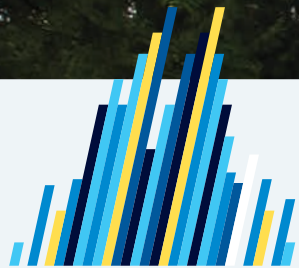


# Your Science Journey





# The Toronto Met Experience



## Bright Lights, Big City

TMU's location in the largest and most diverse city in Canada places a rich array of cultures, businesses, industries and employment opportunities within easy reach. This is a university campus that extends beyond classrooms, labs and buildings and into the heart of downtown Toronto. In this truly global city, you'll meet and work with people from all around the world and build friendships and networks for life.

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# Welcome to the Faculty of Science



At Toronto Metropolitan University (TMU), science is about discovery and results. Our authentic science approach builds bridges between disciplines to solve some of today's biggest challenges, from preserving clean water to developing smarter disease therapies to measuring financial risk. Each program offers an optional co-op stream, and with real-world learning throughout the curriculum, you'll be immersed in a community of students like you who interact daily with passionate, talented professors.

## Faculty of Science Lifer

Eno Hysi can't get enough of physics at TMU. He arrived as a first year student in Medical Physics, and stayed on for his Master's and PhD degrees.

"When I arrived, I was blown away by the research opportunities for undergrads," he says. "No matter what you want to do after your BSc - advanced science, medical school, employment - research experience opens a lot of doors. But maybe even more important, everyone here wants you to succeed. I feel like I've got a whole team on my side."

Eno was recently awarded a prestigious Banting Postdoctoral Fellowship from the Canadian Institutes of Health Research (CIHR). Now, he's working at St. Michael's hospital where he's conducting clinical trials for technology he developed at TMU using photoacoustic imaging to assess damage in donor kidneys.



One day, I hope to have my own research lab and train the next generation of students the same way I've been helped here."

### Eno Hysi

BSc, MEDICAL PHYSICS '10  
MSc, BIOMEDICAL PHYSICS '12  
PhD, BIOMEDICAL PHYSICS '20



# Student Experience



## First Year Office



To ensure you have a smooth transition from high school to university, we created an office that offers advice on academic, administrative and personal matters for most first-year science students. Whenever you have questions or concerns, drop by and visit this experienced team of professionals who are here to support you.

## Peer Academic Leaders in Science (PALS)

Founded in 2020, the Peer Academic Leaders in Science (PALS) program pairs upper year students with first-year students in their program. These upper year students can guide you through your first year and answer questions about anything related to student life. From academics, labs, study skills or even where to find the best pizza near campus, your peer mentor will be there to help you cross the bridge from high school into university life.



**“Entering university is a big transition – it’s easy to feel lost. First year sets the foundation and tone for your educational experience. Getting paired up with an upper-year student is fantastic. They show you all the resources available at TMU, help you create a “study-life balance” – and it makes first year so much fun!”**

**Jamie Rice**

**BIOMEDICAL SCIENCES STUDENT**



**“Being a peer mentor for new students is terrific. When I first came to TMU, I didn’t know anyone – wasn’t sure what to expect, and had so many questions. Now, as an upper-year mentor, I can share my experiences with new students and help them get started on the best footing. I wish I’d had a program like this years ago!”**

