

DISCOVER ENGINEERING



VIEWBOOK
2019-2020

WELCOME TO U of T ENGINEERING, CANADA'S #1 ENGINEERING SCHOOL



* PwC's City of Opportunities 7 and 2thinknow's Innovation Cities Global Index

** 2017-2018 Times Higher Education World University Ranking for Engineering & I.T.

325+

Companies employ 700+ engineering students through the Professional Experience Year Co-op Program each year

160+

Partner universities with study-abroad opportunities

With companies like Uber and Google expanding their operations in Toronto, it's no wonder the city ranks among **TOP 10 FOR INNOVATION AND OPPORTUNITY** in the world.*

110+

Spinoff companies created from UofT Engineering research from 1970 to 2018

1873

Year established

40%

Proportion of women in our first-year class, highest of any engineering school in Canada

\$15M

Investment by the Government of Ontario in U of T Engineering's new Myhal Centre for Engineering Innovation & Entrepreneurship to strengthen the Innovation SuperCorridor in Ontario.

100+

Countries our students call home

TOP 13

U of T is ranked in the top 13 world universities for global employability**

19

Engineering minors and certificates available to customize your degree

The University of Toronto's Faculty of Applied Science & Engineering is forging a new era in engineering education and research with the Myhal Centre for Engineering Innovation & Entrepreneurship. Completed in April 2018, the building embodies key engineering qualities such as collaboration across disciplines, experiential learning, leadership and entrepreneurship. It includes flexible, technology-enhanced active learning spaces, fabrication facilities to support both curricular and co-curricular design projects, and dedicated space for student clubs and teams.

Explore this new building: www.uoft.me/MyhalCentre

U of T ENGINEERING: UNPARALLELED OPPORTUNITY IN AN EXCEPTIONAL COMMUNITY

No university in Canada — and perhaps the world — is in a better position to offer an education that will help the brightest students meet the grand challenges facing humanity today.

Here, you'll find a global community of innovators and makers. We are at the forefront of engineering education and research — in the groundbreaking areas we explore, the ways we collaborate beyond traditional disciplines, and the unique experiential opportunities we create for our students.

All international rankings consistently rate U of T Engineering number one in Canada and among the world's best. We're preparing the engineers of tomorrow — like you — to unlock the future's boundless potential.

You will study alongside talented students who bring their own perspectives and passions to the mix. Our student body is among the most diverse in the world, with a rich gender spectrum and students from every Canadian province and more than 100 countries. For the past three years, women have comprised 40 per cent of our first-year class, which is the highest proportion of any engineering school in Canada.

The U of T Engineering community is known for being especially supportive and closely knit. You'll attend many of your classes with the same group of students, and build strong friendships quickly. We're proud of being one of the oldest and finest engineering schools in Canada, and we look forward to introducing you to our longstanding traditions.



**WE ARE CANADA'S
#1-RANKED
ENGINEERING SCHOOL**

U of T Engineering placed 16 spots higher than the next Canadian school in the 2017–2018 Times Higher Education World University Ranking for Engineering and Information Technology.



Members of the Blue Sky Solar racing team with their vehicle Horizon. Every two years, the team designs, builds and races a solar-powered car more than 3,000 kilometres across the Australian outback powered only by the sun.



INNOVATION STARTS WITH AN IDEA

For that idea to grow into something more, it needs a collaborative network of diverse peers, experienced mentors and an environment that invests in, and nurtures, entrepreneurial thinking.

UofT Engineering fosters the perfect ecosystem to see your ideas come to life, whether you're thinking about new ways to approach research, start a business or create a student team.

Innovation and entrepreneurship extend beyond the borders of our campus. We take full advantage of our prime location in the heart of Toronto, collaborating with our neighbours in the MaRS Discovery District, world-class hospitals, firms in Canada's financial district, and major multinational organizations headquartered here.



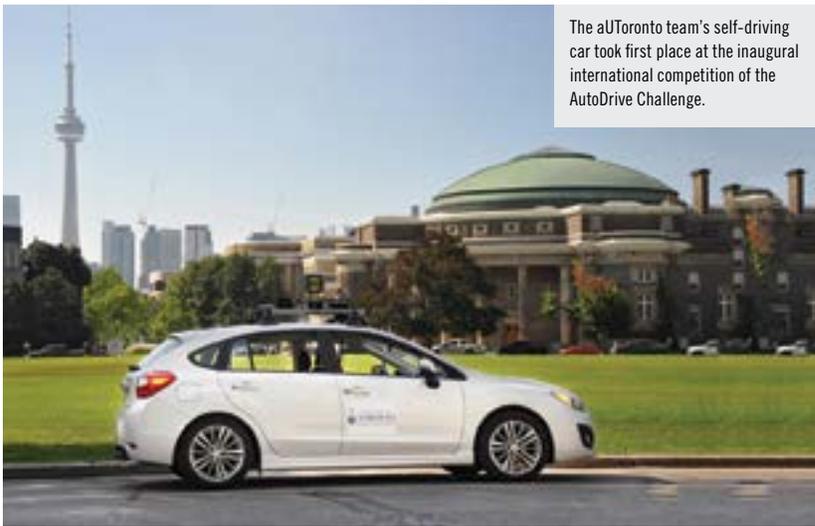
Visit www.uoft.me/startup to learn more about engineering entrepreneurship.

“UofT Engineering’s culture of innovation is infectious. In my classes, extracurriculars and in my research, every student and professor I meet is looking to push the boundaries of technology and improve the world in some way.”

MOLLY McGRAIL
Second-year Engineering Science student



Student entrepreneurs access a bank of 3D printers that enable rapid prototyping at The Entrepreneurship Hatchery.



The aUToronto team's self-driving car took first place at the inaugural international competition of the AutoDrive Challenge.



Rob D'Amico of the Hamilton Professional Firefighters Association demonstrates Xposure, an app designed by U of T Engineering students.

THE ENTREPRENEURSHIP HATCHERY

What does a tool that fixes most bike problems have in common with a company working toward an in-space telecommunications network of satellites? TeleHex and Kepler are both successful companies started by students through The Entrepreneurship Hatchery, one of two startup incubators at U of T Engineering and among nine accelerators across U of T. The Hatchery will reside inside U of T's newest building, the Myhal Centre for Engineering Innovation & Entrepreneurship. The Myhal Centre provides unparalleled access to prototyping equipment and collaborative design spaces to facilitate your next big ideas.

www.uoft.me/startup

AUTODRIVE: SELF-DRIVING ELECTRIC CAR

U of T Engineering's aUToronto student team spent the last year successfully retrofitting an electric vehicle with visual sensors, robotic components and software that enables it to drive itself. aUToronto won the first of three annual competitions, beating out eight fellow teams from institutions across North America in the first-ever AutoDrive Challenge. Professor Angela Schoellig, the team's primary faculty advisor, is an award-winning researcher in autonomous vehicles and machine learning.

www.uoft.me/autodrive

XPOSURE: APP FOR FIREFIGHTERS

Along with axes, ladders and helmets, a group of U of T Engineering students added smartphones to the list of indispensable tools in firefighting. In response to a design challenge proposed by the Hamilton Professional Firefighters Association (HPFA) in a multidisciplinary capstone design course, a team of four engineering students developed an app called Xposure that helps firefighters track hazards they encounter in their jobs. The data collected by the app can support workplace safety and insurance claims if a firefighter experiences health effects based on past exposure. The app is such a success that the HPFA is continuing work on the project.

