

# FACULTY OF SCIENCE

Program Guide 2027

**Toronto  
Metropolitan  
University**

Formerly  
Ryerson University



# Start your science journey

Turn your curiosity into positive change with the Faculty of Science at Toronto Metropolitan University (TMU). Here, science isn't just about textbooks — it's about diving deep into real-world challenges to discover novel, sustainable solutions.

From preserving clean water to developing smarter disease therapies to measuring financial risk, you'll be empowered to explore topics that interest you alongside expert faculty and innovative researchers.

With co-op opportunities and experiential learning woven into every aspect of your education, you'll be immersed in a collaborative scientific community of students and dedicated professors, setting you up to shape a brighter future for yourself — and for us all.

[torontomu.ca/science](https://torontomu.ca/science)

## 8

Undergraduate programs

## 10

Graduate programs

## 63

Minors to customize  
your degree

## 4,600+

Science students

### **Toronto Metropolitan University is in the "Dish with One Spoon" territory.**

Our university's campuses in Toronto and Brampton operate on the Treaty Lands of the Mississaugas of the Credit. This land has been part of the traditional territories of the Mississauga, Anishinaabe, Huron-Wendat and Haudenosaunee. They are now home to many First Nations Peoples, Inuit and Métis from across Turtle Island. We honour and uphold the Dish with One Spoon Treaty, we commit to valuing the Two Row Wampum, and we vow to treat the land and people of our community with understanding built on mutual respect.



## Find your way

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# Get experience with co-op

Build your resumé. Expand your professional network. Get paid work experience in the real world. With co-op available in all of our science programs, you can start applying your knowledge in a work setting before you graduate. In addition to developing expertise in your field, you'll also learn soft skills like communication, time management and problem solving while working with your choice of top employers, from Google to SickKids to RBC and many more.

A man with a beard and a woman with curly hair are sitting at a desk, working on a white robotic car. The man is pointing at a component on the car, and the woman is smiling and looking at it. The car has blue wheels and various electronic components on top.

**\$97K+**

Average potential co-op  
earnings over 16 months



# 93%

Employment rate of  
science co-op students

**“Co-op was one of the most valuable parts of my undergraduate journey. I grew so much both technically and professionally — and I’m graduating with a job offer in hand.”**

**MARIAM WRIGLESWORTH**

Mathematics and Its Applications, Class of 2026

# 12–20

Months of paid real-world  
work experience



# Discover research and innovation

From making your own discoveries to designing scientific innovations, you'll have everything you need to level up your learning. In the lab, you'll get a glimpse of graduate-level research with opportunities to work with professors and master's and PhD students on groundbreaking research projects.

Outside of the lab and into the Science Discovery Zone — our hub of science entrepreneurship — you can work directly with industry leaders and entrepreneurs to find innovative solutions to real-world problems, network with Canada's leading scientific minds and maybe even launch your own startup, all while earning course credit.



## 20K

Square feet of research facilities  
at the MaRS Discovery District

# 100%

Science programs  
with a thesis option



# 191

Ventures supported by the  
Science Discovery Zone



# 155+

Trainees within the Institute  
for Biomedical Engineering,  
Science and Technology (iBEST)



# Explore student life

On campus or abroad, you'll find countless ways to make new friends, gain diverse perspectives and enhance your overall experience. Through hundreds of student groups, you'll connect with people who share your interests, from gaming to robotics to pre-med to anime. You'll also have the chance to get involved in student-run course unions to voice your ideas, grow your leadership experience and even run for office. On top of all that, you'll have the option to take part in a life-changing opportunity to travel and study in another country on exchange.

# 11

Countries where you can live and study abroad through the Global Science Citizen Program

# 35+

Faculty of Science student groups

**"I really like the culture at TMU because there are so many things to do and people to meet. It's also really easy to get involved in science groups and other activities across the university."**

**BENSON ZHANG**

Mathematics and Its Applications, Class of 2026



## Ease into first year

Make a smooth transition from high school to university with the help of our First Year Science Office. Here, you'll receive academic, administrative and personal support tailored to your needs. Through our Peer Academic Leaders in Science (PALS) program, you can be paired with an upper-year student who will guide you through your first year and offer insider tips on everything from course work to study skills, campus life and the best spot for pizza. With professors and an entire community committed to seeing you succeed, you'll be equipped to thrive during university and well into your career.



