

Turn your curiosity into real-world solutions

Are you someone who looks at things differently? Do you believe in using your skills and creativity to make life better for others? At Toronto Metropolitan University (TMU), we empower like-minded engineering and architectural science students to get hands-on experience solving the challenges that matter most to them.

Whether it's advancing sustainable transportation, evolving cancer detection or designing inclusive spaces, our Faculty of Engineering and Architectural Science (FEAS) can help you push the boundaries of innovation. You'll have opportunities to make a real-world impact through groundbreaking lab research, industry co-op placements, startups or competition teams.

Join TMU and FEAS to become part of a diverse, friendly community of problem-solvers ready to help you thrive.

torontomu.ca/engineering-architectural-science

#1

University in Ontario for student services

10Undergraduate programs

6,400+

FEAS undergraduate students

11

Graduate programs

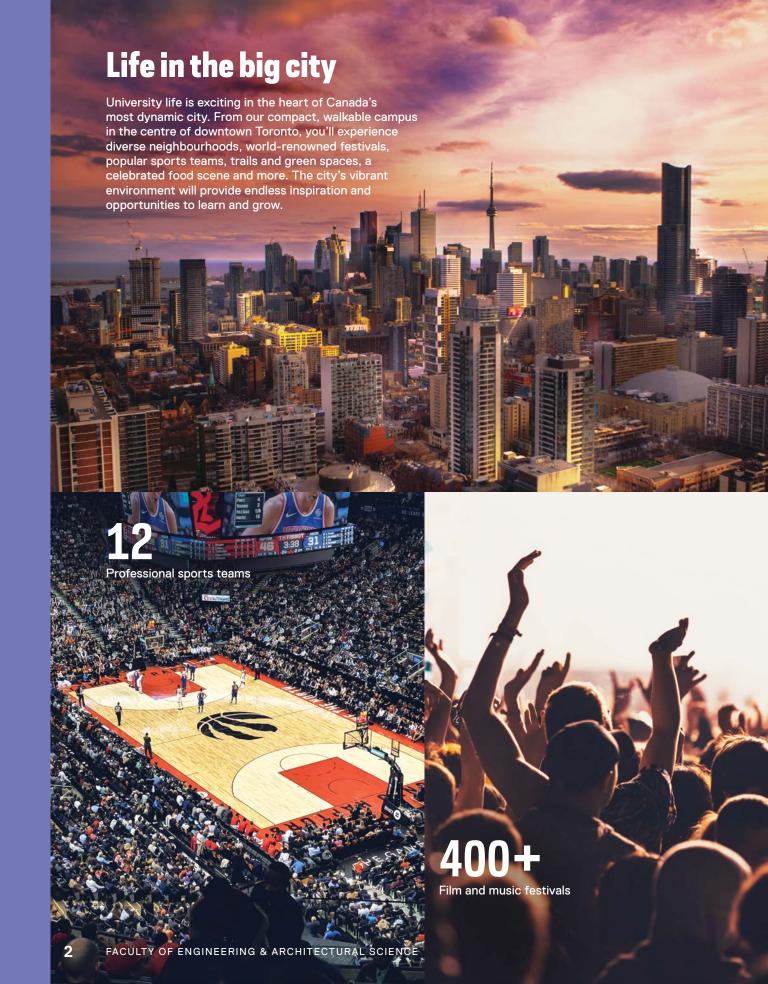
64

Minors to customize your degree

Front cover image: NOVA at Winter Stations 2024 Photo credit: Jake Levy









Co-op and internships

Get an edge in today's competitive job market with unique co-ops and internships that empower you to hone your skills while being mentored by leading professionals.

Whichever program you choose, after completing the first three years, you'll have the option to continue in your regular program, apply for the paid co-op program or join a paid internship. In addition to gaining 8 to 16 months of real-world experience, you'll graduate with a co-op designation as part of your degree name.

\$50K+

Average annual co-op salary of FEAS students

"My experience with the Co-op & Internship Program has been incredibly positive. Their one-on-one appointments helped me to increase my application success and land a position at Toronto Hydro."

VIKRAM PRASHAR
Computer Engineering, Class of 2024





Innovation and research

Work alongside some of the world's top researchers and help propel engineering or architectural science into the future, from developing medical devices that can identify diseases to advancing aerospace technology using robotics, designing net-zero cities and more.

Outside of the lab and into an incubator, pursue a passion project, help launch a startup or launch one of your own through our Zone Learning network of entrepreneurial and innovation spaces. With the support of industry experts, faculty and fellow students, you'll receive the guidance, resources and funding you need to bring your ideas to life.

