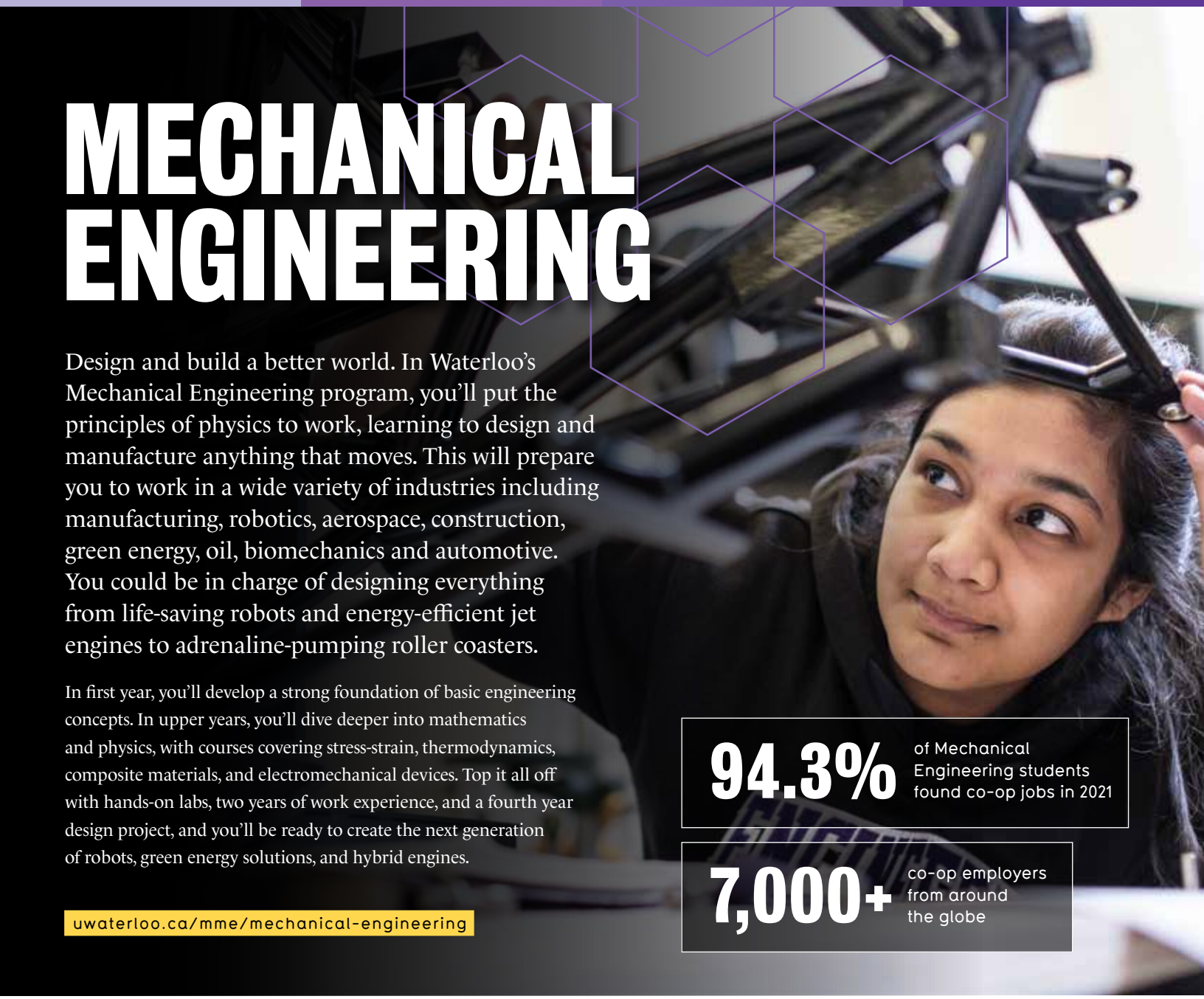
MECHANICAL ENGINEERING



Design and build a better world. In Waterloo's Mechanical Engineering program, you'll put the principles of physics to work, learning to design and manufacture anything that moves. This will prepare you to work in a wide variety of industries including manufacturing, robotics, aerospace, construction, green energy, oil, biomechanics and automotive. You could be in charge of designing everything from life-saving robots and energy-efficient jet engines to adrenaline-pumping roller coasters.