**Corradina Towie**

**BIOLOGY CO-OP STUDENT**

## First Year at-a-glance

	Monday Sep 19	Tuesday Sep 20	Wednesday Sep 21	Thursday Sep 22	Friday Sep 23
8:00AM					
9:00AM		PCS 120 Tutorial 8:00AM - 10:00AM	PCS 120 Lecture 8:00AM - 10:00AM		
10:00AM	BLG 143 Laboratory 9:00AM - 12:00PM		BLG 143 Lecture 10:00AM - 12:00PM	CPS 118 Lecture 10:00AM - 12:00PM	MTH 131 Lecture 10:00AM - 11:00AM
11:00AM		BLG 143 Lecture 11:00AM - 12:00PM			
12:00PM		PCS 120 Lecture 12:00PM - 1:00PM	MTH 131 Laboratory 12:00PM - 1:00PM		CPS 118 Lecture 12:00PM - 1:00PM
1:00PM					
2:00PM		CHY 103 Lecture 2:00PM - 4:00PM	CHY 103 Lecture 2:00PM - 3:00PM	MTH 131 Lecture 2:00PM - 4:00PM	
3:00PM					
4:00PM				CPS 118 Laboratory 4:00AM - 6:00PM	
5:00PM					
6:00PM					

**BLG 143:  
BIOLOGY I**

**PCS 120:  
PHYSICS I**

**CHY103:  
GENERAL  
CHEMISTRY I**

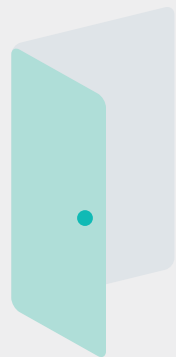
**MTH 131:  
MODERN  
MATHEMATICS I**

**CPS 118:  
INTRODUCTORY  
PROGRAMMING FOR  
SCIENTISTS**



## Learning Outside the Classroom

The Faculty of Science offers experiential learning opportunities that enrich your academic experience, prepare you for the world of work and expand your thinking. Whether they take place in the classroom, community, lab or workplace, these experiences will give you memories and skills to last a lifetime.



## Get Involved

Connect with students who share your interests and goals with over 25 science groups. Through these extracurricular activities, you can network, develop teams, host events, organize initiatives, deliver services and gain valuable leadership experience.

## Science Discovery Zone



Looking for the hands-on learning that comes with starting a venture or impact project? Want to work directly with industry leaders and entrepreneurs while solving a real world problem? The Science Discovery Zone (SDZ) is the space you need for support, credit courses, workshops and networking events.



### Eye on Innovation

Just one week before a TMU pitch competition, computer science student Vahid Safar, scrambled to enter his idea of an autonomous camera system that uses solar power and computer vision. The concept won him an early innovation prize and funds to develop the technology. He's now connecting with industry experts and developing prototypes for red-light traffic cameras, remote monitoring of farm crops and other industrial applications.

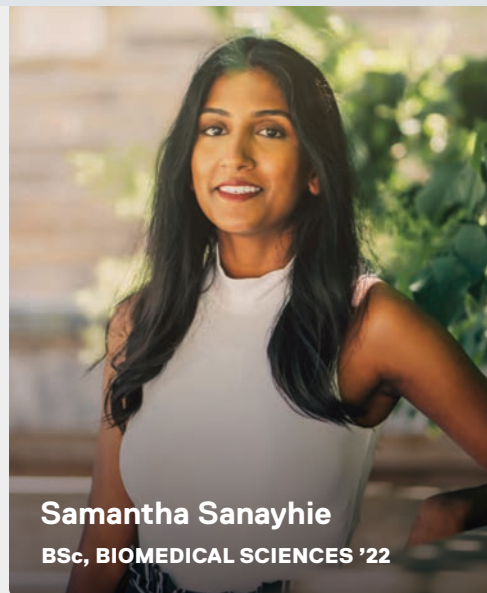
**Vahid Safar**  
BIOLOGY STUDENT



### Match-up, Start-up

Diving into Toronto Met's innovation culture, Camalee Cogle started not one but two separate business ventures. The first, Melahayz, finds high-quality, natural beauty products sold by small/medium sized businesses and gives them wider online reach. Her second venture, Bright-I, uses a secured matching system to connect students searching for a mentor in their community.