4,700+ Startups launched

Startups launched from TMU zones

\$2.7B

Financial awards and funding available

250+

Active research partnerships

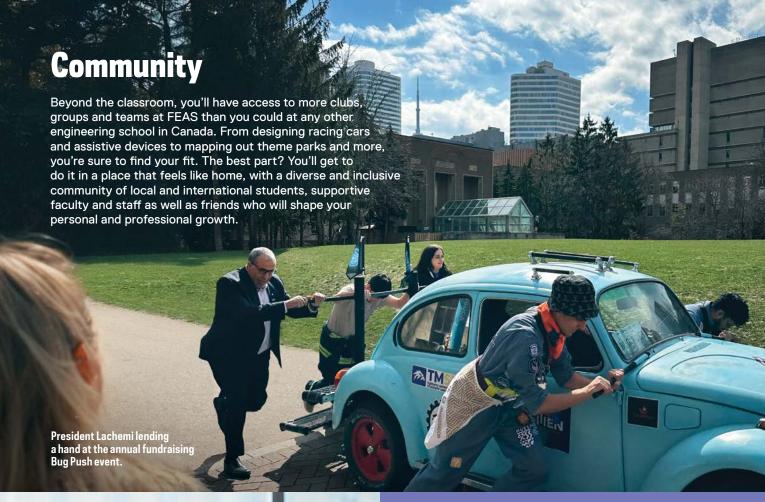


"Thanks to the \$38,000 in Norman Esch awards funding and support from the Biomedical Zone, we developed an app that uses AI to help those living with long-term diseases like diabetes."

