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

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

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.

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
MECH Student Services
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