**Camalee Cogle**  
COMPUTER SCIENCE STUDENT



**Samantha Sanayhie**  
BSc, BIOMEDICAL SCIENCES '22

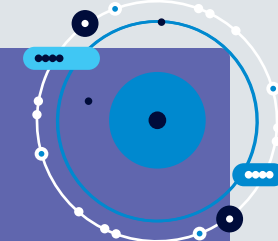
## Community Builder

For the full TMU experience, biomedical sciences undergraduate Samantha Sanayhie recommends unhesitatingly: "Don't hold back! Campus life and student involvement are crucial. My university experience would not have been so amazing without all of the student groups and events. It truly allowed me to step forward and grow into the person I am today."

Samantha has been a Science Orientation Leader and had roles in the Biomedical Sciences course union, Chemistry & Biology Council and STEM Fellowship at TMU.

"Active student life gives you so many ways to grow as a person and to participate in great events, whether social, academic or networking," says Samantha. "I know it can be intimidating, so just start small. Say hi to someone new. Attend a campus event. Soon, you'll feel you belong to this amazing community."

## Global Science Citizen



Keen to live, work or study abroad and experience a new culture? The Faculty of Science has exchange and research partnerships in different countries around the world: England, Netherlands, Singapore, China, Germany, France, and India. There is something for every science program. Go on exchange for a semester or full year and take some courses for academic credit, or engage in research learning at a prestigious university like University College London.

## Research Opportunities

At TMU, science is about "learning by doing" – and research is a key facet. Some students choose to complete a fourth-year undergraduate thesis course, which involves working one-on-one exclusively with a professor on a year-long research project.

There are even opportunities to help with academic research inside a professor's lab – right alongside master's or PhD students. Both paid and volunteer positions are available during summer or the regular academic year. You could gain first-hand experience working as a research assistant, and get an early taste of research at the graduate school level.



**Revin Toquero**  
BSc, MEDICAL PHYSICS '22

"My fourth-year thesis was an amazing learning experience! I worked with a medical physicist at Sunnybrook Hospital. We conducted simulation experiments for his new device, which measures in real time the radiation cancer patients absorb during treatment. My supervisor really inspired me, and I progressed so much under his guidance and extra attention."

# Co-op Program



Every one of our science programs has an optional co-op stream. Make real-world, work experience a formal part of your academic program and boost your resume before you graduate. Co-op extends the regular, full-time program by one year, but the benefits are huge. Build your professional network. Apply your knowledge in a live work environment. Practice soft skills such as communication, time management and problem solving. Plus, earn money while you work.



“Co-op has been, by far, the most valuable piece of my TMU experience. It’s the cherry on top! Through work terms in data science at TD Bank, I’ve expanded my career skills, boosted my confidence in the workplace, and applied course material that I never thought I’d need! Co-op definitely helps you appreciate your classes much more. I urge everyone to consider co-op. You graduate with almost two full years of industry experience, confidence in technical interviews, and a massive professional network for your job hunt after graduation.”

## Ben Cornish

BSc, FINANCIAL MATHEMATICS, CO-OP '21

“ServiceEcho has employed co-op students for years. When it’s a good fit, we’ve even hired them outright after graduation. We love the fresh thinking and enthusiasm TMU students bring. They get to build their professional network and apply what they’ve learned in class to the real world – and our company gets access to a diverse set of talented, hardworking individuals. I’m a Toronto Met co-op graduate too, and the program was an integral tool in my own professional development. Now, as a co-op employer, it’s incredibly rewarding to contribute to a stronger knowledge-based economy in Canada.”

## Jason Silva

MANAGING DIRECTOR, SERVICEECHO

CO-OP STATS



Co-op students in science earn, on average, the highest hourly wages compared to students in other co-op programs.

93%+

Over 93% of co-op students in science get a placement through existing partnerships at Toronto Met.



With 12-20 months of paid work experience, our graduates have an edge when starting their career.



During Abinethaa Paramasivam’s final undergraduate year, the COVID-19 pandemic was in full swing. Hiring had slowed significantly, but Abinethaa firmly believes that her co-op experience had given her a competitive edge. Even before graduation, she had a job offer from the Ontario government. She now enjoys rewarding work as a Program Analyst overseeing the Ontario Indigenous Midwifery Program to help Indigenous families gain access to culturally safe pregnancy and newborn services.

