GRADUATE DEGREES | ADMISSIONS 2026

CHEMICAL ENGINEERING

ONLY AT WATERLOO

IP POLICY

100%

of the ideas developed at Waterloo are owned by you.

YOUR IDEAS, YOUR INTELLECTUAL PROPERTY

Our policy on intellectual property gives both faculty and students complete ownership over their ideas and technology. That puts you in control to patent or license your idea, to commercialize it or even start your own company.

VISIT OUR GRADUATE STUDIES PAGE

Learn more about our programs, get tips on how to apply, read student stories, watch our latest videos and more...

GRADUATE STUDIES

at Waterloo Engineering

WHY STUDY AT THE UNIVERSITY OF WATERLOO?

WHY CHOOSE TO STUDY CHEMICAL ENGINEERING IN OUR DEPARTMENT?

Our Department consistently ranks among the top two universities in Canada and the number one university in Ontario in Chemical Engineering according to the Shanghai Academic Ranking of World Universities.

REPUTATION IN ACADEMICS

Home to Canada's largest engineering school, our students and world-renowned faculty members are known for solving problems that change the world we live in.

CAREER DEVELOPMENT AND NETWORKING

The Waterloo Region is one of Canada's fastest-growing technology hubs where both industry-leading businesses and startups thrive. Many of our graduate students focus their research on industry-relevant solutions. Some develop these solutions into businesses through the local incubator programs. Our faculty members are well-integrated with key industry players, developing lasting partnerships, while tackling real-world problems.

ATTRACTIVE LIFESTYLE

Not only is Waterloo home to an array of startups and tech giants, it's also a good place to live. It offers a vibrant food scene with something for everyone from farmers' markets to vegan cafés and award-winning restaurants. Visitors and residents can enjoy lively cultural events, music festivals as well as the world's largest Oktoberfest outside of Germany. Waterloo is a fast-growing city with a relaxed small-town character. Surrounded by beautiful countryside and located an easy distance from Toronto, Waterloo is a great place to call home.

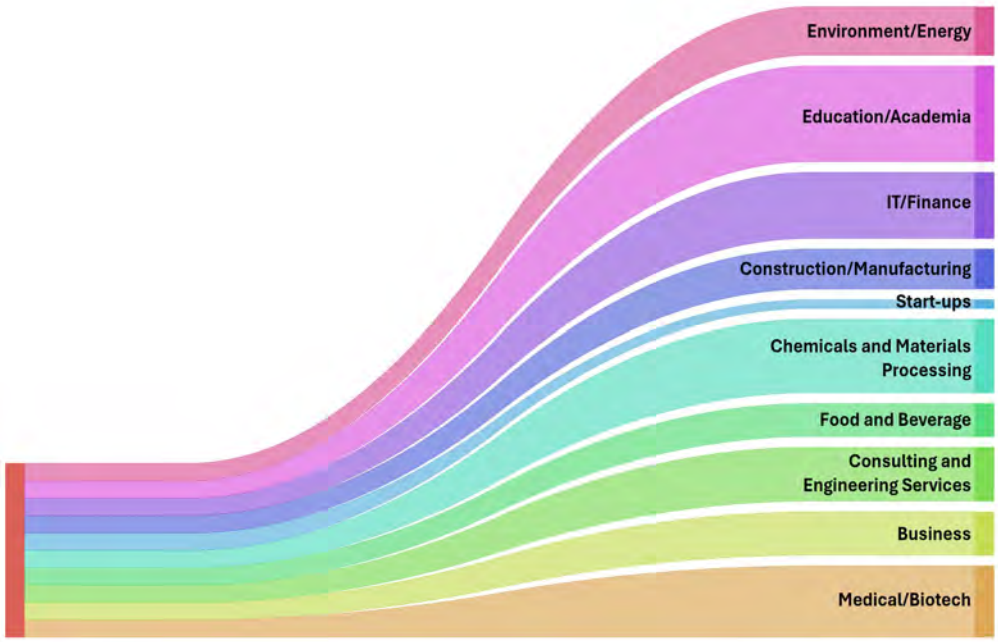
CONNECTION TO THE COMMUNITY

Waterloo Engineering engages with its broader community through a variety of outreach programs. By igniting people's natural curiosity and sharing the wonders of science and engineering, the University is building a culture of lifelong learning, discovery and invention.

