

Biological Engineering is a fast-growing discipline that concerns the sustainable use and protection of the world's resources: air, earth, water, plants, animals and food. As a future biological engineer, you'll enhance our quality of life through food safety, water purification and clean fuel and energy sources. You could also work with medical implants, aquaculture or robotics. There's no limit to the career options. In fact, biological engineers at NASA are helping plan an expedition to Mars.

Dalhousie University has spent the last century producing top-notch engineers who contribute creative approaches to the dilemmas facing our planet. Here's a few other reasons to choose Biological Engineering at Dalhousie:

- world-class research and educational facilities
- internationally respected researchers
- advanced labs and state-of-the-art computer facilities
- strong industry and community partnerships
- co-op programs that provide hands-on experience in the field

Opportunities

Engineering is a profession that affects virtually all aspects of modern life and engineers are the problem-solvers of our society. At Dalhousie, we pride ourselves on offering Engineering programs that are demanding and that will prepare you for success in your chosen career. You can obtain a Bachelor of Engineering in four years, a Bachelor of Engineering (Co-op) in five years, or concurrent Engineering and Science Degrees in five years.

The Dalhousie Engineering Co-op program is a popular choice for our students. Combining traditional academic learning with hands-on experience, the co-op program allows you to learn by doing, make important industry contacts and put money in your pocket.

Courses

We offer unique and diverse courses within the field of Biological Engineering. You could study biomachines, biomedical engineering and robotics. Our Robotics course covers the control and application of robot hardware. Robot arms and grippers, drives, clamping devices and position-changing are all studied, with an eye to a "robotized" workplace.

If it's aquaculture you're interested in, our Aquatic Engineering course studies support facilities, equipment and systems for aquaculture operations, while Physiology of Aquatic Animals looks at the form, function, physiological integration and behavior of major types of aquatic animals.

While at Dalhousie, you also have the freedom to choose electives that will broaden your education. These electives can be chosen from within and outside the department or even at other institutions.

Get ready for your future.

Biological Engineers often find work within the federal and provincial departments of agriculture and food, fisheries and environment. You could also become employed within the private sector in the fields of machinery manufacturing, pharmaceutical and food processing, or as independent consultants.

Financial Support

Our extensive scholarship and bursary program allows more than 63% of first-year students to receive an entrance scholarship. Industrial and private partners offer additional support and in-course academic awards are given to outstanding students.

Facilities

Biological engineering classes are usually limited to 20-40 students, while labs and tutorials are even smaller. Facilities are located on two campuses in Halifax.

The Faculty of Engineering Microcomputer Lab (FEML) is housed in the Sir James Dunn Building on the Studley Campus in the south end of the city. The FEML has five main labs with 145 workstations. The Sexton Campus on Halifax's historical Barrington Street contains the Design and Technology Library, as well as well-equipped classrooms and labs.

Bonus Features

Your mentors in the Dalhousie Engineering Department will range from young and innovative professors to world experts. Dr. Amyl Ghanem is on the forefront of biomedical engineering, exploring how natural seafood polymers can help skin wounds heal faster. Dr. Graham Gagnon is influencing community health, finding new ways to improve drinking water and treat industrial waste. Our professors are doing work that puts them in the global spotlight; it puts you in the heart of important, life-changing research.

One of the best things about university is the friends you make and the experiences you have. So don't forget to have fun! There are more than 200 student clubs and societies, including the Dalhousie Undergraduate Engineering Society, in addition to intramural and varsity sports. You can also explore engineering off-campus with our study abroad and volunteer programs. Manage a crew with Habitat for Humanity or improve water quality in Africa through our chapter of Engineers Without Borders.

In the words of a Dalhousie Biological Engineering graduate: "Find that thing in life that you always enjoy doing, the thing that you talk passionately about, the thing that always makes you curious. Once you know what that is then get the education that increases your chances of being exposed to that environment." -- Aaron Beaton, Class of 1998

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