions to problems. There is never a boring day!

Through the WIL funding process, I was able to come up with some initial goals and practices that I wanted to learn during my time here, all of which have been successful. Not only are the people at FUEL Innovation smart and great role models, but they are also all genuine and nice, making this an amazing environment to work and grow in. During my time here I've learned many practical career, engineering, and life skills. After working at FUEL, I will be going back to school with a new set of tools, and I'm super excited to see how I can apply what I have learned here to my classes and ultimately my career.

Ethan Basanov, Third Year Electrical Engineering Intern

I applied to FUEL because I was interested in incorporating electrical engineering into biomedical devices and mechanical engineering projects. Through this internship, I improved my practical skills and increased my work ready skills.

I love problem solving! Here at FUEL almost every task given is a problem waiting to be solved. This work inspires me to use creative thinking to find the most effective and efficient way to solve these problems. For example, a problem arose in a project where we needed a mechanical indexing system, so I set out to create one with the materials we had. From this, I gained experience in Onshape and 3D printing. While this endeavor was successful, even when things go wrong and solutions fail, these situations give me experience and help me to further improve my skill set.

After my term with FUEL, I will return to the University of Calgary for my fourth and final year of electrical engineering. My aspirations are to develop new tools, as well as improve current tools, that can be used in the medical field to increase people's quality of life. Working at FUEL has enabled me to improve my skills and has increased my confidence when it comes to engineering in general.