# #1

University in Canada  
for student services

# SCI 180

First-term course designed to boost  
your learning strategies and study skills

**“Having a PALS mentor  
is like having a personal  
coach: you get support,  
space to ask questions  
and build confidence,  
and tips and tricks to ease  
the stress of first year.”**

**UMAYYAH SALEH**

Biomedical Sciences (Co-op), Class of 2026

# First year preview

Your first year of university will be full of new experiences. Here's a preview of what a typical week in your first semester might look like.

|            | Monday                 | Tuesday  | Wednesday | Thursday   | Friday          |
|------------|------------------------|----------|-----------|------------|-----------------|
| 9:00 a.m.  | Lab                    | Tutorial | Lecture   |            |                 |
| 10:00 a.m. |                        |          |           | Lecture    | Lecture         |
| 11:00 a.m. |                        | Lecture  | Lecture   |            |                 |
| 12:00 p.m. |                        |          |           | PALS event | Lecture         |
| 1:00 p.m.  | Student learning group |          | Tutorial  |            |                 |
| 2:00 p.m.  |                        | Lecture  | Gym       | Lecture    | Resumé workshop |
| 3:00 p.m.  | Robotics club          |          | Lecture   |            |                 |
| 4:00 p.m.  |                        |          |           | Lab        |                 |
| 5:00 p.m.  |                        |          |           |            |                 |

## Sample of required courses by program

### Biology, Chemistry and Medical Physics

- BLG 143: Biology I
- CHY 103: General Chemistry I
- CPS 118: Introductory Programming for Scientists
- MTH 131: Modern Mathematics I
- PCS 120: Physics I
- SCI 180: Orientation

### Biomedical Sciences

- BLG 143: Biology I
- CHY 103: General Chemistry I
- MTH 131: Modern Mathematics I
- PCS 120: Physics I
- SCI 180: Orientation

### Computer Science

- CPS 109: Computer Science I
- CPS 213: Computer Organization I
- MTH 110: Discrete Mathematics I
- PCS 110: Physics

### Cyber Science

- CYS 119: Foundations of Software Design and Development
- CYS 122: Evidence-based Security
- CYS 151: Introduction to Cybersecurity
- MTH 160: Mathematical Principles for Cyber Science
- SCI 200: Professionalism in Science

### Financial Mathematics

- ACC 110: Financial Accounting
- BLG 143: Biology I
- CPS 118: Introductory Programming for Scientists
- ECN 104: Introductory Microeconomics
- MTH 207: Calculus and Computational Methods I
- SCI 180: Orientation

### Mathematics and Its Applications

- BLG 143: Biology I
- CPS 109: Computer Science I
- MTH 110: Discrete Mathematics I
- MTH 207: Calculus and Computational Methods I
- SCI 180: Orientation

Pursue paid co-op, participate in industry-oriented research and complete an independent thesis project.



# Biology

## Bachelor of Science (BSc)

### ▪ Honours

Explore the nature of living things, from bacteria and cells to plants and animals. Here, you'll study ecology, microbiology, evolution, botany, genetics, cell biology and more. In your first year, you'll strengthen your math, research and science skills before applying them to real-world settings.

Whether you're peering through microscopes in one of our many on-campus labs or conducting field research in a range of areas, from human disease to climate change, a foundation in biology opens doors to a wide variety of future careers.

#### Your program

Full time: 4 year ▪ 5-year co-op

Common first year: Chemistry and Medical Physics

Specialization: Management Sciences

#### Your future

Careers: Bioinformatics Specialist ▪ Biotechnologist

▪ Botanist ▪ Environmental Scientist ▪ Geneticist ▪ Molecular Biologist ▪ Quality Control Technician ▪ Zoologist

Graduate pathways: Biology ▪ Dentistry ▪ Law ▪ Medicine\*

▪ Pharmacy

\*TMU School of Medicine opened in fall 2025.