LIAM BELL

Biomedical Engineering, Class of 2022 Co-Founder, Glucose Vision



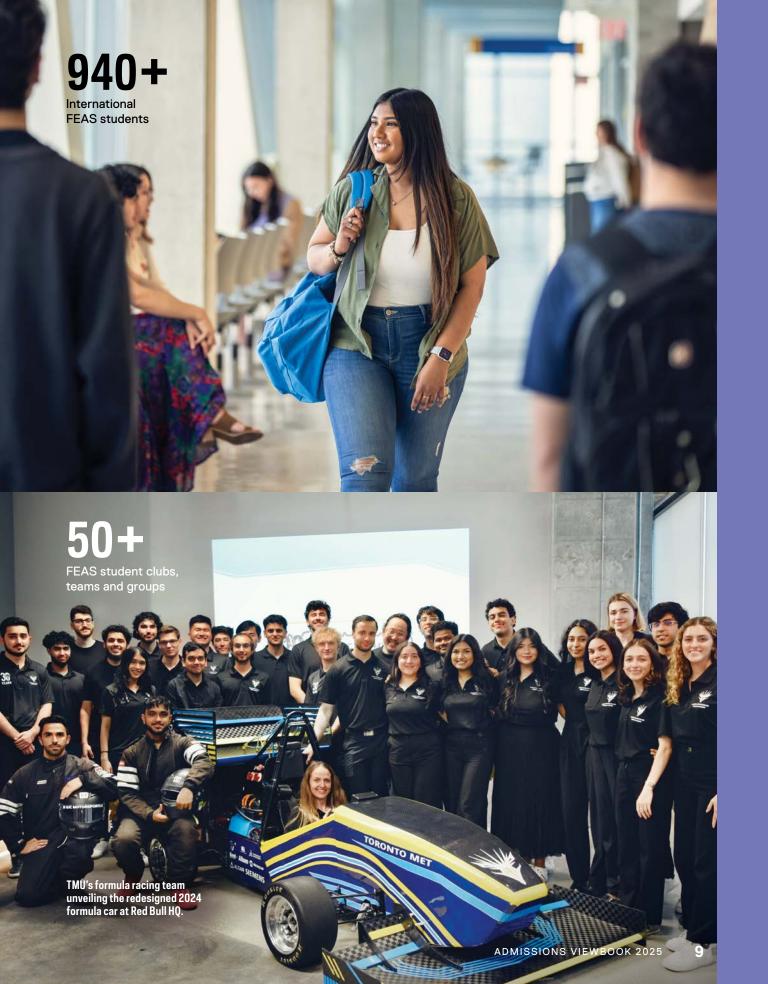


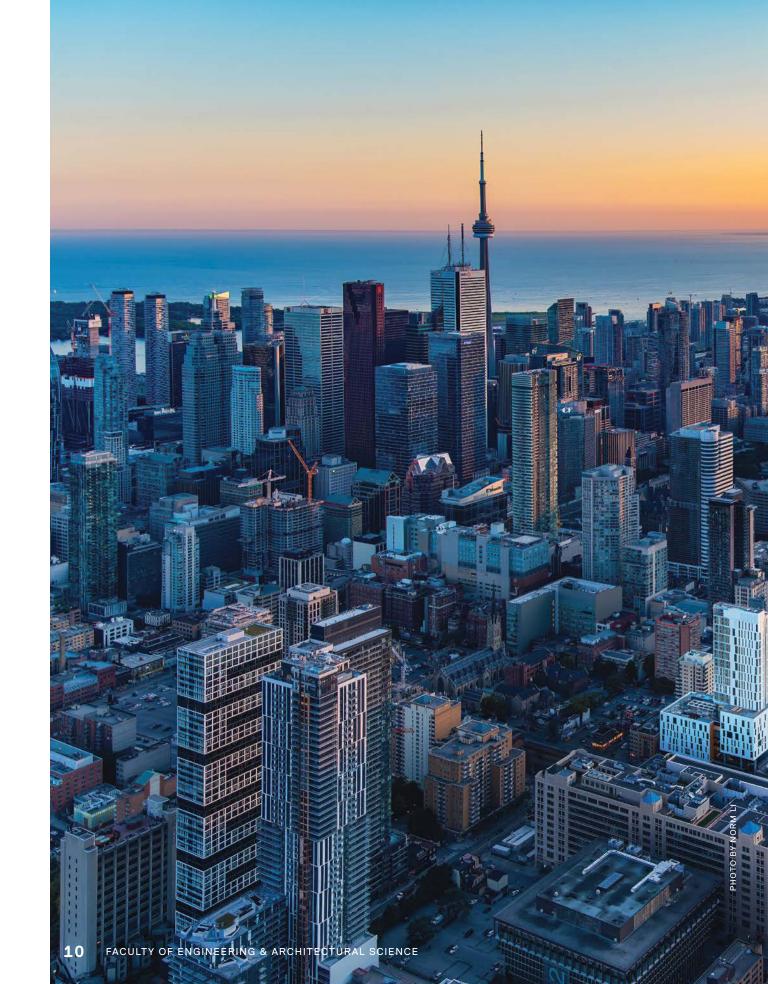
79
Countries FEAS students call home

"Women in Engineering provides a space for community building. Their events and mentorship program have allowed me to develop friendships and gain confidence."

NAUREEN KAUR

Computer Engineering, Class of 2024 President, TMU Women in Engineering





"My experiences in student groups, joining design builds, writing research papers and taking part in co-op at TMU have shown me that we can make a meaningful impact within our programs and the industry at large."

SAROASH HAIDER Architectural Science Class of 2024





Combat climate change by creating sustainable flight or innovating clean water solutions. Engineer highways, wireless networks and assistive robots to turn smart cities into a reality. Enhance cancer detection software or revolutionize hospital operations to elevate patient care.

Being an engineer means tackling problems in novel ways. At TMU, we foster creative thinking and cultivate the technical capabilities and social skills you need to transform your ideas into impactful solutions.

By choosing one of our nine programs or the undeclared entry option, you'll be on your way to becoming a socially responsible engineer. Plus, with our accelerated master's program, optional specialization in management sciences and other opportunities, you'll have a head start on shaping the world.



130+ Renowned engineers to learn from, including some of Canada's top researchers **5,400+**Engineering undergraduate students 20+ Countries where your professionally accredited degree will be recognized* 93% Engineering students employed within 2 years of graduation *For Mechatronics Engineering, accreditation by the Canadian Engineering Accreditation Board will be sought at the time of the first graduating class. ADMISSIONS VIEWBOOK 2025



Your first year

Our unique First-Year Engineering Office (FYEO) is here to help you make a smooth transition from high school to university. The FYEO is designed to set you up for a successful university experience through a range of free services, from academic and personal counselling to help with learning skills, tutoring and more.

FIRST-YEAR RESOURCES

First-Year Ambassadors

Get advice from upper-year students who understand what you're going through. Whether you have questions about fees, financial assistance, scheduling, or time management, these campus leaders are ready to help you navigate university life.

Engineering Boost Program

Sharpen your skills in math, physics, programming and more before university starts.

Academic Advisors

Receive personalized guidance tailored to your interests, strengths and goals.

Early Intervention Program

Boost your success in core courses.

Transition Program

Get extra time to adapt to university curriculum.

Engineering Orientation

Receive transition support and meet your peers through special events and programming.

Engineering ACES

Attend free weekly engineering course tutoring sessions.

FIRST-YEAR CURRICULUM

Your first year will be filled with exciting learning experiences. Here's a breakdown of the courses you'll take.

First semester

- General Chemistry
- Calculus I
- Linear Algebra
- Physics: Mechanics
- Introduction to Engineering
- Liberal Studies elective course

Second semester

- Principles of Engineering Economics
- Calculus II
- Physics: Waves and Fields



Plus, you'll get to take the following courses, depending on your program:

Aerospace Engineering

- Digital Computation and Programming
- Engineering Design and Graphical Communication
- Materials Science
 Fundamentals

Biomedical Engineering

- Computer Programming Fundamentals
- Electric Circuit Analysis
- Introduction to Biomedical Engineering

Chemical Co-op Engineering

- Chemical Engineering Fundamentals
- Digital Computation and Programming
- General Chemistry Laboratory

Civil Engineering

- Digital Computation and Programming
- Graphics
- Materials Science Fundamentals

Computer Engineering

- Computer Programming Fundamentals
- Electric Circuit Analysis

Electrical Engineering

- Computer Programming Fundamentals
- Electric Circuit Analysis

Industrial Engineering

- Computer Programming Fundamentals
- Engineering Graphical Communication
- Materials Science
 Fundamentals

Mechanical Engineering

- Computer Programming Fundamentals
- Engineering Graphical Communication
- Materials Science Fundamentals

Mechatronics Engineering

- Computer Programming Fundamentals
- Engineering Graphical Communication
- Materials Science
 Fundamentals

"I had so many questions and uncertainties in my first year. The FYEO provided me with guidance and answers every step of the way. This inspired me to become an ambassador in my second year to help new students navigate and maximize their first year."