### HOW DID CO-OP HELP YOU LAND YOUR CURRENT ROLE?

“My resume showed employers that I already had direct working experience in the field. My placements had exposed me to different areas of the health system at local, provincial and even international levels. As a result, during my interview, I was able to highlight my co-op work experiences and discuss ideas on how to strengthen government programming and policies.”

### HOW DID CO-OP EXPOSE YOU TO NEW CAREER OPPORTUNITIES?

“During my placements, I got to try out many different roles in various sectors – including opportunities I had never dreamt of. I even got to work abroad with leading scientists conducting research at University College London in London, England. I learned firsthand what I wanted in a career and what I didn’t, and grew outside of my comfort zone.”

### WHAT LESSONS DID YOU LEARN FROM CO-OP?

“The importance of networking! Through my placements, I built a large professional network that I can now turn to in the future. I also learned to ask for opportunities to grow in your role, and that it’s ok to ask for help if you’re not sure about something. Also, have fun! Some of the opportunities you get in co-op will be a once in a lifetime chance, so enjoy it to the fullest!”

## Abinethaa Paramasivam

BSc, BIOMEDICAL SCIENCES, CO-OP '20

PROGRAM ANALYST,  
ONTARIO MINISTRY OF HEALTH



# Career Opportunities

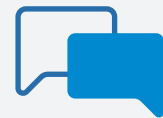


## From Learning to Earning

We offer industry-leading resources to help you land a job – before and after graduation. Tailored to your needs and aspirations, our programs, resources, staff and opportunities build the experience and confidence employers value and help you translate knowledge into action. Your career starts right here –and right now.

## Science-Tailored Career Advice

Faculty-based career specialists are connected to industry and will help you with every step of the process. Whether you're interested in a professional program, graduate school, or heading straight into the workforce, our career specialist can help you plan your path.



Get career support even after you graduate. TMU alumni can access Career Services up to five years after graduation.