[torontomu.ca/programs/undergraduate/biology](https://torontomu.ca/programs/undergraduate/biology)

**"The Biology program sparked my passion for discovery and built the critical thinking, problem-solving and research skills I use every day."**

**GOZEL ATAKGAYEVA**

Biology, Class of 2023

Molecular Science, PhD Student

# Biomedical Sciences

Bachelor of Science (BSc) • Honours

If you dream of a career in health care, this program is for you. Delve into the intricate workings of the human body, from cells to systems, as you uncover the mechanisms of disease and health.

Through practical labs and real-world experiences working with our biomedical industry partners, you'll develop a deep understanding of molecular and cell biology, genetics and genomics, as well as microbiology. You'll also have opportunities to engage in laboratory research, preparing you for a career in the biotechnology and pharmaceutical industries.

## \$45

Potential hourly co-op wage

### Your program

**Full time:** 4 year • 5-year co-op

**Concentration:** Biomedical Chemistry

**Specialization:** Management Sciences

### Your future

**Careers:** Biochemist • Biomedical Researcher • Biomedical Technologist • Biostatistician • Epidemiologist  
• Genetic Counsellor • Regulatory Affairs Specialist

**Graduate pathways:** Dentistry • Law • Medicine\*  
• Molecular Science • Pharmacy • Physiotherapy  
• Veterinary Medicine

\*TMU School of Medicine opened in fall 2025.

[torontomu.ca/programs/undergraduate/  
biomedical-sciences](https://torontomu.ca/programs/undergraduate/biomedical-sciences)

Make a meaningful contribution to health care through research opportunities with TMU's vast network of biomedical industry partners.

Gain access to fully equipped labs, take part in an optional independent laboratory research project and pursue paid co-op.



# Chemistry

## Bachelor of Science (BSc) • Honours

If you're curious about how atoms combine to make matter in all forms and how molecules can be transformed into new and useful products, disease-fighting drugs or green technology to help the planet, this is the program for you.

In this lab-based curriculum, you'll conduct experiments, test hypotheses, address real-world problems and improve the quality of life for all. Plus, you'll have access to opportunities for paid co-op experience, lab research and more.