PALAK DEDHIA
Aerospace Engineering, Student

Aerospace Engineering

Bachelor of Engineering (BEng)

Space planes. Autonomous aerial vehicles. The Hyperloop. Want to be part of the transit revolution? Here you'll master the mechanisms behind flight and propulsion so you can design and develop the vehicles, technologies and systems that will move us into the future.

From building rockets on the MetRocketry team to creating prototypes for clients like Bombardier and Collins Aerospace through our research centres and co-op programs, you'll have many opportunities to apply theory in the real world.

Your program

Full time: 4 years Full-time co-op: 5 years

Sample courses: Aerospace Design - Flight Mechanics

Aircraft Performance

Streams: Aircraft - Spacecraft - Avionics

Your future

Careers: Aircraft Design Engineer - Aircraft Maintenance Engineer Propulsion Engineer - Space Systems Design Engineer

Employers: Boeing - Bombardier - Canadian Space Agency

De Havilland - Magellan Aerospace - Pratt & Whitney - SpaceX

Transport Canada

torontomu.ca/programs/undergraduate/ aerospace-engineering

"My internships allowed me to apply classroom theories to actual aerospace projects, preparing me for a successful engineering career."

VISHAAL VENKATESH Class of 2020



Biomedical Engineering

Bachelor of Engineering (BEng)

Dive into a world where cutting-edge engineering meets lifesaving innovations in one of Canada's first and longest-running biomedical undergraduate programs. With top-tier professors and collaborations in surrounding world-class hospitals, you'll be at the forefront of healthcare advancements.

Here, you'll get hands-on experience through lab-integrated learning from professors who are some of Canada's leading healthcare researchers. From designing ECG circuitry to working with clinicians at TMU's Biomedical Zone, you'll have opportunities to shape the future of health care before you graduate — and well into your career.

"Learning from professors who are actively involved in biomedical research provided me invaluable work experience."

ALEX DUNN
Class of 2023
Biomedical Engineering Master's Student

Your program

Full time: 4 years Full-time co-op: 5 years

Sample courses: Biomechanics
- Biomedical Instrumentation - Medical
Robotics - Rehabilitation Engineering

Tissue Engineering

Your future

Careers: Biomedical Systems Engineer
- Clinical Engineer - Medical Device Design
Engineer - Researcher

Employers: Boston Scientific - Canon

- GE Major Hospitals Medtronic
- Philips Regulatory Boards
- Siemens Toshiba

torontomu.ca/programs/ undergraduate/biomedicalengineering





Chemical Engineering Co-op

Bachelor of Engineering (BEng)

Make an impact on the world around you as you learn to combine engineering with chemistry, biology and physics. From advancing medicine to securing clean water for communities to developing microchips for new technologies, you'll acquire the skills needed to radically improve human life.

Through our mandatory co-op program, you'll take cutting-edge courses — in topics such as AI, waste recovery, the circular economy and hydrogen and fuel cell technologies — and work with leading employers, where you'll gain experience in research, process engineering, operations support and more.

"TMU's comprehensive chemical engineering and co-op placements helped me to gain valuable industry experience."

JOE FIDA

Class of 2018 (BEng), Class of 2021 (MASc) Partner and Chief Innovation Officer, Blade Air

Your program

Full-time co-op: 5 years

Sample courses: Fluid Mechanics - Process Modeling and Simulation - Thermodynamics Co-op requirement: 3 to 4 work terms

Your future

Careers: Air Quality Engineer

- Biostatistician - Clinical Research
Coordinator - Environmental Engineer

Employers: 3M - AGAT Laboratories

- Atomic Energy of Canada Limited
- Environment and Climate Change Canada
- Husky Energy Maple Leaf Foods
- Sanofi Pasteur Sofina Foods

torontomu.ca/programs/ undergraduate/chemicalengineering-co-op

Civil Engineering

Bachelor of Engineering (BEng)

As a civil engineer, you can build smart cities, advance water treatment, rethink transportation infrastructure and more. Whether you dream of being on site for major construction projects or in the lab turning waste into green energy, here you'll learn to help communities thrive.

Spanning transportation, environmental and structural engineering, in our program you'll master theoretical principles while developing a specialization. You'll also get hands-on lab experience with the latest software and tools, using data and Al to solve critical infrastructure challenges.

"I use the theory and software I learned in the Transportation stream daily in my role."

MEVANDIE ABEGUNAWARDANA

Class of 2023

Engineering Associate, Ontario Ministry of Transportation

Your program

Full time: 4 years Full-time co-op: 5 years

Sample courses: Highway Design • Municipal Engineering • Structural Steel Design Option: Structural Engineering Streams: Environmental • Transportation

Your future

Careers: City Manager - Construction Coordinator - Consulting Engineer

Transportation Engineer

Employers: Aecon Group Inc. - City of Toronto - Metrolinx - Morrison Hershfield - PCL Construction - The Boring Company

- The Ontario Ministry of Transportation - Worley

torontomu.ca/programs/ undergraduate/civil-engineering



Computer Engineering

Bachelor of Engineering (BEng)

Study the building blocks of today's technologies to develop tomorrow's computing devices. From designing intricate circuits to coding new programs, you'll develop a specialized skill set that will enable you to advance industries and communities.