## CAREER OPPORTUNITIES >

### Biology



#### INDUSTRY

Medical technologies, research and development, plant management

#### HEALTH

Biotechnology, clinical science, community health

#### GOVERNMENT

Agricultural science, environmental policy, research and development

#### BUSINESS

Healthcare administration, insurance, entrepreneurship

#### FURTHER EDUCATION

Graduate school, dentistry, law, pharmacy, veterinary medicine

### Biomedical Sciences



#### INDUSTRY

Biomedical science, medical technologies, pharmaceuticals

#### HEALTH

Biotechnology, clinical science, genetic counselling

#### GOVERNMENT

National defense, science policy, technology and innovation

#### BUSINESS

Healthcare administration, product analysis, project management

#### FURTHER EDUCATION

Graduate school, law, medicine, pharmacy

### Chemistry



#### INDUSTRY

Data science, medical technologies, environmental technology

#### HEALTH

Clinical pathology, community health, environmental public health

#### GOVERNMENT

Agricultural science, science policy, research and development

#### BUSINESS

Healthcare administration, product analysis, project management

#### FURTHER EDUCATION

Graduate school, law, medicine, pharmacy, veterinary medicine

### Medical Physics



#### INDUSTRY

Computational physics, industrial physics, research and development

#### HEALTH

Medical diagnostics, medical dosimetry, medical informatics, radiation therapy

#### GOVERNMENT

Environmental science, regulatory authorities, technological innovation

#### BUSINESS

Healthcare administration, product analysis, entrepreneurship

#### FURTHER EDUCATION

Graduate school, law, medicine, veterinary medicine, medical physics, physics

### Computer Science



#### INDUSTRY

Artificial intelligence, robotics, software programming, game design

#### HEALTH

Health informatics, medical robotics, healthcare IT

#### GOVERNMENT

Information systems security, information technology, national defense

#### BUSINESS

Data modelling, software architecture and development, web applications

#### FURTHER EDUCATION

Graduate school, law, computer science, data science

### Financial Mathematics



#### INDUSTRY

Actuarial science, computational mathematics, data science, risk analysis

#### CONSULTING

Financial accounting, financial planning, investment services

#### FINANCE

Accounting, advising, banking, financial analysis, market research

#### GOVERNMENT

Auditing, budget analysis, financial examining

#### BUSINESS

Business intelligence, information technology, insurance risk

#### FURTHER EDUCATION

Graduate school, law, economics, mathematics, MBA management

### Mathematics and Its Applications



#### INDUSTRY

Actuarial science, computational mathematics, data science, risk analysis

#### CONSULTING/FINANCE

Accounting, banking, financial planning, statistical analysis

#### HEALTH

Biostatistics, biostatistics, mathematical medicine, public health

#### GOVERNMENT

Auditing, budget analysis, business analysis, statistics

#### FURTHER EDUCATION

Graduate school, law, economics, mathematics, MBA





**Sundar Manku**  
CO-FOUNDER &  
CHIEF EXECUTIVE OFFICER,  
MEDAKI

**Zain Quraishi**  
CO-FOUNDER & CHIEF  
TECHNOLOGY OFFICER,  
MEDAKI

**Create Your Own Path**

A science degree can lead anywhere: employment, graduate school, entrepreneurship and more. Computer science alumni Sundar Manku and Zain Quraishi explored all three directions. They're now co-founders of MedaKi, a software development start-up providing cloud-based solutions for pharmacies. Their journey started with a science degree at TMU.



“My computer science degree set me apart from others in business who had ideas, but lacked the technical skills to actually develop them.”

**Sundar Manku**

“After graduating, Sundar and I collaborated on projects in completely different sectors/ industries, thanks to all the knowledge from our computer science degrees.”

**Zain Quraishi**

**2015**

During 2nd year undergraduate, Sundar begins ideating pharmacy tech tools.



**2018**

Sundar and Zain graduate with BSc. Sundar begins master's program at Queen's Smith School of Business.



**2019**

Zain starts job as a full stack developer. Sundar and Zain team up to found MedaKi.



**2020**

MedaKi joins start-up incubators in TMU's Zone innovation ecosystem.



**SEPT 2021**

MedaKi enters the market, begins generating revenue, wins \$45K in funding from grants and pitch competitions.



# Our Programs



Science at Toronto Met offers the best of both worlds – big ideas and solutions that matter. From learning how gene expression affects aging to creating wealth through financial models, we will help you innovate with impact.



## Investigate and Experience It All

Toronto Met is known for the research opportunities and experiential learning it provides students. If you love to form and test hypotheses, experiment in a lab, team up for competitions or take on work placements, you have all of those options here. We even have courses that teach you how to use the scientific method to develop a venture and build your career. After finishing your degree, you'll be ready to pursue higher education, enter a profession or launch your own business.



# Biology

## From Single Cell to Living Well

Explore and understand the nature of all living organisms, from bacteria and cells to plants and animals. There are so many ways to know and change the world with a foundation in biology! Opportunities for research in leading industries and for laboratory training will prepare you for a career in many fields. If you are also interested in other disciplines, you can combine them for a specialization in biophysics, bioinformatics and computational biology, environmental biology or management science.



“The Toronto Met community is the most loving, compassionate and giving academic family in the city, which I greatly appreciated as a first-generation university student unsure of what to expect. By forging their own path, TMU inspired me to look beyond challenges, seize opportunities and forge my own path as the Director, Partnerships and Collaborations now promoting STEM learning among marginalized communities.”