# 200+

Hours spent in the laboratory  
in your first two years

### Your program

**Full time:** 4 year • 5-year co-op

**Common first year:** Biology and Medical Physics

**Specialization:** Management Sciences

**Option:** Applied Physics

**Accreditation:** Canadian Society for Chemistry

### Your future

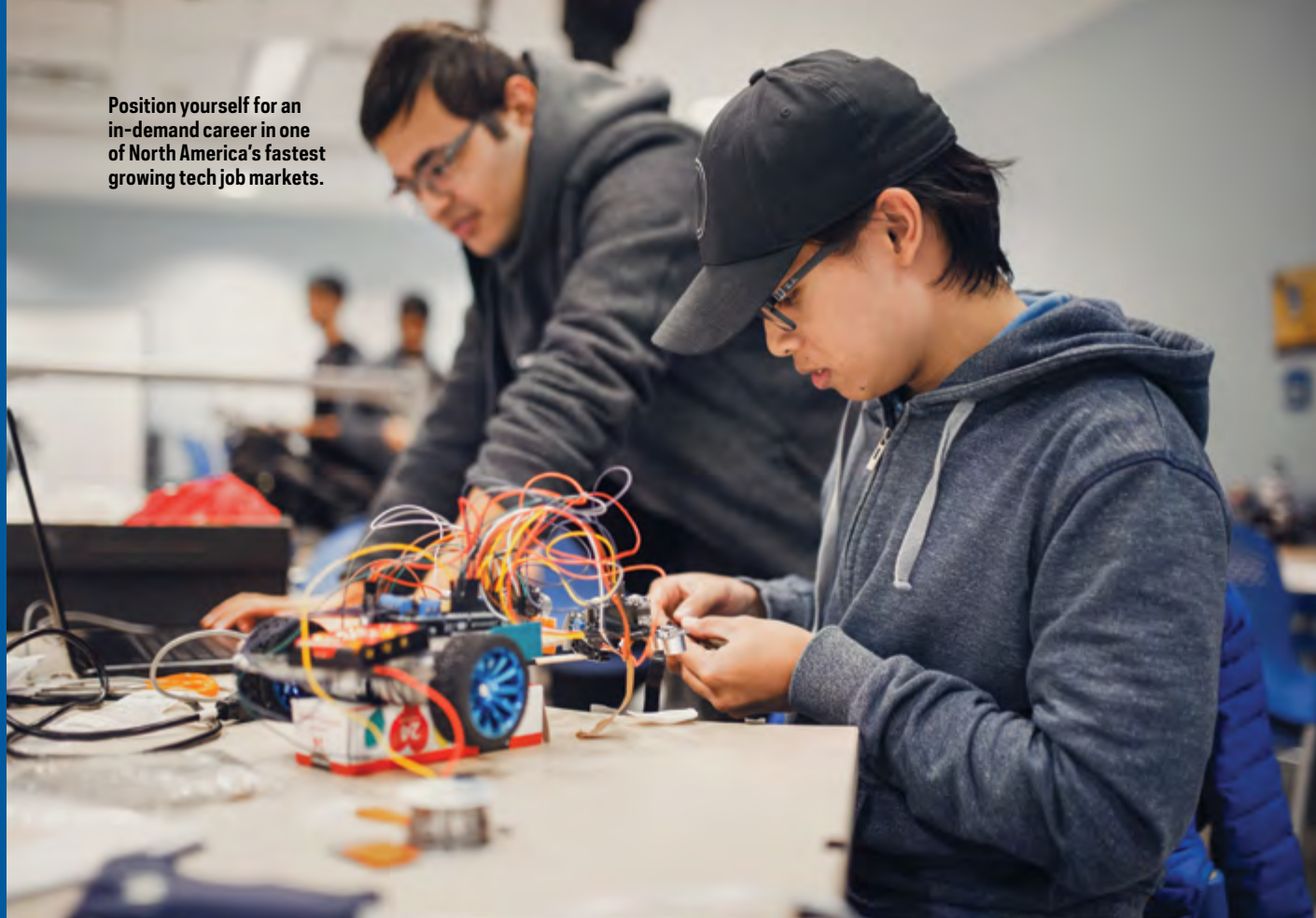
**Careers:** Biochemist • Clinical Trials Manager • Data Scientist • Electrochemist • Environmental Chemist • Food Chemist • Pharmacological Chemist • Product Development Scientist

**Graduate pathways:** Dentistry • Education • Law • Medicine\* • Pharmacy • Veterinary Medicine

\*TMU School of Medicine opened in fall 2025.

[torontomu.ca/programs/undergraduate/chemistry](https://torontomu.ca/programs/undergraduate/chemistry)

Position yourself for an in-demand career in one of North America's fastest growing tech job markets.



# Computer Science

Bachelor of Science (BSc) • Honours

Unlock the power of science and technology to transform the digital world. From coding to AI to cybersecurity and everything in between, this program equips you with the technical skills to turn theoretical knowledge into cutting-edge applications.

Through paid co-op, labs and research opportunities, you'll test and explore virtual reality, computer graphics and human-computer interaction, setting you up for a career working with some of the world's biggest tech companies, like Google, Wealthsimple and more.

## 93%

Students employed in the field within six months of graduation

### Your program

**Full time:** 4 year • 5-year co-op

**Part time:** First-year entry

**Specialization:** Management Sciences

**Concentration:** Software Engineering

### Your future

**Careers:** Cloud Systems Engineer • Cybersecurity Specialist • Data Scientist • Full-Stack Developer • Head of Platform Engineering • Network Architect • Software Developer • UX Engineer

**Graduate pathways:** Computer Science

• Data Science • Law

[torontomu.ca/programs/undergraduate/computer-science](https://torontomu.ca/programs/undergraduate/computer-science)

# Cyber Science

Bachelor of Science (BSc) • Honours

Navigate the complex landscape of cyber threats and solutions by learning to combine technology with business, law, ethics, policy and human behaviour.