Here, you'll learn advanced concepts, spanning computer architecture, software and hardware engineering, cloud computing, Al and more. Through hands-on learning and paid co-op opportunities, you'll also gain industry experience, preparing you for an in-demand career.

"Today, I work in artificial reality, building systems to reconstruct environments for human interactions."

RAY PHAN

Class of 2006 (BEng), Class of 2008 (MASc), Class of 2013 (PhD) Principal Software Engineer, Magic Leap

Your program

Full time: 4 years
Full-time co-op: 5 years

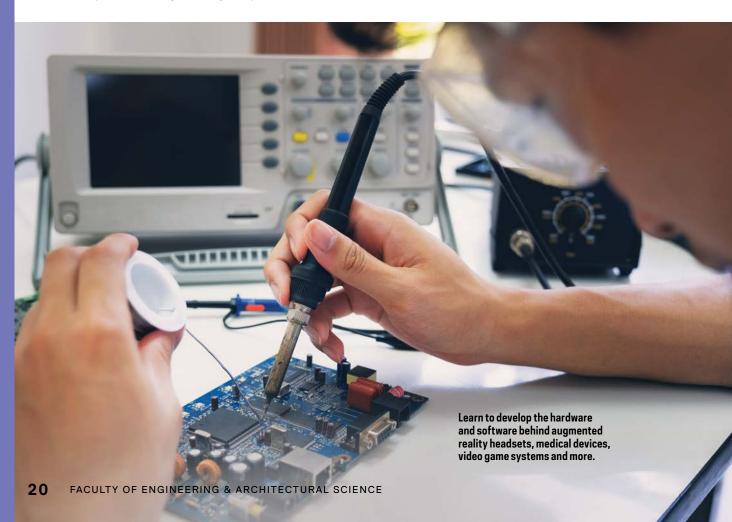
Sample courses: Engineering Algorithms and Data Structures - Operating Systems - Software Systems Option: Software Engineering

Your future

Careers: Cybersecurity Specialist
- Embedded Systems Engineer - Network
Engineer - Software Engineer

Employers: AMD - Apple - Electronic Arts - Google - IBM - Intel - Siemens Canada - TELUS

torontomu.ca/programs/ undergraduate/computerengineering





Electrical Engineering

Bachelor of Engineering (BEng)

Electrical engineers design, build and manage the systems that power our world — from smartphones to electric vehicles and smart cities. Here, you'll master the theory behind core subjects, such as energy systems and control theory, while getting hands-on with lab experiments. Your renowned professors will help you assess the impact of technology on society as you explore the latest innovations.

Whether you want to inform clean energy policy, design aircraft interfaces or manage telecom networks, you can help evolve our world for the better.

"My internship and research experiences have been invaluable in shaping me as an electrical engineer."

VANESSA HOANG
Class of 2024
2024 Gold Medal recipient

Your program

Full time: 4 years Full-time co-op: 5 years

Sample courses: Electric and Magnetic Fields
- Energy Conversion - Signals and Systems

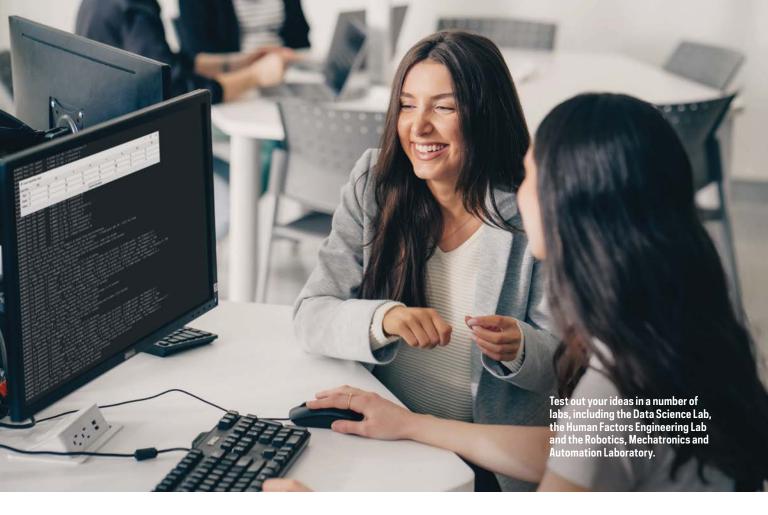
Your future

Careers: Analog Electronics Engineer

- Control Systems Engineer
- Power Systems/Electronics Engineer
- Telecommunications Engineer

Employers: AMD - Apple - Enbridge - GE - Google - Hydro One - Ontario Power Generation - Tesla

torontomu.ca/programs/undergraduate/electrical-engineering



Industrial Engineering

Bachelor of Engineering (BEng)

Enhance the world around you by learning how to optimize processes, maximize efficiency and transform the way industries operate. From healthcare management and transportation to business and finance, you'll study industrial engineering principles across a range of applications.