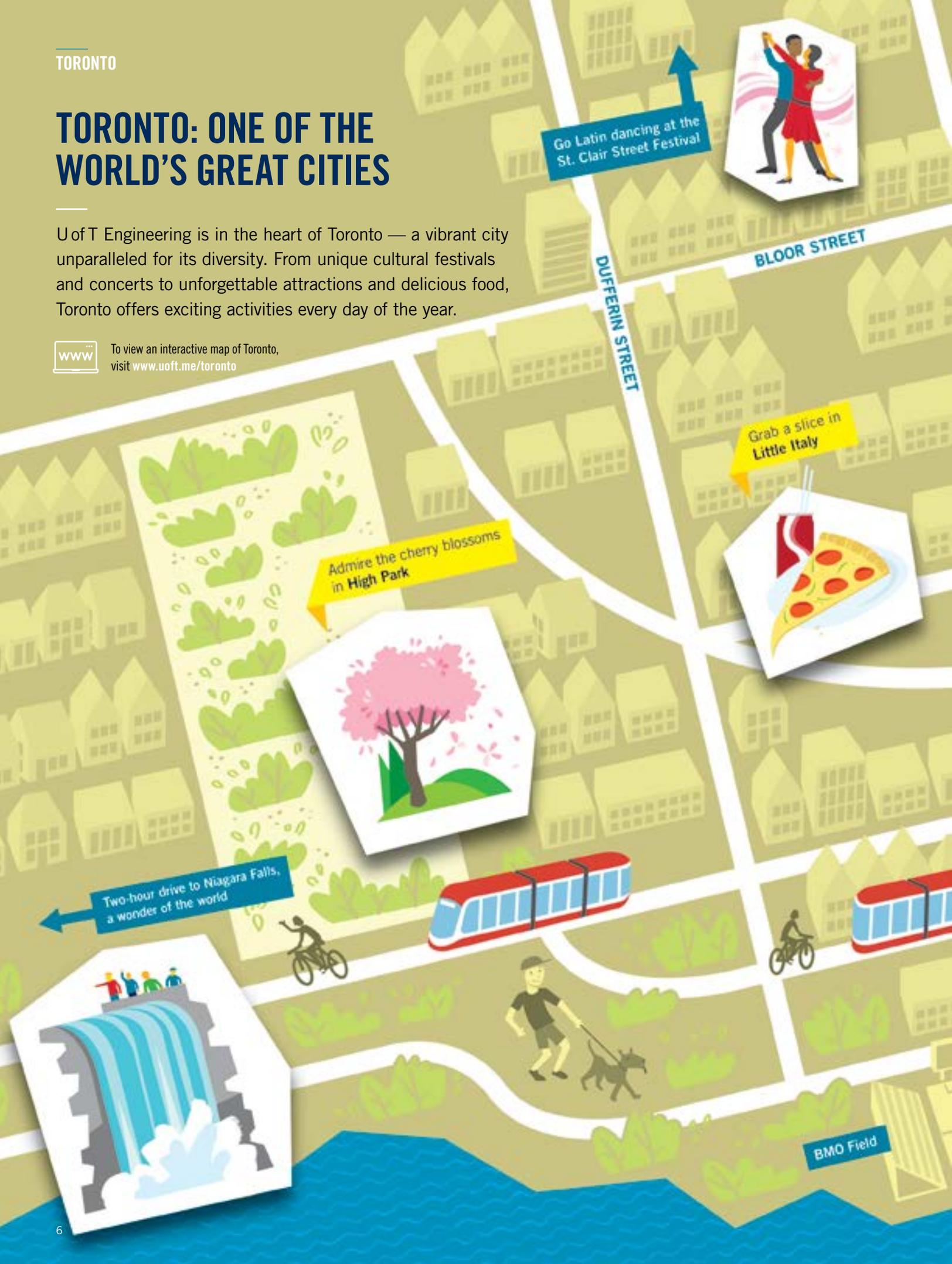
www.uoft.me/xposure

Photo: Scott Gardner, The Hamilton Spectator

TORONTO: ONE OF THE WORLD'S GREAT CITIES

UofT Engineering is in the heart of Toronto — a vibrant city unparalleled for its diversity. From unique cultural festivals and concerts to unforgettable attractions and delicious food, Toronto offers exciting activities every day of the year.

 To view an interactive map of Toronto, visit www.uoft.me/toronto



Royal Ontario Museum

Yorkville

UNIVERSITY AVENUE

SPADINA AVENUE

BATHURST STREET



UNIVERSITY OF TORONTO

Go skating at Nathan Phillips Square

COLLEGE STREET

YONGE STREET



Search for vintage finds in Kensington Market



Enjoy dim sum in Chinatown



Entertainment District



Scotiabank Arena

Rogers Centre



GARDINER EXPRESSWAY

Take a walk on the edge at the CN Tower

Billy Bishop Airport



Join the Pride celebration in Church-Wellesley Village

The Danforth (Greektown)



Toronto Eaton Centre

CHURCH STREET

DUNDAS STREET

JARVIS STREET

Allan Gardens

Little India

QUEEN STREET

Financial District

KING STREET



The Beaches

Shop at St. Lawrence Market, the world's #1 food market*

Plan a day trip to the Toronto Islands



* National Geographic's Top 10 food markets

FAST FACTS ABOUT TORONTO



GLOBAL GATEWAY

Our city is served by two airports: Toronto Pearson International Airport (YYZ) and Billy Bishop Airport (YTZ). Toronto is truly a gateway to the world. It's only 1.5 hours from **New York City**; 5 hours from **L.A.**; 6 hours from **Bogotá**; 13 hours from **Dubai**; 14 hours from **New Delhi**; and 15 hours from **Hong Kong**.



305 days of sunshine on average



Roughly **1,500 PARKS** dot Toronto's urban landscape

EASY TO NAVIGATE

Toronto is home to North America's third-largest mass transit system and the largest underground pedestrian system in North America.

#1 IN SAFETY

Toronto is North America's safest city according to The Economist Intelligence Unit's Safe Cities Index.



A CELEBRATION OF CULTURE

With more than 140 cultures represented and hundreds of walkable neighbourhoods, Toronto is one of the most diverse cities in the world.



CITY OF FESTIVALS

Every season brims with celebration from the Toronto Caribbean Carnival in the summer to the renowned Toronto International Film Festival in the fall.



8 PROFESSIONAL SPORTS TEAMS

There's never a dull moment with eight Toronto-based professional sports teams, including the Toronto Blue Jays (baseball), Toronto Maple Leafs (hockey), Toronto FC (soccer), Toronto Raptors (basketball), Toronto Argonauts (football), Toronto Rock (lacrosse), Toronto Marlies (hockey) and Toronto Wolfpack (rugby).

VIBRANT STUDENT LIFE

 [@uoftengineering](https://www.instagram.com/uoftengineering)

University is much more than lectures and labs. Long before you graduate, you'll be enriching your experience through the relationships you form and the activities you pursue outside of the classroom.

Whatever your interests or hobbies, there is a student group or co-curricular activity for you. From rock climbing and volleyball to human-powered vehicle design and musical ensembles, UofT offers more opportunities to join clubs and teams than any other university in Canada. And if you can't find a club that suits your interests, start a group of your own.

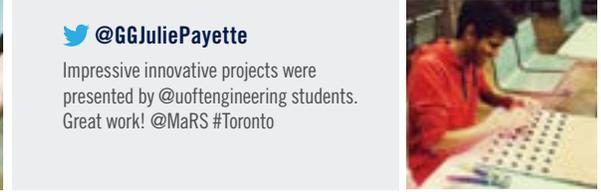
You can also complement your professional development as a future engineer through co-curricular opportunities like The Entrepreneurship Hatchery (see page 5) and the Troost Institute for Leadership Education in Engineering (see page 14).



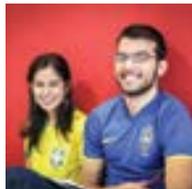
Visit www.uoft.me/engstudentlife and follow us on Instagram ([@uoftengineering](https://www.instagram.com/uoftengineering)) to join the conversation.



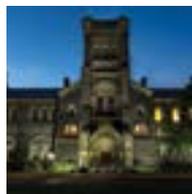
 [@kfacciol](https://twitter.com/kfacciol)
Congratulations to the @UofT @uoftengineering class of 1T8 and 1T7+PEY!! I remember sitting in Con Hall 9 years ago wondering what came next, and the journey has been incredible. Dream big! You'll be amazed where your life can take you! Ad astra per aspera 🚀



 [@GGJuliePayette](https://twitter.com/GGJuliePayette)
Impressive innovative projects were presented by @uoftengineering students. Great work! @MaRS #Toronto



 [@uoftengineering](https://www.instagram.com/uoftengineering)
Robin is working at @synaptivemedical for her #PEY, helping develop robotic arms for brain and spinal surgeries! 🤖🧠🏥
#myPEY #LookLikeAnEngineer



 **@uoftengineering**

Take a break today with the #UofTEngineering Fall PAWS 🐾 in SF2202 with some #furryfriends from the @st_john_ambulance therapy #dog program.