In this program, you'll develop the knowledge and skills needed to write secure code, analyze system vulnerabilities, apply cryptography and design secure systems, as well as learn to bridge the gap between technology, society and business. Working with faculty experts, industry and community partners, and the Rogers Cybersecure Catalyst at TMU, you'll put theory to practice and even run mock cyber attacks — attacks against which you'll be well prepared to defend.

## 50+

Hours of immersive training in real-world cyber threat scenarios

### Your program

**Full time:** 4 year • 5-year co-op

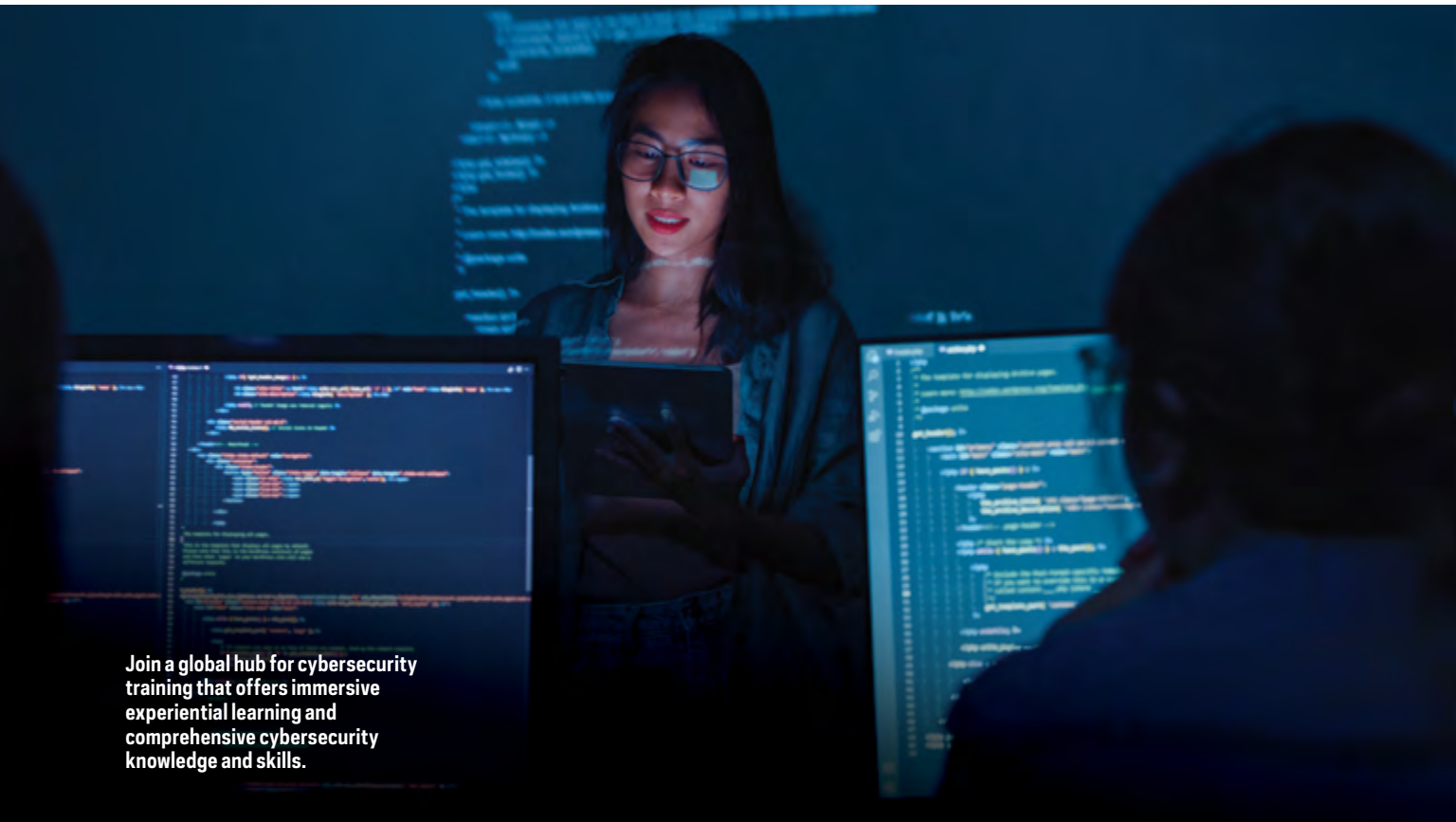
**Specialization:** Management Sciences

### Your future

**Careers:** Cybersecurity Analyst • Digital Forensics Specialist • Incident Response Specialist • Privacy Officer • Security Policy and Compliance Specialist

**Graduate pathways:** Computer Science • Cybersecurity • Law

[torontomu.ca/programs/undergraduate/cyber-science](https://torontomu.ca/programs/undergraduate/cyber-science)



Join a global hub for cybersecurity training that offers immersive experiential learning and comprehensive cybersecurity knowledge and skills.

# Financial Mathematics

Bachelor of Science (BSc) • Honours

Turn your love of numbers into a rewarding career in the fast-paced world of finance. This program will help you build the mathematical, economic and statistical skills needed to understand financial markets, manage investments, evaluate risk and support smart financial decisions.

With experiential learning opportunities and a strong foundation in financial instruments and quantitative analysis, you'll be ready to enter the competitive financial sector and make your impact.