**Camilo Garay**  
BSc, BIOLOGY '12  
MSc, BIOLOGY '15



“

I’m a disease ecologist focused on researching animal parasites. I investigate the interaction of hosts, parasites and their environment, and the massive impact they can have. Biology is fundamentally about interconnectedness, and it’s fascinating to learn how this happens at every level. With the breadth and variety in our program, students really get an excellent sense of all the possibilities out there for their degree.”

**Dr. Janet Koprivnikar**  
PROFESSOR OF BIOLOGY

“I’ve always been passionate about conservation biology and the planet. The professors here love talking with students and are on the journey with you. Thanks to TMU’s culture of support, I’ve been able to attend conferences, research coral reefs in Mexico, and explore my career options.”

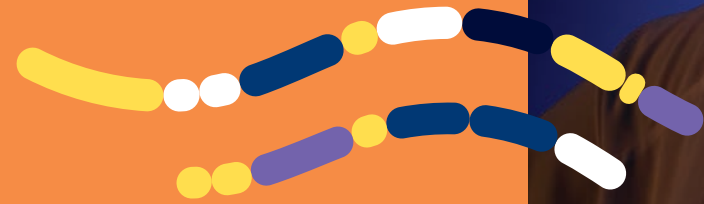


**Jacklyn Cunningham**  
BSc, BIOLOGY '20



# Biomedical Sciences

All's Well That Mends Well



Do you want to know how molecular and cellular mechanisms drive health, infection and the development of disease in living organisms? With a deep understanding of biomedical sciences, such as molecular and cell biology, genetics and genomics, and microbiology, you can engage in medical research and prepare yourself to succeed in the biotechnology and pharmaceutical industries. TMU's close relationship with the biomedical industry means that great co-op, volunteer and research options are available to elevate your learning and value to employers.



**Dr. Sarah Sabatinos**  
PROFESSOR OF BIOMEDICAL SCIENCES



"I research how environmental stresses like heat, starvation, and toxic chemicals affect cell health and lead to aging and disease. I also explore how climate change is impacting ecosystems and DNA stability in crops and wildlife. Science research is really cool because you're like a detective investigating how things work - and you just never know what you'll find! It's like an amazing puzzle."



I was most excited about studying courses like immunology, medical microbiology, and physiology in the program. I also chose TMU for its urban campus downtown. I'm so happy with my decision to pursue my passion for science here. My goal is to study translational medicine in graduate school and eventually become an ER physician."

**Gurleen Braich**  
BSc, BIOMEDICAL SCIENCES '21



"I chose TMU because I wanted technical skills on top of theoretical knowledge. I had many opportunities to grow personally and professionally through leadership, communication and teamwork skills. I'm surprised by where TMU has taken me. I began in the architecture program and am now finishing my graduate degree in molecular science. It's been an interesting and challenging journey."