 **@iana_aranda**

So excited to see my alma mater @uoftengineering represent #tech4dev innovation at the @ASMEishow #thisishardware



 **@ChiragVariava**

I promised a timbit to any student who figured out the right answer. Everyone did. Time to keep my word! @TimHortons #UofT #uoftengineering



 **@uoftengineering**

Happy Pi Day #UofTEngineering! We're celebrating the occasion in the most literal way possible! #piday #piday2018



 **@WISEUofT**

Thank you to Dean Amon for being an advisor and mentor for Women in Science and Engineering - University of Toronto



 **@mel.pg**

As a member of the LGBTQ+ community and as a student planning on applying in the fall, I am so glad to see my community being represented by the faculty, I already feel so welcomed! 🏳️💜



 **@uoftengineering**

"What I really like about engineering is that it helps me be able to make a difference, to effect change in society through math and science." — Samantha Stuart (Year 3 MSE)



THE PROFESSIONAL EXPERIENCE YEAR CO-OP PROGRAM (PEY CO-OP): A NEW ERA IN CO-OPERATIVE EDUCATION

**APPLYING FOR
PEY CO-OP IS EASY!**

Simply indicate your interest during the U of T Engineering application process (see page 28 for details)

PEY Co-op offers you more ways than ever to put your best foot forward as a future engineering professional.

What if you could graduate with meaningful work experience, a strong resume, an extensive network and professional competencies that you'll leverage for years to come?

That's just the start of what you can gain from our Professional Experience Year Co-op Program (PEY Co-op), the largest optional work-experience program of its kind in Canada. Building on a 40-year legacy of facilitating successful professional opportunities for engineering students, we have expanded PEY Co-op to include more flexibility, enabling you to tailor your career development to suit your unique needs.

PEY Co-op is designed to provide you with the perfect balance of industry exposure and professional development.

It can help you create career momentum and build a strong portfolio of meaningful contributions, career confidence and professional connections you'll draw on after graduation. PEY Co-op has two distinct components:

WORK EXPERIENCE

Through the PEY Co-op Program, you'll immerse yourself as a full-time employee for 12 to 16 consecutive months after third year. You'll also have the option to work for an additional four months after second year, giving you up to 20 months of paid professional work experience before you graduate. Whether you see yourself contributing to a small team at a fast-paced local startup or gaining international experience with a large multinational company, you'll have unparalleled access to 1,500+ positions across every industry through PEY Co-op.

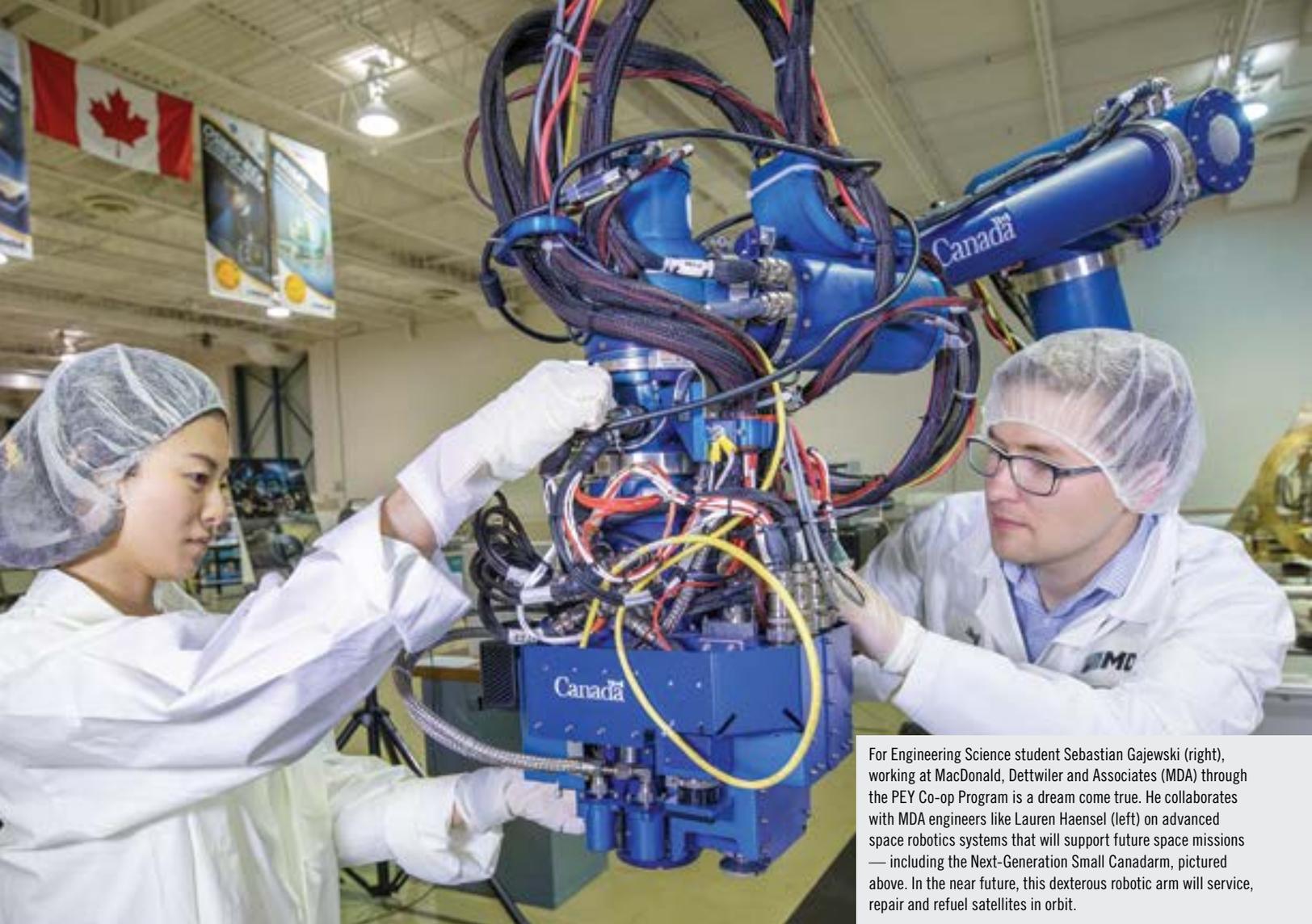
PEY CO-OP

CAREER EDUCATION

To help you prepare for — and excel in — your PEY Co-op positions, you'll complete career development modules throughout your degree, alongside your academic program. These flexible online and in-person modules cover several topics over the course of the program, including: setting professional goals; resume and cover letter writing; interview skills; building your network; and transitioning to industry. You'll use these critical competencies throughout your time at university, and well beyond.



Explore all that PEY Co-op has to offer: www.uoft.me/peycoop



For Engineering Science student Sebastian Gajewski (right), working at MacDonald, Dettwiler and Associates (MDA) through the PEY Co-op Program is a dream come true. He collaborates with MDA engineers like Lauren Haensel (left) on advanced space robotics systems that will support future space missions — including the Next-Generation Small Canadarm, pictured above. In the near future, this dexterous robotic arm will service, repair and refuel satellites in orbit.

PEY CO-OP QUICK FACTS



Each year, PEY Co-op students have access to **1,500+ positions** around the world. You'll apply to the positions you're most interested in, and accept the job offer that aligns best with your goals.



Leverage U of T Engineering's connections to **325+ hiring companies** worldwide, including Apple, BMW, IBM, Shell and more (see pages 19 to 26 for a sample of employers by academic program).



700+ students choose to participate in PEY Co-op each year (that's roughly two-thirds of each third-year class).



During PEY Co-op work experiences, you'll be treated like a full-time employee — with a salary to match. Students earn an average 12-month salary of **\$50,000** with a higher earning potential for longer durations of work. **All PEY Co-op positions are paid.**



You can graduate with **up to 20 months** of immersive and meaningful work experience: all PEY Co-op students work for 12 to 16 months after third year, and those who participate in an optional summer position after second year gain an additional four months of experience.



Your PEY Co-op work experience can count toward obtaining your **P.Eng designation**, meaning you'll have a head start on earning your professional engineering license after graduation.

YOUR SUCCESS IS OUR SUCCESS

Support is evident throughout the U of T Engineering experience. You will find it in the mentorship that upper-year students provide through our peer-assisted study programs, and in the time professors spend during and after class to help students with challenging course content. This tight-knit community thrives because success is a shared goal.

We have several specialized services and programs that address the needs of engineering students from first year to graduation. As a U of T student, you also benefit from university-wide services and resources, including the Academic Success Centre, Health & Wellness Centre and Accessibility Services.

SPECIALIZED SUPPORT FOR ENGINEERING STUDENTS

The **First Year Office** will facilitate your transition into university and support you throughout your first year. This team of advisors will help you make informed decisions that will shape your academic career. After first year and for the remainder of your degree, your **departmental advisors** will help guide you through your journey at U of T Engineering.