**"Seeing the connections between pure math and its financial applications gave me a unique perspective on markets."**

**ALAN WRYA**

Financial Mathematics (Co-op), Student

## Your program

**Full time:** 4 year • 5-year co-op

**Specialization:** Management Sciences

## Your future

**Careers:** Auditor • Economist • Financial Planner

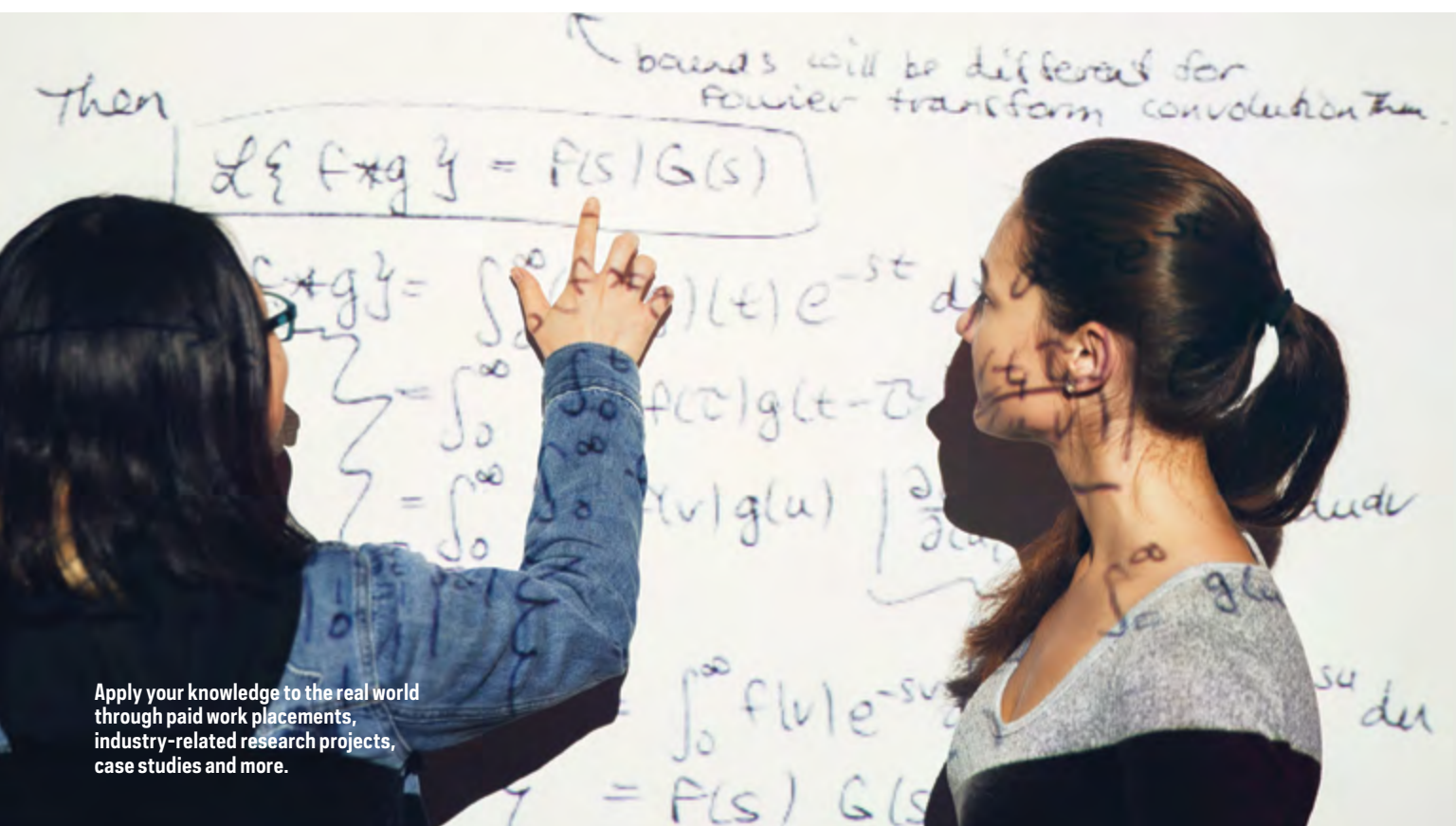
• Investment Banker • People Analytics Analyst

• Risk Manager • Statistician • Underwriting Analyst

**Graduate pathways:** Economics • Finance • Law

• Mathematics • MBA Management

[torontomu.ca/programs/undergraduate/  
financial-mathematics](https://torontomu.ca/programs/undergraduate/financial-mathematics)



Apply your knowledge to the real world through paid work placements, industry-related research projects, case studies and more.

Apply your problem-solving and quantitative skills through paid work placements and research opportunities with leading organizations.



# Mathematics and Its Applications

Bachelor of Science (BSc) • Honours

If you love solving problems using logic, principles and your own imagination, this dynamic program is for you. Here, you'll discover the versatility of mathematics as you apply it to complex problems from technology to disease to cryptography and beyond.

