



Undergraduate program at UBC's Department of Mechanical Engineering

What is Mechanical Engineering?

A branch of engineering specializing in the analysis, design, production and maintenance of mechanical systems. Mechanical engineers study and design anything that moves – from robots to aircraft, energy systems and the human body.

ABOUT OUR PROGRAM

The UBC Mechanical Engineering undergraduate program engages you in an education with both breadth and depth, giving you the teamwork, leadership, design and technical skills you need to work across a wide variety of sectors. The flexibility of the program gives you the opportunity to explore different areas of interest, and the mobility to adapt when the industry changes.

WHY STUDY AT UBCV?

- Award-winning curriculum
- Strong support for students
- Team-oriented and design-focused
- Sense of community
- Practical and hands-on

Program Options

Breadth or depth -
pick the path that suits your interests

GENERAL (FLEX)

Get a broad mechanical engineering foundation with a taste of everything, and the freedom to take courses from all the other areas.

AEROSPACE

Reach for the sky, and tailor your degree to the high-tech industries of aircraft and spaceflight.

BIOMECHANICS & BIOMEDICAL DEVICES

Learn about movement in the human body and designing medical devices that improve human health, from hip implants to heart valves.

ENERGY AND ENVIRONMENT

Open up the world of energy systems, building design, industrial and transportation systems, and address critical issues in sustainability.

MECHATRONICS

This option explores where electronics, AI, programming, sensors and controls meet the world of mechanical systems.

NAVAL ARCHITECTURE AND MARINE ENGINEERING

Connect the world through ship design, and explore topics like hydrodynamics, fluid mechanics and marine systems.

Degree timeline

General Engineering

At UBC we understand that flexibility is important. Get the background you need by taking one of the following:

- First Year Engineering at UBC Vancouver
- Engineering One at UBC Okanagan
- Engineering Transfer from some BC Colleges and Polytechnic Universities
- Camosun College Bridge for Mechanical Engineering Technologists (enters into third year)
- General Transfer from other recognized institutions (Note: you must match our curriculum and may need to make up some courses once you get to UBC)

Mech 2

MECH 2 is a revolutionary new way to think about undergraduate education.

Subjects aren't taught in isolation — instead of taking six, separate courses per term, you will take four consecutive modules over the entire year, each integrating multiple aspects of mechanical engineering. Practical, hands-on approaches are emphasized with field trips, community service learning, and project work. All modules are with the same group of students, Profs, and TAs, forming a close-knit community.

WWW.MECH.UBC.CA/UNDERGRADUATE/MECH-2

Specialize or keep things open

Students can choose out of six options that let them pursue a broad skill set, or delve into an area of interest. Either way, the core mechanical engineering skillset taught in our program allows for industry flexibility, regardless of the path you choose.

Faculty-wide Minor programs are also available to Mech students, including a Minor in Commerce, a Minor in Arts, and a Minor in Science.

GENERAL (Flex)

Interested in multiple areas? Our flexible general option lets you take courses from all options.

ENERGY & ENVIRONMENT

Thermodynamics and fluid mechanics unlock the world of transportation, clean energy, efficient buildings, and more.

AEROSPACE

Tailor your skills to the world of flight, by studying propulsion, materials, aircraft design, and more.

MECHATRONICS

Explore the overlap of motion and electronics, with topics like electromechanics, microcomputers, and software.

BIOMECHANICS & MEDICAL DEVICES

Improve human health with courses on medical devices, biomechanics, and biomaterials.

NAVAL ARCHITECTURE & MARINE ENGINEERING

Prepare for this global industry, studying topics like hydrodynamics, propulsion, and ship design.

CO-OP | Applications for Co-op open in September of year 2. Co-op lets you combine industrial experience with your education, connecting the classroom with the workplace. Students who take co-op extend their degree by one year and get 16 months on the job. | www.coop.apsc.ubc.ca

Capstone Design

The final piece that pulls everything together.

A full-year team project designing and prototyping a solution for a real problem for a real client. When you're done, you're ready for industry.

Learn More

MECH.UBC.CA/UNDERGRADUATE

Student Services Office

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