The **Engineering Career Centre** facilitates the Professional Experience Year Co-op Program (PEY Co-op) and an array of workshops, seminars and events designed to prepare you for your future career.

Successful engineers understand themselves and inspire others toward a common vision. The first centre of its kind in Canada, our **Troost Institute for Leadership Education in Engineering (Troost ILead)** offers courses, certificates and programs to help you better understand yourself and excel as an engineering leader.

To succeed in your studies and as an engineering professional, you'll need a strong foundation in both communications and math. To assist you in developing these critical competencies, we created the **Engineering Communication Program** and the **Math Aid Office**.

The **Office of the Registrar** is your resource for all administrative aspects of your education, including financial aid counselling and course scheduling. The office also coordinates specialized counsellors and learning strategists just for engineering students.

An **Engineering Student Success Coordinator** supports the many engineering students who live at Chestnut Residence.

Your community extends beyond peers and professors. In first year, you'll receive an invitation to join **U of T Engineering CONNECT**, a rich online social network of alumni from all over the world. They can offer you mentorship, industry-specific career advice, work opportunities and more.

Your professors are more than teachers and renowned researchers — they are mentors, collaborators and advocates for your success within the U of T Engineering community and beyond.

MEET PROFESSOR JASON BAZYLAK

Professor Bazylak teaches Engineering Strategies & Practice, a first-year design course for students in the Core Programs. This award-winning course brings engineering design to life as student teams develop sustainable and creative solutions to address challenges posed by real clients. In learning about the fundamentals of the engineering design process, Professor Bazylak guides teams toward viable solutions — some of which clients implement at the end of the course.

Professor Bazylak's passion for the engineering community extends well beyond the walls of his class. He is an active member of the Engineering Positive Space committee and serves as the Dean's Advisor on Indigenous Initiatives as co-chair of the Eagles' Longhouse Committee. For his creativity and dedication to enriching the student experience, he was recently named a Hart Teaching Innovation Professor.



Explore U of T Engineering's student support services:
www.uoft.me/engsuccess



95%

of first-year engineering students move into second year. For those who choose a different pathway, academic advisors help them to navigate program or university transfers.

CUSTOMIZE YOUR EDUCATION

Through discipline-specific specializations, multidisciplinary minors and certificates and unique professional opportunities, you can customize your U of T Engineering degree to meet your own developing needs at every stage of your academic journey.

Academic flexibility combined with a wide range of optional curricular and co-curricular opportunities means that you graduate equipped with the engineering competencies, professional confidence and global perspective to address any challenge.



START

During the application process, you'll decide how you want to begin your journey at U of T Engineering. There are two pathways you can choose from:

CORE PROGRAMS

CORE 8, DECLARED ENGINEERING

If you know what you want to study during your degree, you can apply directly to a Core 8 program: Chemical; Civil; Computer; Electrical; Industrial; Materials; Mechanical; or Mineral. (See pages 19 to 25 for details on each of the Core 8 programs)

TRACKONE, UNDECLARED ENGINEERING

If you're unsure of how you'd like to focus your first year, the TrackOne program allows you to explore several areas across engineering. At the end of first year, you will declare which of the Core 8 programs you will join in second year for the remaining three years of your undergraduate degree. (See page 18 for details)

ENGINEERING SCIENCE

Engineering Science (EngSci) is a direct-entry program designed for those seeking a unique academic challenge. The first two years of the program — called the Foundation Years — are common to all EngSci students. For the latter half of your program, you will specialize in one of eight exciting majors. (See page 26 for details on the program and EngSci majors)

FIRST YEAR

First year is about establishing fundamental knowledge in math, applied science and design. For this reason, the first-year curricula for the Core 8 programs and TrackOne are very similar. Topics covered in the first year of all Core Programs include:

- » Math (linear algebra, calculus)
- » Physics
- » Chemistry (physical chemistry and/or materials science)
- » Programming (Python or C)
- » Engineering Design, Communication and Practice

The Foundation Years establish breadth and depth in principles and design. Topics include but are not limited to:

FOUNDATION YEAR 1

- » Calculus, Algebra
- » Mathematical Computation
- » Programming (Python and C), Algorithms
- » Electric Circuits
- » Physics, Chemistry
- » Engineering Design, Communication and Practice

OPTIONAL CURRICULAR AND CO-CURRICULAR OPPORTUNITIES

Here are just a few of the many ways you can add to your academic journey through optional curricular and co-curricular opportunities:



Focus your career trajectory while earning a competitive salary through the immersive **PROFESSIONAL EXPERIENCE YEAR CO-OP PROGRAM** (page 12)



Advance the frontiers of engineering through a **SUMMER RESEARCH POSITION** either on campus or at a partner engineering school abroad



UPON GRADUATION

Whether you plan to work in industry, start your own business or pursue further studies, a U of T Engineering degree will enable you to advance in any number of career directions — with confidence. All of our programs are fully accredited. Students in the Core Programs graduate with a Bachelor of Applied Science (BASc) and Engineering Science students graduate with a Bachelor of Applied Science in Engineering Science (BASc in EngSci).

SECOND YEAR

Expand your knowledge with more courses in your discipline. Gain a greater depth of understanding through enhanced lab experiences and design opportunities.

THIRD YEAR

Deepen your knowledge further by choosing a specialization within your Core 8 program (see pages 19 to 25 for discipline-specific specializations). Consider taking electives that allow you to complete a multidisciplinary minor or certificate (see page 27).

If you opted into the PEY Co-op Program, this year is particularly important in preparing for your 12- to 16-month position after third year. See page 12 for details.

FOURTH YEAR

Apply the competencies and knowledge you've developed with the opportunity to complete a team-based design project.

mathematics, science, engineering
ted to:

FOUNDATION YEAR 2

- » Ordinary Differential Equations, Probability and Statistics, Vector Calculus
- » Digital and Computer Systems
- » Quantum Mechanics, Thermodynamics
- » Electromagnetism, Waves
- » Systems Biology
- » Engineering, Society and Critical Thinking

With the Foundation Years behind you, you will now focus your studies on one of eight EngSci majors.

If you opted into the PEY Co-op Program, this year is particularly important in preparing for your 12- to 16-month position after third year. See page 12 for details.

Within your EngSci major, you'll have the opportunity to apply your knowledge, competencies and talents through a team-based design project and an individual research thesis.



Solve a real challenge faced by a company through a collaborative industry-sponsored project at the U of T **INSTITUTE FOR MULTIDISCIPLINARY DESIGN & INNOVATION**



Go global by **STUDYING ABROAD** at 160+ partner universities worldwide



Join the **ALUMNI MENTORSHIP PROGRAM** and benefit from the insight and experience of a U of T Engineering alumnus



Strengthen your leadership competencies through the **TROOST INSTITUTE FOR LEADERSHIP EDUCATION IN ENGINEERING** (page 14)



Turn your idea into a startup through **THE ENTREPRENEURSHIP HATCHERY** (page 5)



Gain complementary perspective on your studies through an **ENGINEERING MINOR OR CERTIFICATE** or through an **ARTS & SCIENCE MINOR** (page 27)



KATHARINE ARMSTRONG

GRADUATION YEAR: 2020

MEMORABLE EXPERIENCE: As part of an annual tradition of friendly pranks between programs, Katharine and a group of fellow TrackOne students built a giant wooden sculpture of one of their favourite professors.

FUN FACT: Katharine balances life as a student with her active role in Queer Sphere, an LGBTQ+ club she founded in first year for engineering students.

GIVING BACK: Katharine is currently a Fresh Week Subcommittee chair, helping to organize unforgettable orientation activities for incoming first-year U of T Engineering students.



TRACKONE, UNDECLARED ENGINEERING

TrackOne is an undeclared first year, designed for students interested in exploring all fields of engineering before joining a Core 8 program in second year. Students in this program spend their first year taking a wide range of courses. This approach helps you discover your interests within U of T Engineering while developing a strong foundation in key engineering principles. After successfully completing TrackOne, you are guaranteed* a spot in the Core 8 program of your choice — Chemical, Civil, Computer, Electrical, Industrial, Materials, Mechanical or Mineral — for the remaining three years of your BAsC degree.

DID YOU KNOW?

The TrackOne community organizes game nights, study groups, beach parties and an annual dinner-dance called the Eight Ball. Alumni of the program often sew a TrackOne patch onto their coveralls or jackets.