WHERE WILL A GRADUATE DEGREE TAKE YOU?

59%

INDUSTRY OR ENTREPRENEURSHIP



CHEMICAL ENGINEERING PhD GRADUATES ARE EMPLOYED GLOBALLY

Our recent PhD graduates work for some of the top employers in academia and industry or start their own industry-leading companies.

41%

ACADEMIC

EXAMPLES OF EMPLOYERS:

INDUSTRY EMPLOYERS:

› Tesla, Google, IBM, Microsoft, Apple, Uber, Goldman Sachs, Honeywell, Siemens, Oracle

UNIVERSITY EMPLOYERS:

› Stanford, UBC, U of T, Yale, Purdue, Harvard, MIT

COMPANIES STARTED BY OUR GRADS:

› Smarter Alloys, SMATS Traffic Solutions, SSIMWave, AdHawk Microsystems, FleetCarma

FIND THE PROGRAM THAT'S RIGHT FOR YOU

LEARN MORE

PROGRAM	PROGRAM INFORMATION
Doctor of Philosophy (PhD)	› Research-based program. › 3-4 courses + original research and thesis. › Duration: 4 years. › No supervisor is required at the application stage. A supervisor is needed before receiving an offer of admission. › Minimum funding provided: $26,000/year*. › In addition to minimum funding, eligible for Teaching Assistantships (TA) and Research Assistantships (RA). › Direct Entry PhD (from a Bachelor's degree) is an available option for top applicants. *May increase in the future.
Master of Applied Science (MASc)	› Research-based program. › 4-5 courses + original research and thesis. › Duration: 2 years. › No supervisor is required at the application stage. A supervisor is needed before receiving an offer of admission. › Minimum funding provided: $18,000/year. › In addition to minimum funding, eligible for Teaching Assistantships (TA) and Research Assistantships (RA). › Eligible students can transfer to a PhD.
Master of Engineering (MEng) Master of Engineering Co-op (MEng Co-op) **Master of Engineering Co-op (MEng Health Tech Co-op)**	› Coursework-based programs. › 8-9 courses. › Duration: 1 to 1.5 years. › No supervisor. › Student needs to be self-funded. › Eligible students can transfer to a MASc.

DISCOVER OUR COLLABORATIVE PROGRAMS

Chemical Engineering promotes interdisciplinary learning with different perspectives.

Our University community is connected, we understand that shared success makes us all stronger. We have developed collaborative programs where students complete their specialist training in their respective home departments or school while working with students from a variety of disciplines.

WATER

Delivered by the 11 participating academic units and coordinated and supported by the Water Institute, the Collaborative Water Program at the University of Waterloo is the most interdisciplinary water graduate program in Canada.

Look for MASc and PhD Collaborative programs in Water in the Departments of:

- Chemical Engineering.
- Civil and Environmental Engineering.
- School of Architecture.

Collaboration with all 6 faculties: Engineering, Arts, Environment, Health, Mathematics and Science.