What you learn in the classroom, you'll apply in the field through paid work placements and research opportunities. Whether you study math on its own or combine it with another specialization, you'll become an in-demand professional with your choice of future careers.

# 100%

Students employed within two years of graduation

## Your program

**Full time:** 4 year • 5-year co-op

**Specialization:** Management Sciences

**Options:** Computer Science • Economics

## Your future

**Careers:** Actuary • Biostatistician • Cryptologist

• Data Scientist • Mathematical Modeller

• Quantitative Analyst • Research Analyst

• Video Game Designer

**Graduate pathways:** Economics • Law • Mathematics

• MBA Management

[torontomu.ca/programs/undergraduate/mathematics-applications](https://torontomu.ca/programs/undergraduate/mathematics-applications)



Complete a thesis project and pursue a paid co-op placement with one of our existing hospital partners.

# Medical Physics

Bachelor of Science (BSc) • Honours

Combine medicine and physics together and learn to apply both to the prevention, diagnosis and treatment of illnesses such as cancer. Through a combination of theoretical and practical learning, you'll explore concepts and methodologies in medical imaging, radiation therapy, radiation protection, health physics and more.

Take advantage of our vast connections with leading local hospitals as you prepare for a unique career in a range of roles, from transforming health care and medicine to propelling businesses beyond conventional limits.