Through hands-on experience working on research projects and internships at leading companies, you'll graduate with the ability to develop cutting-edge solutions to optimize supply chains, implement innovative technologies, enhance patient care systems and more.

"At TMU, I grew personally and professionally — from making lasting friendships and networking to my internship."

AARON SEGAL Class of 2024

Your program

Full time: 4 years
Full-time co-op: 5 years

Sample courses: Facilities Design
Information Systems - Operations Research

Your future

Careers: Automation Engineer - Logistics Engineering Analyst - Product Designer - Workflow and Resource Optimization Specialist

Employers: Canada Post - Canadian Tire
- CIBC - FedEx - Michael Garron Hospital
- NASA - Toronto Pearson International
Airport - The Walt Disney Company

torontomu.ca/programs/ undergraduate/industrialengineering

Mechanical Engineering

Bachelor of Engineering (BEng)

Improve the quality of life for people and the planet by using engineering science and modern technology to create game-changing innovations. From robotics to renewable energy systems, this hands-on curriculum equips you to tackle local and global problems.

Whether you're designing robots for space exploration or using jet technology to deliver drugs through the skin, you'll learn from some of Canada's leading experts in their fields. Plus, you'll gain career-relevant skills through co-op placements and lab training.

"With mechanical engineering, you can work on computer-based projects or be hands-on in the field."

RUTH ARUNACHALAM

Class of 2021 Junior Mechanical Engineer, Mosaic Manufacturing

Your program

Full time: 4 years Full-time co-op: 5 years

Sample courses: Fluid Mechanics - Materials Science - Mechanics of Machines

Your future

Careers: Automotive Engineer - Design Engineer - Manufacturing Engineer Analyst - Product Development Engineer

Employers: Alphabet - Apple - Bombardier - General Motors - IBM - Ontario Power Generation - Pfizer - Siemens Canada

torontomu.ca/programs/ undergraduate/mechanicalengineering



Mechatronics Engineering

Bachelor of Engineering (BEng)

Ready to make science fiction a reality?
Working at the nexus of mechanics, electronics and computer engineering, you'll gain the skills and knowledge needed to design smart solutions that make our lives safer and more efficient.

In this innovative, lab-based curriculum, you'll explore topics like programming and electric circuit analysis, progressing toward modern control theory, microcontrollers and robotics. And, through experiential learning alongside renowned, multidisciplinary experts, you'll be equipped to bring intelligent and streamlined systems to the real world.

Your program

Full time: 4 years Full-time co-op: 5 years

Sample courses: Introduction to Robotics

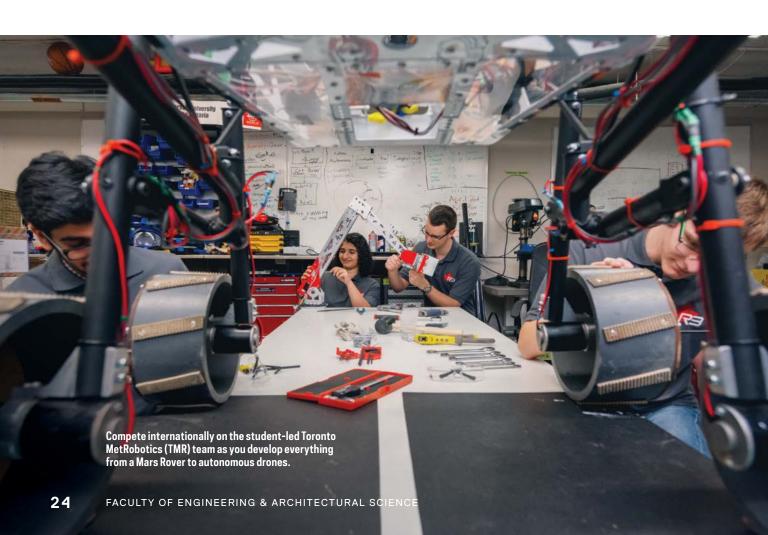
- Machine Mechanics and Design
- Microprocessor Systems

Your future

Careers: Automation Engineer - Product Development Engineer - Robotics Engineer - System Engineer

Employers: AtkinsRéalis - Clearpath Robotics - MKS Instruments - Microsoft - Rockwell Automation - Siemens Canada - Synaptive Medical - Voltera

torontomu.ca/programs/ undergraduate/mechatronicsengineering





Undeclared Engineering

(first-semester studies only)

Still deciding which type of engineer you want to be? No problem. Our Undeclared Engineering entry option is a great choice if you're unsure about which engineering discipline is right for you. There's no drawback whatsoever. All of our programs share a common first semester, so you won't be out of sync with your classmates and you won't have to reapply to engineering once you make your decision. The deadline for choosing your discipline is **December 1**.

Once you're enrolled, tap into these resources to help you choose your discipline.