NANOTECHNOLOGY

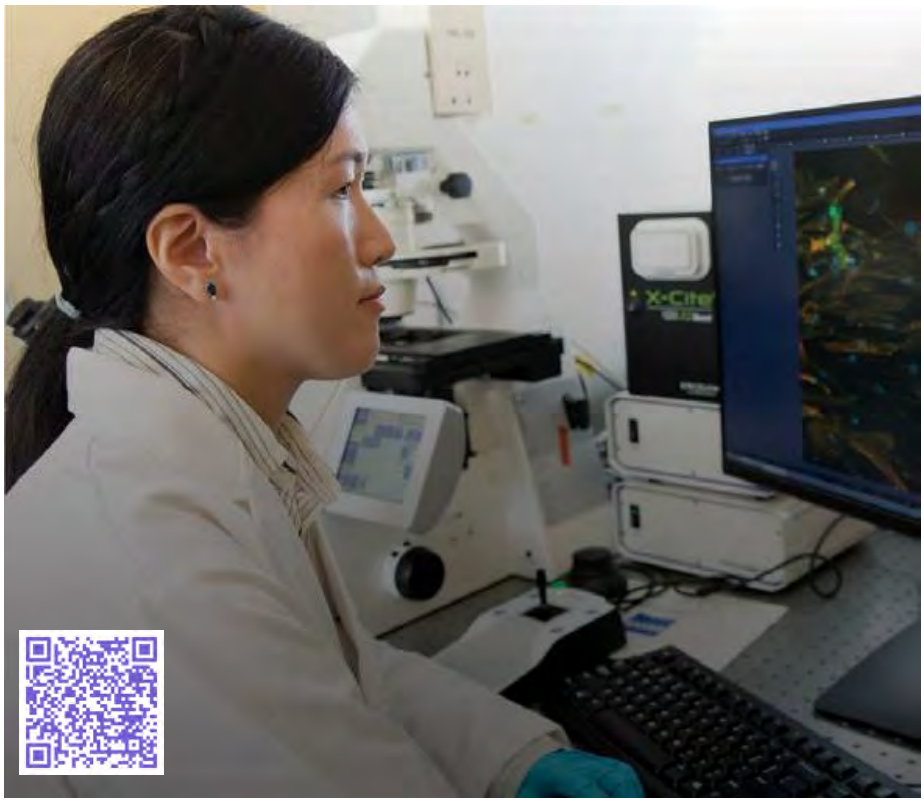
Through the collaborative graduate program in Nanotechnology the students are exposed to rich, broad and integrated educational resources, a diverse network of expertise and world class research opportunities that leverage their engineering degrees.

Look for MASc and PhD Collaborative programs in Nanotechnology in the Departments of:

- Chemical Engineering.
- Electrical and Computer Engineering.
- Mechanical and Mechatronics Engineering.
- Systems Design Engineering.

Collaboration with faculties of: Engineering and Science.

RESEARCH AREAS



CHEMICAL ENGINEERING

- Nanotechnology for advanced materials
- Biotechnology and biomedical engineering
- Process systems engineering
- Electrochemical engineering
- Sustainable reaction engineering
- Soft matter engineering

UNRIVALLED RESEARCH FACILITIES

As a Chemical Engineering graduate student you'll be immersed in leading-edge research with real-world impact, learning from our Faculty who have expertise in nanotechnology, electrochemistry, biotechnology and more .

The Analytical Lab in the Department of Chemical Engineering has a variety of state-of-the-art analytical instrumentation to support your research.

INFRASTRUCTURE THAT MATTERS

Our buildings include multi-media teaching facilities and world-class research laboratories. We're home to the largest cluster of super-computers in all of Canada, our machine shop is one of the best equipped among Canadian universities, and our nanotechnology labs are furnished with the latest equipment and technology.

Our building, Engineering 6, is a state-of-the-art facility. This dedicated research space, coupled with our entrepreneurial ecosystem , brings a wealth of new opportunities and resources for graduate students.

RESEARCH CENTRES AND INSTITUTES

Centres and institutes are established in areas where Waterloo has extraordinary research strengths and anticipates extraordinary results.

- Institute for Polymer Research (IPR)
- Waterloo Institute for Nanotechnology (WIN)
- Water Institute
- Waterloo Institute for Sustainable Energy (WISE)

FIND MORE INFORMATION

HOW TO FIND RESEARCH AREAS AND SUPERVISORS

Investing time and effort into your search and connecting with potential supervisors prior to applying will give you a strong start.

WHEN DO I NEED A SUPERVISOR?

- Course-based programs (MEng) do not require a supervisor.
- No supervisor is required at the application stage for research-based programs (MASc or PhD). A supervisor is needed before receiving an offer of admission.

