

WE Design: Students Designing a Greener Future

WE Design was initially conceived in May 2016 by two Mechanical Engineering graduate students, with a goal to foster a culture within the undergraduate and graduate student body for wind turbine design and research. In Fall 2016, a group of senior Mechanical Engineering students helped kickstart the wind turbine design by designing the rotor blades and performing preliminary numerical analysis of their aerodynamics and structural integrity.

In January 2017, WE Design was launched as an official University of Manitoba student group with the target to compete at The International Small Wind Turbine Contest, organized by NHL University of Applied Sciences in Leeuwarden, Netherlands. The team has already attracted 30 students, 26 of which are undergraduate students, and is set to compete at the Summer 2018 competition. WE Design's vision is to prepare students from multiple disciplines to enter the renewable energy workforce by providing them with hands-on experience in wind energy generation, as well as developing recruitable skills such as engineering design, project management, budgeting, report writing, and presentation skills.

Presenters: Benjamin Gibson and Laurissa Bridgeman



Ben is a second-year mechanical engineering student with a keen interest in machine design, as well as renewable energy. As a kid, he used to read books about inventors like Robert Fulton, Jan Matzeliger, and Eli Whitney, and he was inspired to become an inventor. This is why he chose to go into engineering. Working on WE Design has made him feel like an inventor, and has made him look forward to a career in mechanical engineering, hopefully in the energy sector. In fact, WE Design even makes him look forward to some of his second year courses! Probably the most challenging aspect of WE Design so far has been coordinating with the ECE students, as their fields don't overlap much, but his experience here has given him the confidence to go ahead anyway.



Laurissa Bridgeman is a third year Biosystems Engineering student at the University of Manitoba. She has lived in Winnipeg her whole life, graduated with the Governor General's award from Vincent Massey Collegiate in 2014, and spent a year in general studies before deciding to pursue engineering. She has been part of the WE Design team since February 2017 and has participated in the Rotor Section, Sponsorship Section, Manufacturing Section, and has taken on the role of Financial Director.

As a member of WE Design, she has gained valuable engineering experience by contacting and working with professors and professional companies, creating models and simulations in various computer programs, and by working in a student-run engineering team. She looks forward to a future that is less dependent on fossil fuels and believes strongly in student and university involvement in renewable energy research and advancement.