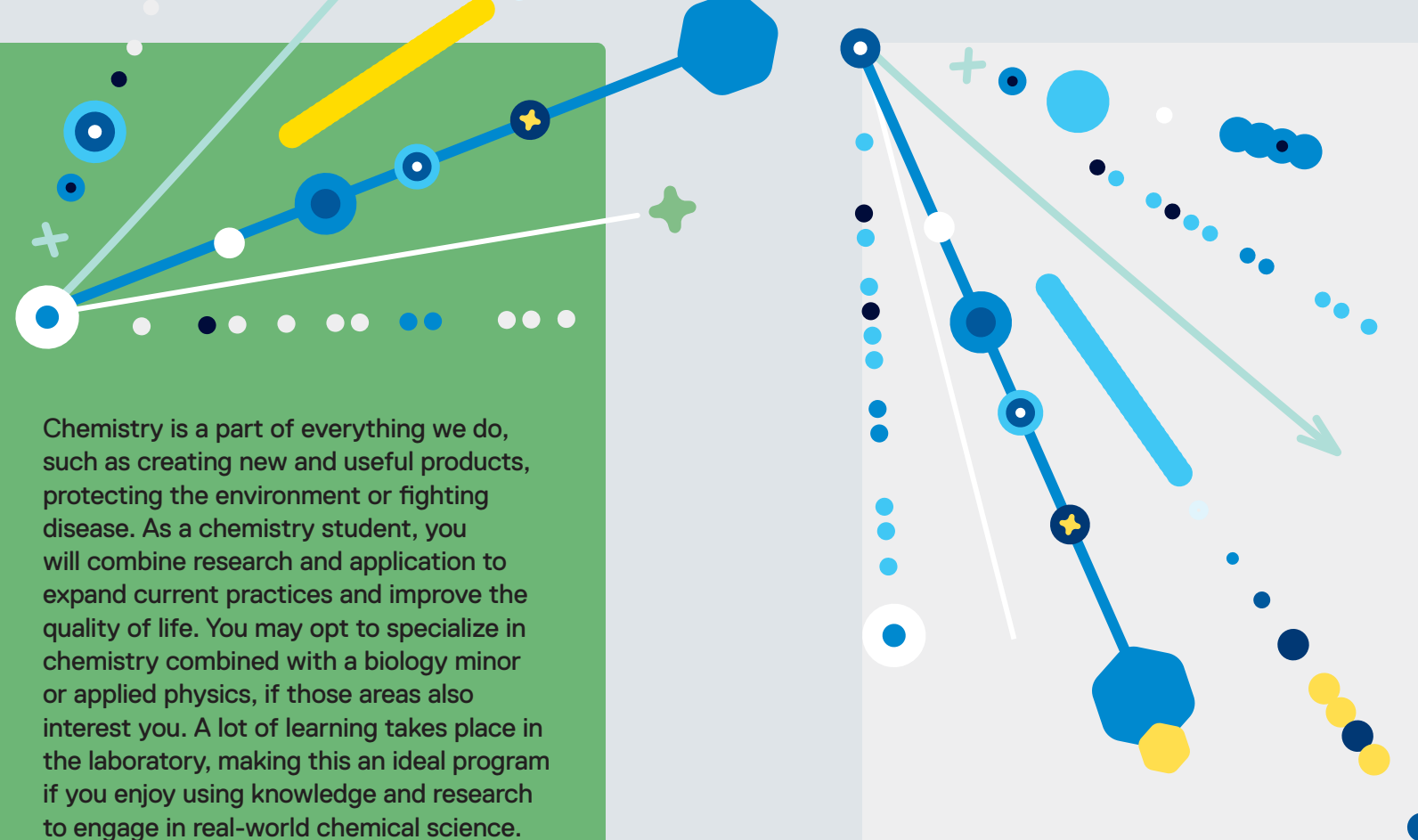
**Kyle Cheung**  
BSc, BIOMEDICAL SCIENCES '18



# Chemistry

## When Life Gives You Lemons, Investigate Their Properties and Form New Substances

Chemistry is a part of everything we do, such as creating new and useful products, protecting the environment or fighting disease. As a chemistry student, you will combine research and application to expand current practices and improve the quality of life. You may opt to specialize in chemistry combined with a biology minor or applied physics, if those areas also interest you. A lot of learning takes place in the laboratory, making this an ideal program if you enjoy using knowledge and research to engage in real-world chemical science.



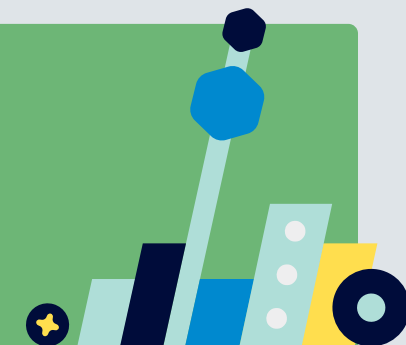
**Kelvin Urbina**  
BSc,  
CHEMISTRY '20

“What attracted me to TMU was the chance to embed work experience into my degree, through the co-op program. All of the professors are friendly and willing to help, and there are tons of resources to help you excel. I’m now studying a fully-funded PhD program at Rutgers University.”