LEARN MORE:

FIND YOUR RESEARCH AND SUPERVISOR

SEARCH BY DEPARTMENT

When looking for a supervisor, check the research areas by department or school. Once you identify an area of interest, click to find a list of supervisors. Then, click on the name of a supervisor to view their profile and contact information. Check the last paragraph of their profile page to find out if they are accepting graduate students.

SEARCH BY RESEARCH AREA

Waterloo Engineering researchers are driving innovative discoveries that are advancing knowledge and improving lives globally. Access Waterloo Engineering's faculty database to search for a specific supervisor or research area of expertise.

CHEMICAL ENGINEERING

WATERLOO ENGINEERING

DID YOU KNOW..

01

If you applied for a direct entry co op program and are not admited, you may be considered for admission to the regular course based master'sprogram.

02

You can transfer from MEng to MASc if you find a supervisor.

03

You can transfer from MASc to the PhD.

04

For exceptional students, direct entry (from Bachelor's) to PhD is allowed.

NO ANSWER FROM ANY SUPERVISOR BEFORE APPLYING?

No worries! Go ahead with the application and optionally indicate the supervisors you would like to work with. All professors will have access to your application.

FINANCIAL SUPPORT

Funding is available from many sources including scholarships, awards, teaching assistantships and government agency fellowships and awards.

LEARN MORE

1 GUARANTEED MINIMUM FUNDING

All full time students in the MASc and PhD programs are guaranteed a minimum level of funding while they are within their program time limits and in good academic standing. You will use this to pay your tuition and then the rest, if applicable, will be deposited into your bank account.

Plan	Duration	Amount (per year)
PhD (from a complete Master's)	12 terms (4 years)	$30,000*
PhD (directly from Bachelor's)	15 terms (5 years)	$30,000*
MASc	6 terms (2 years)	$18,000
MEng	4 terms (16 months)	No guaranteed funding

*May increase in the future.

2 ADDITIONAL TO THE MINIMUM FUNDING

Graduate Teaching Assistantships (TA) and Graduate Research Assistantships (RA) are available to selected students and are paid on top of any awards and scholarships they are already receiving.

GRADUATE TEACHING ASSISTANTSHIPS (TA)*

Effective date	Per term	Per month	Per hour
May 1, 2023	$5,967	$1,491	$50.13

*Rates assume 10 hours per week for 16 weeks during a term, paid for by the hiring department.

GRADUATE RESEARCH ASSISTANTSHIPS (RA)**

Effective date	Position	Per term	Per month	Per hour
May 1, 2023	RA - Master's	$7,003.20	$1,750.80	$47.80
May 1, 2023	RA - Doctoral	$8,332.80	$2,083.20	$56.87

** Paid for by the faculty supervisor.

3 WATERLOO AWARDS AND SCHOLARSHIPS

100+
AWARDS
and fellowships

VISIT THE FUNDING, SCHOLARSHIPS, AND AWARDS DATABASE

IBET PhD Project- Indigenous|Black Engineering|Technology PhD Project

The IBET PhD Project is intended to foster equitable and inclusive research environments to increase the presence of Indigenous and Black academics in STEM.

This support, which primarily consists of four-year $30,000/annual IBET Momentum fellowships in addition to academic mentoring, will assist in creating a robust presence of what is currently an underrepresented group of young researchers. The success of these scholars will lead to teaching and research careers in academia, industry and policy making.

PROVOST DOCTORAL ENTRANCE AWARD – WOMEN (PDEAW)

Valued at $5,000. Eligible Doctoral students must have a minimum first-class (80%*) standing, as well as an outstanding record of research accomplishments and/or references citing significant future potential in research. Limited budget is available.

Budgeting is one of the most important factors when it comes to planning your graduate studies.

TUITION

Tuition fees are assessed based on your domestic residency status or international immigration status.

STUDY AND LIVING COSTS

The Waterloo Region is an exciting place to live. Enjoy the amenities of a big city without the big city costs. Approximate cost of living information is available online.

