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 aircrafts, to devices for 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

GENERAL

Providing an overview of our three options, our general program gives you a breadth of knowledge suitable for a variety of industries, allowing you career flexibility and the ability to adapt as industry needs change.

IF YOU WANT TO GO DEEPER IN ONE DIRECTION, YOU CAN CHOOSE TO DO AN OPTION INSTEAD:

BIOMEDICAL

Biomedical engineers are at the front line of life-changing innovation in the medical field, designing devices from hip implants to heart valves, conducting research in academic and government institutions, and testing medical products.

MECHATRONICS

With the growing capabilities of electronics, many mechanical systems are now either controlled by computers or enhanced by embedded sensors and circuits. This is Mechatronics, and it is one of modern society’s most critical fields.

THERMOFLUIDS

Thermofluids is the combined study of heat transfer, fluid dynamics, thermodynamics, and combustion, opening up the worlds of aircraft design, naval architecture, power generation, heating and air conditioning, and more.
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 don’t)

Breadth or depth?

It’s an important choice. Students can choose to remain in a general program for breadth or to concentrate their studies in one of the following Options: Biomedical, Mechatronics, or Thermofluids. Faculty-wide Minor programs are also available to Mech students, including a Minor in Commerce, a Minor in Arts, and a Minor in Science.

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<th>GENERAL</th>
<th>BIOMEDICAL</th>
<th>MECHATRONICS</th>
<th>THERMOFLUIDS</th>
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<td>General gives you a taste of everything, with the freedom to take courses from all areas. This option is for students looking to get the most breadth out of their degree.</td>
<td>Biomedical engineers find ways to improve medicine through technology. Students in this option take a solid core of mechanical engineering plus specific biomedical engineering courses.</td>
<td>In Mechatronics, students swap some general Mech courses for option specific courses. Think Electromechanics, Microcomputers, and Software Engineering.</td>
<td>Thermodynamics and fluid mechanics: the basis of everything from acoustics to aerospace, clean energy to combustion, fuel cells to naval architecture. This option prepares you for all of it.</td>
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Capstone Design

Capstone is 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

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