Introduction to Engineering (CEN 100)

Learn about the various disciplines through this compulsory first-semester course. Think of it as trying each program on for size.

Academic advisors

Our academic advisors are professional engineers with years of experience, so they can give you industry and career insights to help you choose the right path for you.

Professors

Our faculty take mentorship seriously and are committed to supporting you in any way you need — including in choosing a discipline.

Upper-year students

Get to know students in second, third, fourth and fifth year and pick their brains. If you need an intro, our First-Year Engineering Office can set you up.

torontomu.ca/programs/undergraduate/undeclared-engineering







Architectural Science

Bachelor of Architectural Science (BArchSc) - Honours

Build a better future. Design impactful settings that help people and the planet thrive. Develop new paradigms for environmental sustainability. Champion social and environmental justice. Here, you'll discover how to leverage creativity to advance social and cultural well-being.

Through hands-on fabrication, theory and practice, you'll learn to shape high-performing built environments while experimenting with new technologies. You'll also have opportunities to design solutions for clients and build a network of industry connections, leaving you ready to launch your career.

This pre-professional program qualifies you for a professional Master of Architecture (MArch) degree and other graduate programs in the built environment.

Your program

Full time: 4 years
Full-time co-op: 5 years

Sample courses: Light/Sound in Architecture - Structures

Sustainable Practices

Concentrations: Architecture - Building Science

Project Management

Your future

Careers: Architect - Building Scientist - Construction Project Manager - Policy Advocate - Researcher

Employers: Architecture 49 - Bjarke Ingles Group (BIG) - Diamond Schmitt Architects - ENFORM

- Giannone Petricone Associates Gow Hastings
- Partisans Waterfront Toronto

torontomu.ca/programs/undergraduate/ architectural-science

FIRST-YEAR CURRICULUM

Your first year will help you to gain skills, broaden horizons and experiment with hands-on projects. Here's a breakdown of the courses you'll take.

First semester

- Communications Studio
- The Built World
- The Built Context
- Sustainable Practices

Second semester

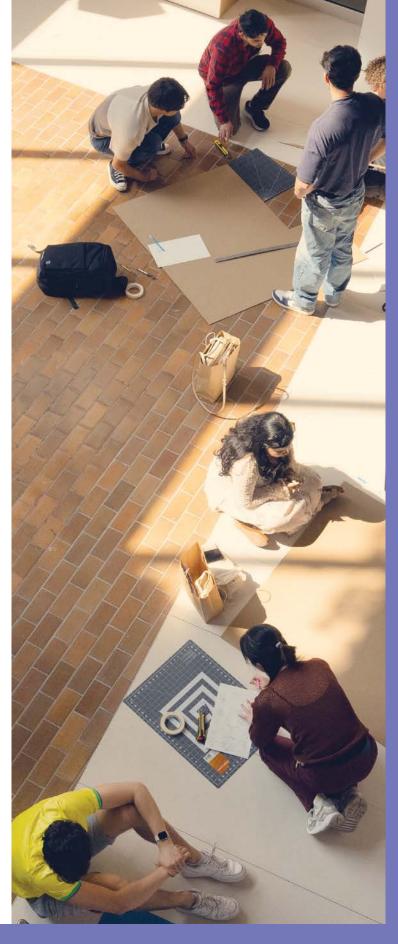
- Design Studio I
- The Building Project
- Structures I
- Collaborative Exercise I
- Ideas, Tech and Precedents I

Plus, you'll get to take one of the following Liberal Studies courses:

- Cultures in Crisis
- The Literature of Native Peoples
- Myth and Literature
- Zap, Pow, Bang: Pop Lit
- The Short Story
- Laughter and Tears: Comedy and Tragedy

"I've gained the technical and soft skills to excel in my profession and the agency to actively engage with and contribute to my community on various fronts."

SASKIA SCARCE Student



Admission requirements

In order to apply, you must have completed, or be currently completing, your Ontario Secondary School Diploma (OSSD) or equivalent with a competitive average in your top six Grade 12U/M courses. You must also meet the prerequisite course requirements outlined below.

For requirements from other countries or educational systems, please visit torontomu.ca/admissions/undergraduate/requirements.

ENGINEERING

Competitive average:

80% or higher

Prerequisite requirements:

70 – 75% in the following courses:

- · Grade 12U English
- Advanced Functions (MHF4U)
- Calculus and Vectors (MCV4U)
- Physics (SPH4U)
- Chemistry (SCH4U)

ARCHITECTURAL SCIENCE*

Competitive average:

80% or higher

Prerequisite requirements:

70% in the following courses:

- Grade 12U English
- Mathematics [one of Calculus and Vectors (MCV4U) or Advanced Functions (MHF4U)]
- Physics (SPH4U)

*In addition to meeting the academic criteria, you also must submit non-academic requirements. For more information, visit: torontomu.ca/programs/undergraduate/architectural-science



HOW TO APPLY

Step 1:

Apply online by **February 1** through the Ontario Universities' Application Centre (OUAC) at ouac.on.ca.

Step 2:

Watch for an acknowledgement email with your next steps and TMU Student Number.