BUDGET CALCULATOR

Use this tuition calculator to estimate your costs and resources.

4 EXTERNAL AWARDS

- Canada Graduate Scholarship Master's program (CGS M). Tri Agency (NSERC, SSHRC, CIHR): $17,500/year for 1 year.
- Canada Graduate Scholarships Doctoral program (CGS D). Tri Agency (NSERC, SSHRC, CIHR): $35,000/year for 3 years.
- NSERC Post graduate Scholarships Doctoral program (PGS D): $21,000/year value for 2 3 years.
- Vanier Canada Graduate Scholarship : $50,000/year for 3 years.
- Ontario Graduate Scholarship (OGS) and the Queen Elizabeth II Graduate Scholarship in Science and Technology (QEII GSST): $15,000/year for 1 year.

Recipients of NSERC, SSHRC, or CIHR Scholarship who hold their scholarship at Waterloo are also eligible to receive the Waterloo President's Graduate Scholarship (PGS) top-up to $10,000+ each year.

5 INTERNATIONAL STUDENT SUPPORT

INTERNATIONAL DOCTORAL STUDENT AWARD (IDSA)

$15,420 / year for 4 years

An IDSA will be provided automatically to all international students who are registered full time in a doctoral program. The value is approximate to the difference in tuition between domestic and international full time PhD students. The award's value and duration varies depending on multiple factors. Please review the details carefully.

LEARN MORE

INTERNATIONAL MASTER AWARD OF EXCELLENCE (IMAE)

$2,500 / term for max. 5 terms

The IMAE will be awarded to a small number of selected international research master s students who meet the eligibility criteria. The Faculty will nominate eligible students based on the Faculty's award allocation. Students will be selected based on academic excellence as demonstrated through their application for admission to the graduate program.

LEARN MORE

INTERNATIONAL AGREEMENTS AND SPONSORSHIPS

Find the numerous agreements we have with institutions abroad. If you are applying for graduate studies under one of these formal agreements, please review Waterloo s sponsorship requirements which are an important part of your application process.

LEARN MORE

ADMISSION REQUIREMENTS

Check specific admission requirements by your program of interest: minimum GPA, application materials (resume, supplementary information form, transcripts), number and type of references, GRE (if applicable) and ELP (if applicable).

PROGRAMS ADMISSION REQUIREMENTS

CONTACT PROGRAM GRAD COORDINATOR BY BOOKING INTO JUDY'S CALENDAR AT YOUR CONVENIENCE

APPLICATION DEADLINES

Application deadlines are six months before the beginning of the term you would like to start your program. Most of the programs start every four months, but a few start only in the September/Fall term.

FACULTY OF ENGINEERING

Intake September/Fall February 1
Intake January/Winter June 1
Intake May/Spring October 1

HOW TO APPLY

Join the ranks of elite Waterloo Engineering graduate students:

LEARN MORE:

INTERNATIONAL STUDENTS

INTERNATIONAL ADMISSION EQUIVALENCIES

ENGLISH LANGUAGE PROFICIENCY (ELP)

ENGLISH FOR ACADEMIC SUCCESS (EFAS)

BEYOND YOUR ACADEMIC PROGRAM

ATHLETICS, RECREATION, AND WELLNESS

One thing is certain: we have serious fun here. The student experience at Waterloo Engineering goes far beyond work, lectures and studying. We have an exciting and energetic community of students who love to work hard and play even harder. You can race a dragon boat, join a varsity team or become a leader – whatever your interests, you'll be in good company.

Find academic success and develop your career while maintaining physical and mental well-being. Visit our graduate page for more information about varsity sports, intramurals and other recreational activities on campus.

LEARN MORE

SUPPORT FOR SUCCESS

The University of Waterloo supports you with a large group of services designed to help you to succeed. Explore the multiple workshops, training session's conferences, certificates and experience-driven programs available at UWaterloo that can help you to develop your career path.

FOCUS ON ONE CAREER PATH, OR EXPLORE THEM ALL

We encourage our graduate students to go beyond their program's degree and milestones to explore where their studies can take them.

