

# ARCHITECTURAL ENGINEERING

Communication, collaboration, and design. Combine architectural design with building engineering to learn about the whole scope of building design, construction, assessment, and refurbishment. This design-driven program will provide you with the technical knowledge and collaborative communication skills needed to solve emerging challenges currently confronting the building industry like new technologies, greater urbanization, and increasing demand for healthier spaces.

In the classroom, you'll tackle issues such as design, aesthetics, culture, environment, and professionalism. In the studio, you'll solve real-world problems with your peers, develop your collaboration skills, get inspired by your surroundings, and access resources needed to do rapid modelling and prototyping. In this program, you'll learn how to be a unique, interdisciplinary, and forward-thinking engineer ready to tackle the industry's pressing issues.

[uwaterloo.ca/architectural-engineering](http://uwaterloo.ca/architectural-engineering)

**91.1%**

of Architectural Engineering students found co-op jobs in 2021

## YOUR FIRST YEAR

### FIRST TERM

- > Concepts Studio
- > Linear Algebra
- > Chemistry
- > Mechanics 1
- > Calculus 1
- > History of the Built Environment

### SECOND TERM

- > Structural Design Studio
- > Computational Methods
- > Electrical Circuits and Instrumentation
- > Mechanics 2
- > Calculus 2

### A UNIQUELY TAILORED PROGRAM

The Architectural Engineering program gives students the skills and experience they need to work in a range of architectural and civil engineering environments including consulting firms specializing in building performance, structural, or architectural design, regulatory agencies, and government agencies.

Graduates of this program will be in high demand and will profoundly impact the building industry, with a unique skill set making them capable of responding to the specialized and emerging challenges currently confronting this industry.



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. Architectural Engineering students are part of the Stream 4S sequence.

### STREAM 4S STUDY AND CO-OP SEQUENCE

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

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

\* These study terms will take place on our Cambridge Campus at the School of Architecture

## 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 questions about student life or want to shadow a student for a day, our Engineering Ambassadors can help!

[uwaterloo.ca/engineering-student-ambassadors](http://uwaterloo.ca/engineering-student-ambassadors)

## ABOUT THE PROGRAM

The Civil and Environmental Engineering Department, in collaboration with the Waterloo School of Architecture, developed this program to meet the large current and future demand for engineers technically-skilled in the whole scope of building design, construction, assessment, repair, and refurbishment.

## 2 NEW STUDIOS

and a dedicated "makerspace" have been built for this program

### DISTINCTIVE CURRICULUM

Our program is like no other in North America:

- > Studio courses, plus real-world co-op placements
- > Hands-on experience, coupled with peer learning
- > Collaboration with Architecture students in third year

Through the program's studio focus and exposure to open-ended design problems, you'll have access to a design-driven, collaborative culture.

By the time you graduate you'll be:

- > Capable of impacting two sectors where governments are currently placing heavy emphasis: infrastructure renewal/improvement and climate change mitigation
- > Trained as a uniquely skilled engineer with the breadth of knowledge required to facilitate communication between the various professions involved in building projects, and capable of serving as a leader in this industry

## EMPLOYMENT OPPORTUNITIES

- > Consulting firms specializing in structural and/or architectural design
- > Building performance consulting firms
- > Construction companies and developers
- > Regulatory agencies
- > Building owners and operators

## CONNECT WITH US

[UWaterlooEng](https://www.instagram.com/UWaterlooEng)

[@WaterlooENG](https://twitter.com/WaterlooENG)

[UWaterlooEngineering](https://www.facebook.com/UWaterlooEngineering)

FACULTY OF ENGINEERING

[enginfo@uwaterloo.ca](mailto:enginfo@uwaterloo.ca) | [uwaterloo.ca/engineering](http://uwaterloo.ca/engineering)

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

[uwaterloo.ca/future-students](http://uwaterloo.ca/future-students)