HELPING YOU DECIDE

The *Introduction to Engineering* course explores how each engineering field contributes to society, helping you choose your best fit within the Core 8 programs at the end of first year. Support from a dedicated TrackOne advisor will also help you with your decision.

The TrackOne curriculum is designed to parallel the courses taken by first-year students in the Core 8 programs. This allows TrackOne students to transition into year two smoothly.

“I chose TrackOne because I didn’t have a concrete sense of my academic interests. I wanted to understand all the disciplines before making a decision about my studies. The TrackOne seminars and courses allowed me to explore topics I hadn’t encountered before. Ultimately, I fell in love with programming during my second semester, and knew Computer Engineering is where I belonged.”

*TrackOne students who achieve a minimum average of 60% in both semesters are guaranteed entry to the Core 8 program of their choice in second year.



CHEMICAL ENGINEERING

Chemical engineers combine chemistry, biology, math and design to solve global challenges and create innovative processes and products. As one of the top chemical engineering programs in Canada, UofT Engineering is at the forefront of research to develop renewable fuels, use biotechnology to clean up pollution, manufacture products sustainably, create artificial organs, and fortify foods to address malnutrition. You'll put theory to practice in innovative courses and laboratories, including the unique Unit Operations Lab, filled with large-scale industrial equipment and a two-storey distillation column.

SPECIALIZATIONS

- » Biomolecular and Biomedical Engineering
- » Bioprocess Engineering
- » Chemical and Materials Process Engineering
- » Environmental Science and Engineering
- » Informatics
- » Pulp and Paper
- » Surface and Interface Engineering
- » Sustainable Energy

DID YOU KNOW?

In your fourth year, you'll get to design an industrial processing plant in just 10 weeks.

SAMPLE PEY CO-OP EMPLOYERS

Agfa Graphics (Belgium)
 Ministry of the Environment and
 Climate Change
 Peel Plastic Products Ltd.
 Sanofi Pasteur

SAMPLE CAREER TRAJECTORIES

Advanced Manufacturing
 Bioprocessing
 Finance
 Food Fortification
 Management Consulting

“Chemical engineering stood out to me because it addresses large-scale challenges in society in a wide range of industries. The opportunity to attain professional experience in a variety of industries — water, mining and nuclear energy in my case — really helped guide me toward my interests in renewable energy. I ultimately want to apply my research toward creating a sustainable world for future generations.”

JASON MARTINS

GRADUATION YEAR: 2017

PEY CO-OP: He worked on energy-related projects at Amec Foster Wheeler and Hatch. He also did a summer position at Toronto Water.

MEMORABLE EXPERIENCE: For his fourth-year capstone project, he worked with NASA's Ames Research Centre on a system for converting carbon dioxide into acetic acid.

FUN FACT: Jason polished his public speaking skills at UofT Engineering's Toastmasters Club, and served as president in his third year.

CURRENT JOB: Master's student at MIT, after which he will continue his graduate work in energy technologies at the University of Cambridge as a Gates Cambridge Scholar



ANGELA HU

GRADUATION YEAR: 2017

PEY CO-OP: Angela worked for international consulting firm Arup where she helped design two subway stations in Saudi Arabia and a school in Haiti.

MEMORABLE EXPERIENCE: Her undergraduate research on fibre-reinforced concrete will be incorporated into the next Canadian Highway Bridge Design Code.

FUN FACT: In third year, Angela formed a team and travelled to Montreal to participate in the Troitsky Bridge Competition, where they built a metre-long bridge made of popsicle sticks that held 88 times its own weight.

CURRENT JOB: Structural engineering master's student at the University of California, Berkeley



CIVIL ENGINEERING

Civil engineering focuses on the design, infrastructure and sustainability of the structures and systems that support our daily lives, from the deepest tunnels to the tallest buildings. You will learn from global experts in some of the world's most advanced and unique facilities. Your courses in applied structural mechanics, fluid mechanics, geology and engineering ecology will prepare you to create solutions that will directly impact quality of life, from designing disaster-resistant structures to building systems that supply clean water to remote communities.

SPECIALIZATIONS

- » Building Science
- » Construction Management
- » Environmental Engineering
- » Mining & Geomechanics
- » Structural Engineering
- » Transportation Engineering & Planning

DID YOU KNOW?

To learn the art and science of land and water surveying, civil and mineral engineering students take part in a two-week camp at beautiful Gull Lake, located three hours north of Toronto.

SAMPLE PEY CO-OP EMPLOYERS

Aecon Construction
Cadillac Fairview
Ferrovial Agroman (U.S.)
Toronto Hydro
Toronto Transit Commission

SAMPLE CAREER TRAJECTORIES

City Planning
Energy Use and Supply
Environmental Management
Transportation and Infrastructure
Water Treatment and Sustainable Use

“I’ve always had a passion for structural engineering, but I ultimately chose U of T because of the strong sense of community and longstanding traditions within the program (like survey camp at Gull Lake), and the renowned professors who continue to make inspiring advances in my areas of interest. I felt like I was part of something special when I joined the civil engineering program.”





ELECTRICAL & COMPUTER ENGINEERING

Electrical and computer engineers deal with many pressing challenges of our time, including the communication and control of digital information, and the creation and distribution of energy. In the first two years of both programs, you'll study design, math, digital systems, electronics, communication systems, computer architecture and software. In your upper years, you'll focus on two of six cutting-edge specializations. The electrical and computer engineering (ECE) programs are housed within the same department, giving you access to 79 professors with expertise in both disciplines.

SPECIALIZATIONS

- » Analog & Digital Electronics
- » Communications, Signal Processing & Control
- » Computer Hardware & Networks
- » Electromagnetics & Energy Systems
- » Photonics & Semiconductor Physics
- » Software

DID YOU KNOW?

Our ECE department is the highest-ranked and one of the largest in Canada. It's also where multi-touch sensing technology was pioneered.

SAMPLE PEY CO-OP EMPLOYERS

- Apple (U.S.)
- IBM
- Intel
- Hospital for Sick Children
- Rapyuta Robotics (Switzerland)

SAMPLE CAREER TRAJECTORIES

- Artificial Intelligence
- Big Data
- Computer Architecture
- Medical Device Design
- Sustainable Energy

"I chose ECE because I always wanted to invent something that would have an impact. In addition to the strong technical foundation needed to explore new ideas, ECE — just as importantly — taught me how to solve complex challenges. This combination is what makes ECE an incredible basis for a career, both as an engineer, and also as an entrepreneur."

NATASHA BAKER

GRADUATION YEAR: 2008

MEMORABLE EXPERIENCE: She learned about system design, analysis and optimization by designing a vending machine as part of a digital logic course.

FUN FACT: Natasha played the part of a mechanical engineer, nurse and meteorologist in Skule™ Nite, the annual sketch comedy musical run entirely by engineering students.

CURRENT JOB: Founder of SnapEDA, the Internet's first parts library for circuit board design, based in San Francisco

GIVING BACK: Natasha recently shared her startup success story at a U of T Engineering alumni event in Silicon Valley.



DIMPHO RADEBE

GRADUATION YEAR: 2015

PEY CO-OP: She analyzed and improved processes and systems to enhance performance at Canadian Imperial Bank of Commerce (CIBC).

MEMORABLE EXPERIENCE: Celebrating four years of hard work and accepting the responsibility of the engineering profession at her Iron Ring ceremony before graduation.

FUN FACT: Dimpho played a leadership role in many student organizations, including the National Society of Black Engineers and Women in Science and Engineering. She also taught at a children's engineering summer program on campus.

CURRENT JOB: Project Manager, Process Engineering at CIBC in Toronto

GIVING BACK: Dimpho is currently an active member of U of T Engineering's Black Inclusion Steering Committee.



INDUSTRIAL ENGINEERING

Industrial engineers improve the way people interact with technologies and systems. They help organizations run safely, efficiently and profitably. You will begin your program by learning the foundations of industrial engineering: operations research and human-centered design. In your upper years, you'll take courses in engineering psychology and human performance, scheduling and health-care systems. For their ability to see "the big picture," you'll find industrial engineers applying their expertise to every environment, from streamlining operating rooms to distributing products worldwide more efficiently.

SPECIALIZATIONS

- » Human Factors
- » Information Engineering
- » Operations Research

DID YOU KNOW?

Industrial engineering is closely tied to business and health care. UofT's connections to Toronto's financial district and hospitals give you a significant career advantage.