## 1 of 5

Undergraduate Medical Physics programs in Canada

### Your program

**Full time:** 4 year • 5-year co-op

**Common first year:** Biology and Chemistry

**Specialization:** Management Sciences

### Your future

**Careers:** Clinical Medical Physicist • Complex Systems Physicist • Computational/Data Physicist  
• Entrepreneur • Lab Assistant • Medical Imaging Assistant  
• Radiation Therapist

**Graduate pathways:** Education • Law • MBA Management  
• Medicine\* • Medical Physics • Optometry • Pharmacy  
• Physics • Veterinary Medicine

\*TMU School of Medicine opened in fall 2025.

[torontomu.ca/programs/undergraduate/medical-physics](https://torontomu.ca/programs/undergraduate/medical-physics)

# Ontario admission requirements

Are you a student in Ontario? Check the admission requirements for your program(s) of choice. The information in this chart is current as of July 2026, so be sure to confirm up-to-date admissions details at [torontomu.ca/admissions/undergraduate](https://torontomu.ca/admissions/undergraduate).

## LEGEND

 Paid co-op available

 Part-time available

| PROGRAM AND CREDENTIAL                                                                                                                                                                               | GRADE RANGE | ACADEMIC REQUIREMENTS                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Biology (BSc) • Honours                                                                                             | 75–80%      | Grade 12U English; Grade 12U Advanced Functions; two of Grade 12U Physics, Grade 12U Chemistry or Grade 12U Biology (all required courses min. 70%)                                                                          |
| Biomedical Sciences (BSc) • Honours                                                                                 | 80–85%      |                                                                                                                                                                                                                              |
| Chemistry (BSc) • Honours                                                                                           | 70–75%      | Grade 12U English; Grade 12U Advanced Functions; two of Grade 12U Physics, Grade 12U Chemistry or Grade 12U Biology (all required courses min. 65%)                                                                          |
| Computer Science (BSc) • Honours   | 75–80%      | Grade 12U English; Grade 12U Advanced Functions; one of Grade 12U Calculus and Vectors or Mathematics of Data Management; one of Grade 12U Physics, Grade 12U Chemistry or Grade 12U Biology (all required courses min. 70%) |
| Cyber Science (BSc) • Honours                                                                                       | 75–80%      | Grade 12U English; Grade 12U Advanced Functions; one of Grade 12U Calculus and Vectors or Mathematics of Data Management (all required courses min. 70%)                                                                     |
| Financial Mathematics (BSc) • Honours                                                                               | 70–75%      | Grade 12U English; Grade 12U Advanced Functions; one of Grade 12U Calculus and Vectors or Mathematics of Data Management; one of Grade 12U Physics, Grade 12U Chemistry or Grade 12U Biology (all required courses min. 65%) |
| Mathematics and Its Applications (BSc) • Honours                                                                   | 70–75%      |                                                                                                                                                                                                                              |
| Medical Physics (BSc) • Honours                                                                                   | 70–75%      | Grade 12U English; Grade 12U Advanced Functions; two of Grade 12U Physics, Grade 12U Chemistry or Grade 12U Biology (all required courses min. 65%)                                                                          |

## HOW TO APPLY

**Step 1:** Apply online by February 1 through the Ontario Universities' Application Centre (OUAC) at [ouac.on.ca](https://ouac.on.ca).

**Step 2:** Watch for an acknowledgment 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:** Receive an Offer of Admission? Accept it through the OUAC.

## Attend Open House

Come visit our vibrant downtown Toronto campus and learn more about TMU.

**Saturday, November 7, 2026**

Discover TMU: Open House

**Saturday, March 20, 2027**

Choose TMU: Open House

## Let's connect



@TorontoMetSci



@TorontoMetScience



@ChooseTMU

## Ready to apply?

Scan the code below or visit  
[torontomu.ca/admissions/undergraduate](https://torontomu.ca/admissions/undergraduate)  
to start planning your future at TMU.