In first year, you'll develop a strong foundation of basic engineering concepts. In upper years, you'll dive deeper into mathematics and physics, with courses covering stress-strain, thermodynamics, composite materials, and electromechanical devices. Top it all off with hands-on labs, two years of work experience, and a fourth year design project, and you'll be ready to create the next generation of robots, green energy solutions, and hybrid engines.

uwaterloo.ca/mme/mechanical-engineering

94.3% of Mechanical Engineering students found co-op jobs in 2021

7,000+ co-op employers from around the globe

YOUR FIRST YEAR

FIRST TERM

- Mechanical Engineering Practice 1
- Linear Algebra
- Calculus 1
- Mechanics
- Chemistry

SECOND TERM

- Mechanical Engineering Practice 2
- Structure and Properties of Materials
- Calculus 2
- Electrical Circuits and Instrumentation
- 1 Complementary Study Elective*

*Complementary studies electives offer instruction in the social sciences and humanities, building knowledge of the impact technology has on society.

KICK-START YOUR IDEAS – VENA MEDICAL

Mechanical engineering alumni Michael Phillips and Phil Cooper commercialized their fourth-year design project to launch Vena Medical. This medical hardware company has successfully scaled while leveraging support through the Velocity incubator and securing financial opportunities like the Engineer of the Future Fund, the Tanguay Prize, and more!

In early 2022, Vena celebrated a key milestone announcing their first government approval for a device to remove blood clots from the brains of stroke patients. The device temporarily restricts blood flow while surgeons use tools to remove the clot, increasing the chances of success on the first attempt.

UNIVERSITY OF WATERLOO

CO-OP

Waterloo offers the

WORLD'S LARGEST CO-OP PROGRAM

CO-OP AT WATERLOO = REAL WORLD EXPERIENCE

You'll have an unrivalled opportunity to gain paid work experience before you even graduate. We'll help you navigate job applications, résumés, and interviews; you'll have the added benefit of trying out different roles and/or industries to find the one that fits you while building your work experience and reinforcing your in-class learning out in the real world. It all adds up to a competitive advantage after graduation. Mechanical Engineering has two co-op sequences you can choose from Stream 4 and Stream 8.

STREAM 4 AND 8 STUDY AND CO-OP SEQUENCES

YEAR	TERM	STREAM 4	STREAM 8
1	Fall	Study (1A)	Study (1A)
	Winter	Work	Study (1B)
	Spring	Study (1B)	Work
2	Fall	Work	Study (2A)
	Winter	Study (2A)	Work
	Spring	Work	Study (2B)
3	Fall	Study (2B)	Work
	Winter	Work	Study (3A)
	Spring	Study (3A)	Work
4	Fall	Work	Study (3B)
	Winter	Study (3B)	Work
	Spring	Work	Study (4A)
5	Fall	Study (4A)	Work
	Winter	Study (4B)	Study (4B)

Fall term: September to December
Winter term: January to April
Spring term: May to August

BEYOND THE CLASSROOM

As a Waterloo Engineer, it's easy to get in on the action. You can join the Engineering Society, make a difference with Engineers Without Borders, or apply your studies with a student design team. If you have any questions about student life or want to shadow a current student for a day, our Engineering Ambassadors can help!

uwaterloo.ca/engineering-student-ambassadors

OUT IN THE WORLD

Mechanical engineers are innovators – they're the minds behind so many technological advances of the 21st century. These engineers are making breakthough developments in hybrid vehicle technology, finding ways to harness clean energy, and implementing autonomous operation for space vehicles.

EXPLORE YOUR INTERESTS

Our program lets you specialize based on your interests:

- Automation and control, robotics, and autonomous vehicles
- Fluid mechanics, micro-fluidics, and fire safety
- Materials engineering and processing, welding, and joining
- Solid body mechanics and machine design
- Thermal engineering, heat transfer and combustion, and green energy

EMPLOYMENT OPPORTUNITIES

- Automotive manufacturing
- Aerospace engineering
- Medical device development
- Robotics engineering
- Wind turbine design
- Nuclear and Thermal engineering
- Biomedical engineering

CONNECT WITH US

UWaterlooEng
@WaterlooENG
UWaterlooEngineering

FACULTY OF ENGINEERING
enginfo@uwaterloo.ca | uwaterloo.ca/engineering

200 UNIVERSITY AVE. W., WATERLOO, ON, CANADA N2L 3G1

uwaterloo.ca/future-students