SAMPLE PEY CO-OP EMPLOYERS

Environment Canada
Ernst & Young
Healthcare Human Factors
Royal Bank of Canada
Shopify

SAMPLE CAREER TRAJECTORIES

Big Data Analytics
Health-care Engineering
Financial Analysis and Planning
Management Consulting
Project Management

"I chose industrial engineering because it focuses on human interaction with technologies and systems, placing engineering in a human context. I wanted to join a program that integrated human elements into its curriculum, which I found at U of T. The ability to gain immersive, long-term work experience through the PEY Co-op Program also played a big role in my choice of universities. Ultimately, PEY Co-op and engineering leadership courses helped me define a clear career pathway."





MATERIALS ENGINEERING

Materials engineers focus on improving what things are made of and how they are made. This is where advanced engineering and cutting-edge science meet. You'll study how to manipulate the structure and properties of materials at molecular and atomic levels from professors who create advanced materials for everything from energy storage to automotive applications. With a foundation in chemistry, physics and math, you'll be poised to choose an area to specialize in for the latter half of your program.

SPECIALIZATIONS

- » Biomaterials
- » Design of Materials
- » Manufacturing with Materials
- » Sustainable Materials Processing

DID YOU KNOW?

With 200 undergraduates, 100 graduate students, 20 professors and 2,000 alumni, ours is one of the largest materials science departments in North America.

SAMPLE PEY CO-OP EMPLOYERS

- Air Liquide Laboratories (Japan)
- General Electric Canada
- MIT's Koch Institute (U.S.)
- Ontario Power Generation
- Synaptive Medical

SAMPLE CAREER TRAJECTORIES

- Clean Technologies
- Forensic Engineering
- Manufacturing
- Mining and Mineral Processing
- Transportation and Infrastructure

"Materials science touches on every aspect of life and is closely intertwined with other disciplines — which suited me well because my interests as a student were varied, from medicine to forensic science. In my current job, I review designs for devices like rollercoasters. With my educational background, I can quickly recognize proposed designs where certain materials won't work together under all conditions, thereby preventing problems in the long run."

JOELLE JAVIER

GRADUATION YEAR: 2010

MEMORABLE EXPERIENCE: For one of her manufacturing projects, she studied the heat treatment of chocolate. Joelle reports it was a very fulfilling project.

FUN FACT: In the annual Chariot Race during U of T Engineering's Godiva Week, Joelle and her friends built and raced a chariot made from a dishwasher — and won.

CURRENT JOB: Elevating and Amusement Devices Safety Engineer with the Technical Standards and Safety Authority in Toronto

GIVING BACK: After graduation, Joelle taught in DEEP Summer Academy, an on-campus STEM program for high school students (see page 31 for details).



HARRISON CHEN

GRADUATION YEAR: 2016

PEY CO-OP: He improved and streamlined testing and validation processes for medical device startup Conavi Medical.

MEMORABLE EXPERIENCE: For his fourth-year capstone project, Harrison developed a polymer-based imaging transducer for minimally invasive heart surgeries.

FUN FACT: Harrison completed an engineering minor in robotics and mechatronics.

CURRENT JOB: Junior Member Technical Staff at MDA (MacDonald, Dettwiler and Associates) in Brampton, Ontario



MECHANICAL ENGINEERING

Mechanical engineers understand the world as parts in motion: from cars to medical devices, all design uses mechanical engineering principles. Our program is renowned for its applied approach, where you'll put theory to practice through unique experiential opportunities both in the lab and in the field. You'll take courses in physics, risk assessment, thermodynamics, biomechanics and sustainable energy. You'll also learn about the physical principles of design: how individual components come together, and how to manufacture objects to make them safe, economical and easy to use.



"I chose mechanical engineering because of its versatility across industries. During my PEY Co-op position at Conavi, I was involved in mechanical-electrical systems development, micro-machining and assembly manufacturing process, device testing and more. These experiences, combined with my coursework, helped me move into the aerospace industry at MDA after graduation. Now I help to design and manufacture robotics systems for the space and medical industries."

SPECIALIZATIONS

- » Bioengineering
- » Energy & Environment
- » Manufacturing
- » Mechatronics
- » Solid Mechanics & Design

DID YOU KNOW?

Our Energy Lab has state-of-the-art equipment for studying thermodynamics, but also some important pieces from our rich and longstanding history — including engines more than 100 years old.

SAMPLE PEY CO-OP EMPLOYERS

BMW (U.S.)
Bombardier
Defence Research and Development
Canada
General Motors Canada
IBI Group (U.S.)

SAMPLE CAREER TRAJECTORIES

Advanced Manufacturing
Artificial Intelligence
Communications Systems
Robotics
Sustainable Energy



MINERAL ENGINEERING

Everything that humans use is either caught, grown or mined. Mineral engineering is the applied science of our interaction with the planet. What sets the Lassonde Mineral Engineering program apart is our broad approach to the discipline. Here, you'll learn mineral exploration, mine design and management, mineral processing and mining finance from researchers at the Lassonde Institute of Mining, as well as industry professionals. Your degree will give you the expertise to lead the way in making mining more sustainable, safe and productive.

SPECIALIZATIONS

- » Applied Geology
- » Geological Engineering
- » Geotechnical
- » Mining & Geomechanics

DID YOU KNOW?

Toronto is the mining finance capital of the world and home to more than 1,600 mining company headquarters.

SAMPLE PEY CO-OP EMPLOYERS

EllisDon
Fugro Peninsular Services (Qatar)
Kinross Gold Corp.
Suncor Energy
Vale

SAMPLE CAREER TRAJECTORIES

Consulting
Mine and Business Management
Sustainable Mining Practices
Transportation
Tele-mining

"I always had an interest in solving real-world problems, so engineering was a natural fit. Being at U of T meant an incredible opportunity to experience life in an exciting city while being at the best engineering school in the country. Since the Lassonde Mineral Engineering program is small, I got to know everyone really well. I made some amazing lifelong friends here."

MARINA RENY

GRADUATION YEAR: 2017

PEY CO-OP: She optimized mine operations at Imperial Oil's Kearsy Oil Sands Project in Alberta.

MEMORABLE EXPERIENCE: The two-week course in mapping and land surveying she took with her classmates at U of T's Gull Lake cottage located north of Toronto.

FUN FACT: In her fourth year, Marina served as U of T's team captain at the Canadian Mining Games where they won second place.

CURRENT JOB: Mine Engineer-In-Training at Imperial Oil in Calgary



KRAMAY PATEL

ENGSCI MAJOR: Biomedical Systems Engineering (with a minor in robotics and mechatronics)

GRADUATION YEAR: 2016

MEMORABLE EXPERIENCE: In second year, he travelled to Turkey as a National Science Foundation Fellow to learn about the intersection of bioinformatics and systems biology.

FUN FACT: Kramay turned an idea for a smart showerhead into a patent and startup through The Entrepreneurship Hatchery.

CURRENT JOB: Vanier Scholar and MD-PhD candidate at U of T, focusing on neuroprosthetics, brain-machine interfaces and human memory augmentation

GIVING BACK: Kramay is a mentor to the U of T Robotics for Space Exploration team, a group he started as an undergrad.



ENGINEERING SCIENCE

One of the most distinguished engineering programs in the world, Engineering Science (EngSci) is designed for ambitious students who are looking for an intense academic challenge. In your first two years, you'll be immersed in engineering, math, science, computing and humanities. In your last two years, you'll choose from one of eight majors for accelerated, discipline-specific learning. Our students thrive in a close-knit community of exceptional individuals, creating an enriched and unique learning environment.

ENGINEERING SCIENCE MAJORS

- » Aerospace Engineering
- » Biomedical Systems Engineering
- » Electrical & Computer Engineering
- » Energy Systems Engineering
- » Engineering Mathematics, Statistics & Finance
- » Engineering Physics
- » Machine Intelligence
- » Robotics

DID YOU KNOW?

U of T is one of the few institutions worldwide to offer a program that integrates enriched science fundamentals with engineering. The EngSci curriculum is nimble with dynamic majors that evolve and anticipate emerging technologies.

SAMPLE PEY CO-OP EMPLOYERS

Airbus (France)
Amazon
Harvard-MIT Science & Technology (U.S.)
Scotiabank
Verity Studios (Switzerland)

SAMPLE CAREER TRAJECTORIES

Half of EngSci grads pursue graduate studies or professional degrees such as law and medicine. The other half enter the workforce in a wide range of careers across all industries, or start their own companies.