Step 3:

Track your application status via your ChooseTMU Applicant Portal.

Step 4:

Wait to hear from us. We make all of our admission decisions by the end of May.

Step 5:

Accept your offer of admission through the OUAC.

ENGLISH-LANGUAGE REQUIREMENTS

You may be required to present proof of English language proficiency. For details on our English language policy, acceptable tests and required scores, visit torontomu.ca/admissions/undergraduate/requirements/english-language.

ARE YOU AN INTERNATIONAL STUDENT?

Let us help you through every step of your university journey. For international undergraduate admission information and support, visit torontomu.ca/international/admissions.

Scholarships and awards

Discover a range of scholarships and awards available to you. After applying to TMU, you'll get access to our AwardSpring platform to view and apply for scholarships that fit your profile. You can even apply before receiving your admission offer from TMU. We strongly encourage you to take advantage of these opportunities.

For details and deadlines, check out torontomu.ca/admissions/scholarships-awards.

TMU SCHOLARSHIPS

\$10M

Entrance scholarships available

President's Entrance Scholarship

\$10,000 per year

UP TO \$40,000 total

(plus a quaranteed residence room)

\$5,000 (for first-year studies)

International Secondary School Merit Scholarship

Full tuition (for first-year studies)

Terence Grier Entrance Scholarship

FEAS SCHOLARSHIPS

\$10,000

George and Helen Vari Foundation Entrance Scholarships

\$6,000

Pierre Lassonde Entrance Awards in Engineering

\$5,000

Audrey Bowes Memorial Award for Women in Civil Engineering

\$2,500

Ontario Association of Architects Awards

\$2,000

Charles A. Root Scholarship

UP TO \$1,500

Ontario Professional Engineers Foundation for Education Entrance Scholarships

GUARANTEED AND RENEWABLE SCHOLARSHIPS

Depending on your final admission average, you may automatically qualify to receive a guaranteed and renewable entrance scholarship.

\$3,000 PER YEAR UP TO \$12,000 TOTAL

95%+ final entry average

\$1,500 PER YEAR UP TO \$6,000 TOTAL

90-94.99% final entry average

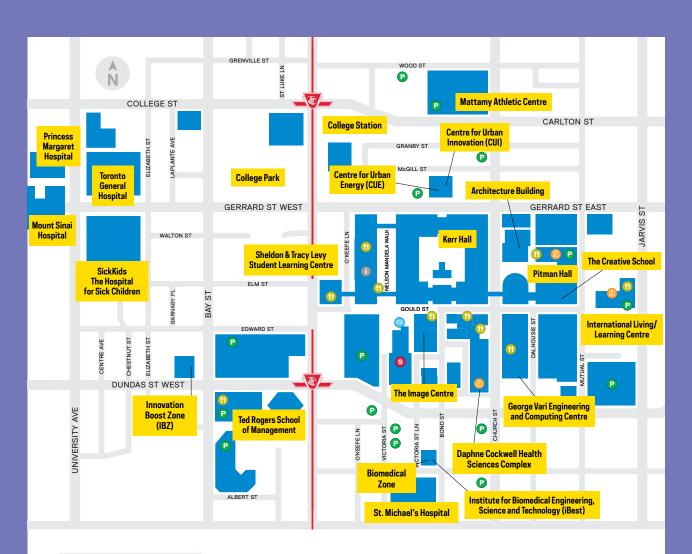
\$750 PER YEAR UP TO \$3,000 TOTAL

86-89.99% final entry average



Campus map

Get to know your metropolitan campus by exploring our 40+ buildings in the downtown core along with research labs and spaces across campus and the city. For an interactive experience, visit torontomu.ca/maps or take a virtual tour at torontomu.ca/virtualtour.



EXPLORE DOWNTOWN

Nearest TTC stop: 1 minute

CF Toronto Eaton Centre: 3 minutes

Financial District: 5 minutes

City Hall: 10 minutes

Art Gallery of Ontario: 15 minutes

Union Station: 20 minutes

St. Lawrence Market: 20 minutes
Entertainment District: 30 minutes
CN Tower/Rogers Centre: 30 minutes

Legend

- ServiceHub
- Security
- Residence building
- Lake Devo
- Parking



Ready to apply?

Scan the code below or visit torontomu.ca/admissions/undergraduate/apply for detailed instructions on how to apply to become a Faculty of Engineering and Architectural Science student at TMU.



Let's Connect

Engineering

Schedule a one-on-one virtual meeting at torontomu.ca/askeng Email us at askeng@torontomu.ca Call us at 416-542-5870

Architectural Science

Email us at arch.office@torontomu.ca Call us at 416-979-5000 ext. 556483

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@ChooseTMU



Faculty of Engineering & Architectural Science

Toronto is in the "Dish with One Spoon Territory."

The Dish with One Spoon is a treaty between the Anishinaabe, Mississaugas and Haudenosaunee that bound them to share the territory and protect the land. Subsequent Indigenous Nations and peoples, Europeans and all newcomers have been invited into this treaty in the spirit of peace, friendship and respect.