Whether you pursue a career in Academia, Industry or want to build your own start-up, Waterloo Engineering has supportive programs to help get you there.

LEARN MORE

WOMEN IN ENGINEERING (WIE)

Women in Engineering (WiE) supports current female engineers and students while encouraging the next generation of women to pursue careers in engineering.

45+ ENTREPRENEURIAL SUPPORT PROGRAMS AT WATERLOO

accelerator centre®

VELOCITY

GreenHouse purpose • action • impact

40+ PROGRAMS, PITCH CONTESTS, PROBLEM LABS, MICRO FUNDING and more

CLUBS AND ASSOCIATIONS

65,000 SQUARE FOOT FIELD HOUSE with recreation facilities

2,500+ FITNESS CLASSES each year and **32** VARSITY TEAMS

100+ STUDENT SUPPORT and wellness programs

BUILD YOUR FUTURE IN WATERLOO REGION

Kitchener/Waterloo is among the top 20 start up ecosystems in the world. We are home to some of Canada s largest tech companies, global think tanks, and innovation hubs, with brands like Google, SAP, Oracle NetSuite, Shopify and many others making the move to Kitchener/Waterloo. Our city has an entrepreneurial spirit that continues to propel us in the creation and development of new ideas.

Short commutes, rustic forest hikes, beautiful sandy beaches, festivals, professional sports, world class dining and incredible education are all part of life in Waterloo. Rest assured, the Waterloo community has an incredible quality of life.

WATERLOOEDC, 2023

LEARN MORE

20%+ VISIBLE MINORITY population

FASTEST MILLENNIAL POPULATION | NEW GRAD POPULATION growth in North America (CBRE)

1,570+ TECH COMPANIES located in Waterloo Region

EASY ACCESS to Toronto, Hamilton, and London

600,000 PEOPLE and growing

50%+ WATERLOO RESIDENTS have a college/ university qualification

5.5% GROWTH RATE (higher than the Canadian average)

INFO SOURCE: WATERLOO EDC, 2023

FIND MORE ABOUT GRADUATE HOUSING

OUR CAMPUS

JOIN US FOR A CAMPUS TOUR

FACULTY OF ENGINEERING GUIDED WALKING TOUR

ENGINEERING RESEARCH OFFICE VIDEO

A DAY IN THE LIFE OF A STUDENT

WATERLOO CAMPUS

The main University of Waterloo campus is located in the city of Waterloo, Ontario. Approximately 1 ½ hours (by car) outside of Toronto. This is home to most of our Engineering programs and facilities including state-of-the-art research and teaching labs, media labs, collaborative spaces and great coffee!

EXPLORE THE UNIVERSITY OF WATERLOO CAMPUS

Check out our website for more information!

Do you want to learn more about our programs and the exciting research happening in our department? Please explore our website to learn more, you can read about our graduate students' experiences on the link below. https://uwaterloo.ca/chemical-engineering/future-graduate-students/meet-our-graduate-students

https://uwaterloo.ca/chemical-engineering/future-graduate-students

OTHER CAMPUS:

- Health Sciences Campus in Kitchener, Ontario. Includes the School of Pharmacy and the McMaster/ Waterloo DeGroote School of Medicine.
- School of Interaction Design and Business in Stratford, Ontario. Offers our Global Business and Digital Arts program

ACKNOWLEDGEMENT OF TRADITIONAL TERRITORY

The University of Waterloo acknowledges that much of our work takes place on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee peoples. Our main campus is situated on the Haldimand Tract, the land granted to the Six Nations that includes six miles on each side of the Grand River. Our active work toward reconciliation takes place across our campuses through research, learning, teaching and community building, and is coordinated within our Office of Indigenous Relations.

YOU+WATERLOO

Our greatest impact happens together.

UNIVERSITY OF WATERLOO

Department of Chemical Engineering

UWaterloochemeng

UWaterloo_che

University of Waterloo Chemical Engineering Alumni

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

uwaterloo.ca/chemical-engineering/graduate-students