“I chose EngSci because I wanted a challenge — and it was one of the best decisions of my life. From academic learning to personal growth and amazing friendships, it was everything I hoped for and more. EngSci prepared me to be successful after graduating, not just through the wealth of knowledge I gained, but by helping me develop a personality that embraces challenges and chases the impossible.”



ENGINEERING MINORS & CERTIFICATES

Choosing an engineering minor or certificate is a powerful way to graduate with an extra set of credentials, or just explore an area of interest, while earning your degree. As an engineering student, you can also pursue a minor through the Faculty of Arts & Science—such as French, Geography or Psychology.

To obtain an engineering minor or certificate, you complete a set number of specified and optional courses — six for a minor and three for a certificate. For example, if you're interested in the Engineering Business minor, you would take courses in engineering economics, accounting and finance, competitive strategy and people management, plus two courses from a set of electives. When you graduate, your minor or certificate will appear on your transcript.

More than half of our students graduate with an engineering minor or certificate

ADVANCED MANUFACTURING MINOR

The most intensive research and development sector in Canada is manufacturing. Courses in this minor cover an array of competencies, all of which can be broadly applied to areas like biomedical, automotive, aerospace and energy.



BIOENGINEERING MINOR

With topics extending across life sciences, from forestry and ecology to biological waste treatment and health care, this minor offers you a breadth of possibilities, from biofuels to pharmaceuticals.



BIOMEDICAL ENGINEERING MINOR

This highly focused minor examines engineering's intersection with medicine and biomedical technology. Courses cover physiological control systems, bioinstrumentation, biomechanics and a choice of lab or design experience.



ENGINEERING BUSINESS MINOR

This minor represents a powerful collaboration between UofT Engineering and the Rotman School of Management. Our most popular minor, it provides knowledge of finance, economics, business management and marketing from an engineering perspective.



ENVIRONMENTAL ENGINEERING MINOR

Delve into topics such as ecological impact, risk assessment, environmental microbiology, hydrology, preventive engineering, climate change, and the social and environmental impact of technology.



MUSIC PERFORMANCE MINOR

This unique program is designed for students interested in exploring their creativity and applications in music technology. Through our partnership with the Faculty of Music, you will have access to a performance-based program, including courses typically only offered to music students.



NANOENGINEERING MINOR

Reflecting a growing focus on engineering materials and devices at the nano scale, this minor is applicable to many sectors including electronics, communications, energy and medical diagnostics.



ROBOTICS & MECHATRONICS MINOR

Explore robotic and mechatronic systems involved in consumer products, industrial uses and adaptive technologies. Courses cover topics such as micro-electromechanical systems and new system-level principles underlying embedded systems.



SUSTAINABLE ENERGY MINOR

The need for greener, more sustainable energy resources is critical. Topics in this minor focus on the sustainable use of energy, energy-demand management and public policy related to sustainability.



ENGINEERING CERTIFICATES

- » Communication
- » Engineering Business
- » Engineering Leadership
- » Entrepreneurship
- » Forensic Engineering
- » Global Engineering
- » Mineral Resources
- » Music Technology
- » Nuclear Engineering
- » Renewable Resources Engineering

HOW TO APPLY

The U of T Engineering admissions committee carefully considers each applicant's academic performance and activities outside the classroom. Once we have received your application through the Ontario Universities' Application Centre (OUAC), we will send you a link to complete a mandatory Online Student Profile (OSP). Your OSP will be used along with your academic transcripts and OUAC application to make an admissions decision. For details, visit www.uoft.me/engapply

1

APPLY ONLINE PRIOR TO JANUARY 16

Submit your application online through the **Ontario Universities' Application Centre (OUAC)** at www.ouac.on.ca starting in early October. Shortly after you submit your application we will send you an email acknowledgement with instructions on how to access your account on the Engineering Applicant Portal.

2

SUBMIT YOUR ONLINE STUDENT PROFILE AND DOCUMENTS BY FEBRUARY 1

Log in to your Engineering Applicant Portal to complete your **Online Student Profile (OSP)** — where you can tell us about your academic history and co-curricular involvement, the programs you want to be considered for, and your interest in the PEY Co-op Program. Through the Portal, please upload transcripts for your studies to date (completed and in progress) from the start of high school*. English proficiency test results must be sent electronically directly from the testing service. Your application will be reviewed once all components of your OSP are complete.

3

APPLY FOR RESIDENCE BY MARCH 31

Residence is guaranteed for all new full-time students entering their first year of study.

To qualify for the guarantee, complete the University's common **residence application (MyRes)** by March 31. For full details, please visit www.uoft.me/engresidence

*Current Ontario high school students: your grades will be sent to us automatically from your school.

4

TRACK THE STATUS OF YOUR APPLICATION

Log into your **Engineering Applicant Portal account** regularly to see what documents have been received in support of your application, confirm that your Online Student Profile is complete, and track your admission status. When a decision is made, it will be posted here first.

ACADEMIC REQUIREMENTS

CANADA

ONTARIO: English (ENG4U); Advanced Functions (MHF4U); Calculus and Vectors (MCV4U); Chemistry (SCH4U); Physics (SPH4U); and an additional U or M course

ALBERTA/NW TERRITORIES/NUNAVUT: Math 30-1; Math 31; Chemistry 30; Physics 30; and English 30 or ELA 30-1

BRITISH COLUMBIA/YUKON: Pre-Calculus 12; Calculus 12 or AP Calculus; Chemistry 12; Physics 12; and English 12

MANITOBA: Pre-Calculus Math 40S; AP Calculus; Chemistry 40S; Physics 40S; and ELA 40S

NEW BRUNSWICK: Calculus 120; Pre-Calculus B120; Chemistry 121 or 122; Physics 121 or 122; and English 120, 121 or 122

NEWFOUNDLAND/LABRADOR: Math 3200; Math 3208; Chemistry 3202; Physics 3204; and English 3201

NOVA SCOTIA: Pre-Calculus; Grade 12 Calculus/AP Calculus; Chemistry 12; Physics 12; and English 12 (competitive candidates will be considered with Math 12/Advanced Math 12 if Calculus is not offered by your school)

PRINCE EDWARD ISLAND: Mathematics 621A or 621B; Mathematics 611B; Chemistry 611 or 621; Physics 621; and English 621

SASKATCHEWAN: Pre-Calculus 30; Calculus 30; Chemistry 30; Physics 30; and English ELA A30 + B30

QUEBEC CEGEP: 12 academic courses including one course in Algebra, and two courses each in Calculus, Chemistry, Physics and English. 24 courses with prerequisites will be considered for advance standing credit.

*Please contact us if your school does not offer Calculus

MONEY MATTERS

For a more complete picture of financing your U of T Engineering education, please visit www.uoft.me/engfinances

SCHOLARSHIPS & AWARDS

All high school applicants to U of T Engineering are automatically considered for most admission scholarships on the basis of their academic achievements and extracurricular involvement (as detailed in the Online Student Profile). Some scholarships and awards require a separate application. Engineering applicants are also eligible for a number of University-wide scholarships. Major U of T scholarships requiring nomination include the **National Scholarship** for Canadian high school students and the **Lester B. Pearson International Scholarship** for international students. Please visit www.uoft.me/engscholarship for more information.

FINANCIAL AID

UNIVERSITY OF TORONTO ADVANCE PLANNING FOR STUDENTS

We are committed to ensuring that no admitted domestic student¹ is unable to enrol in or complete their studies due to lack of financial means. This commitment led to the creation

of a unique financial aid program called **University of Toronto Advance Planning for Students (UTAPS)**. Through a grant, UTAPS covers unmet financial need after a student has received a maximum amount of support through government assistance (e.g., OSAP for Ontario students).

U.S. STUDENT AID

U.S. citizens can apply for financial assistance from the U.S. William D. Ford Federal Direct Loan Program. U of T is a recognized post-secondary institution for Federal Direct Loans (PLUS/Subsidized/Unsubsidized). Education Savings Plans and U.S. Federal Education Tax credits are also applicable. Visit www.uoft.me/usloans for details.

SPONSORED STUDENTS

As a top-ranked world institution, the University of Toronto is an approved destination for most countries' national mobility scholarship programs.

COSTS

Fees for full-time studies are in Canadian dollars.

| | DOMESTIC | INTERNATIONAL |
|----------------------------------|-------------------------|---------------------------|
| Tuition | \$15,760 ² | \$54,840 ² |
| Incidental Fees | \$1,595.09 ³ | \$1,595.09 ^{3,4} |
| Residence & Meal Plan | \$11,000– \$19,000 | \$11,000– \$19,000 |
| Books & Supplies | \$1,500– \$2,000+ | \$1,500– \$2,000+ |

1. International students are not eligible for need-based financial aid
2. 2018–2019 academic fees; 2019–2020 fees are subject to change
3. 2018–2019 incidental fees; 2019–2020 fees are subject to change
4. International students are required to purchase health insurance through UHIP (approximately \$624 per year)

INTERNATIONAL

AMERICAN SYSTEM: Excellent CGPA, Senior Year/Grade 12 GPA at an accredited high school with high scores on SAT Reasoning/Redesigned SAT (including Essay) or ACT exams (including Writing Test Component). Excellent results in senior level courses, including Math, Chemistry and Physics. Competitive applicants are encouraged to have two years of Chemistry and Physics as well as Calculus completed or in-progress by senior year. Students unable to take more than one year of Chemistry or Physics who are not taking an AP course in that subject should arrange to take the SAT Subject test prior to February 1, 2019. AP or SAT Subject Test results in Calculus, Chemistry and Physics are recommended, but not required. Applicants with written AP exams should present minimum scores of 4; SAT Subject Tests in Math, Physics or Chemistry should be at least 650. U of T Engineering does not grant advanced standing credit for AP courses.

BRITISH PATTERNED: Three A-Levels including Mathematics and Physics. Chemistry is strongly recommended as the third A-Level. Applicants are required to present at least AS-Level Chemistry. U of T Engineering does not grant advanced standing for A-Level subjects.

INDIAN SYSTEM: Mathematics, Chemistry and Physics at the Grade 12 level. Completion of the All India Senior School Certificate awarded by CBSE, or the Indian School Certificate awarded by CISCE, or Year 12 State Board Exams with excellent results.

INTERNATIONAL BACCALAUREATE (IB) DIPLOMA: Mathematics (recommended at Higher Level); Physics and Chemistry at either level. U of T Engineering does not grant advanced standing for 13 courses.

FIRST NATIONS, MÉTIS AND INUIT APPLICANTS

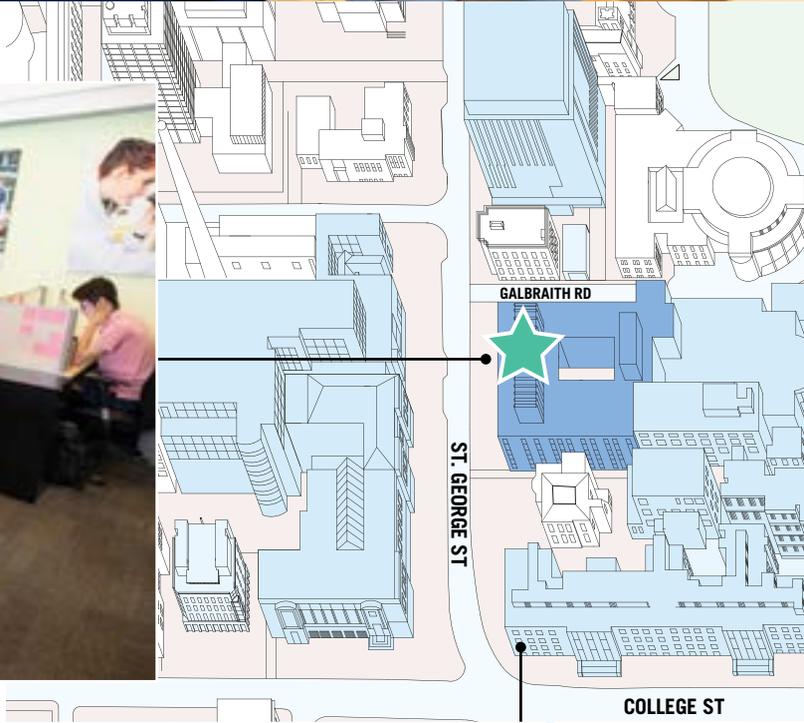
Indigenous students who are applying to U of T Engineering are encouraged to contact us at Indigenous@ecf.utoronto.ca.

ENGLISH FACILITY REQUIREMENTS

If your first language is not English, you must present proof of English facility prior to admission consideration, unless you have completed four years of full-time study in an English language school in a country where the predominant language is English. For applicants who are required to present proof of English facility and are taking Grade 12 English (i.e., ENG4U), you must achieve at least 70% in this course. For details on required scores and acceptable tests, please visit www.uoft.me/EFT.

INTERNATIONAL FOUNDATION PROGRAM (IFP)

The IFP is available to academically qualified international students graduating from an international high school with English facility test scores just below the required minimum. For details, visit www.uoft.me/engifp.



ENGINEERING WELCOME CENTRE

Located in the Galbraith Building, the Engineering Welcome Centre is your first stop when visiting U of T Engineering. Here you can drop in or make an appointment to speak to a recruitment specialist about our programs.



Wallberg Memorial Building

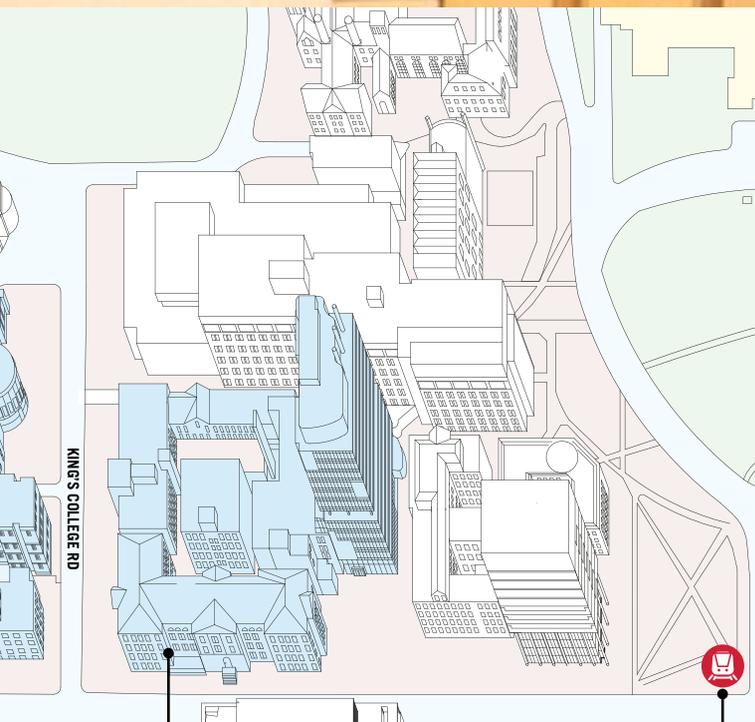


TAKE A TOUR

The best way to experience UofT Engineering is in person. Schedule a visit to explore our facilities and meet our students on a guided tour from the Engineering Welcome Centre in the Galbraith Building. You'll visit all major points on campus including libraries, engineering buildings, study spaces and go inside some of our world-class labs.

Led by current engineering undergraduate students, tours are one hour long and followed by a 30-minute admission information session.

Visit www.uoft.me/touengineering to sign up for a tour.



Lonsdale Mining Building



Queen's Park Station

GET A TASTE OF ENGINEERING THROUGH DEEP SUMMER ACADEMY



Each summer, high school students from around the world travel to Toronto for the Da Vinci Engineering Enrichment Program (DEEP) Summer Academy.

Taught by UofT Engineering professors, researchers and PhD candidates, week-long courses tackle some of today's most interesting topics in everything from robotics and nanotechnology to engineering business and bioengineering. DEEP is also a great way to get to know UofT before you begin your undergraduate studies.

www.deepsummeracademy.com

ACCESSIBLE BY TRANSIT

UofT Engineering is located near College Street on the southern edge of University of Toronto's St. George Campus. The area is serviced by two TTC subway stops, Queen's Park Station and Museum Station, and is also accessed via Spadina Avenue's 510 and 506 streetcar routes. Once on campus, UofT Engineering buildings are within a picturesque 15-minute walk to help you arrive on time wherever you're going.



UNIVERSITY OF
TORONTO

Engineering

**UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING**

engineering@ecf.utoronto.ca | +1 416-978-3872

www.discover.engineering.utoronto.ca

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 www.youtube.com/uofteng |  @uoftengineering

ACKNOWLEDGEMENT OF TRADITIONAL LAND

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and most recently, the Mississaugas of the Credit River. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.