“My research lab explores how light interacts with matter and how to convert its energy. We’re now developing solar cells that can be installed as transparent films on windows. Imagine the impact: skyscrapers converted into green energy power generation stations! TMU’s undergraduate chemistry program is really one of Canada’s most innovative. It offers all the rigour of a traditional program, but also gives students early exposure to the culture of chemical research, discovery and innovation.”

**Dr. Bryan Koivisto**  
PROFESSOR OF CHEMISTRY



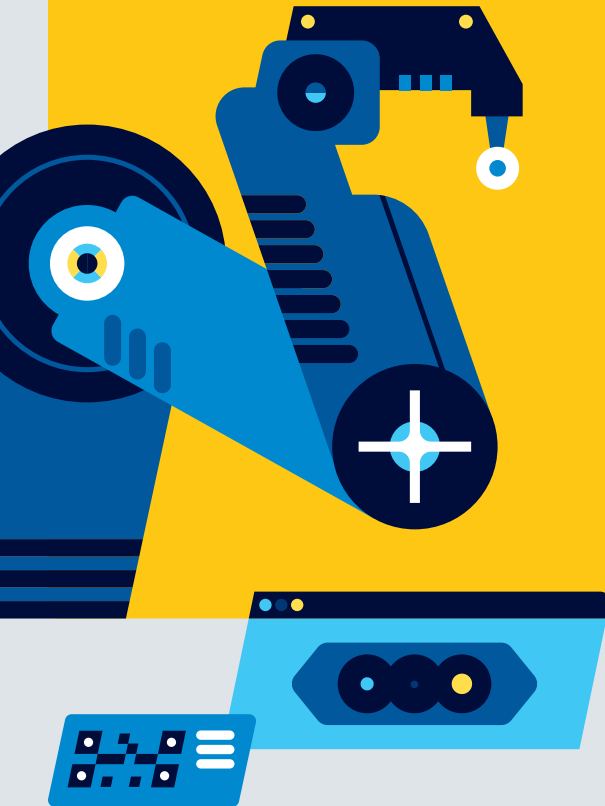
I was attracted to the downtown experience in Canada’s leading science and technology innovation hub. There are so many opportunities to experience research, networking events and more. Thanks to the program, I’ve gained hands-on skills in techniques not traditionally taught in undergrad, exposure to how real research labs work, and my interests have really expanded.”

**Kaitlyn Silverthorne**  
BSc, CHEMISTRY '21



# Computer Science

## Byte Club



If you want to influence the hyperconnected digital landscape, become fluent in programming languages, and learn about data structures, networks, operating systems, and cyber technologies, this is the program for you. You can study software engineering, computer vision, robotics, artificial intelligence and platform-based development. While you're at it, explore human-computer interaction, computer graphics, virtual reality, and computer security. Offering part-time study and first-year direct entry, you may opt to concentrate in software engineering or specialize in management science.



“Computer Science at TMU has ignited my passion for technology! There are so many opportunities to get involved and explore career paths. I joined the Women in Computer Science (WiCS) student group and found many like-minded friends. I’ve learned so much from my professors and peers. I can’t imagine attending any other university!”

**Nika Dariani**  
COMPUTER SCIENCE STUDENT



The combination of TMU’s co-op program, downtown campus and extracurricular organizations all guided me to where I am today. After interning in software engineering at Amazon, I was hired on full-time after graduation. Now, I’m about to join a technology-urbanism start-up in Montreal. Tech is so much more than staring at a computer writing code. It’s surprisingly interdisciplinary, with potential to create large-scale, impactful innovations.”

**Mitchell Mohorovich**  
BSc, COMPUTER SCIENCE '18



**Dr. Cherie Ding**  
PROFESSOR OF COMPUTER SCIENCE

“The computer science program at TMU really emphasizes how to actually apply abstract theoretical concepts. My own research specialty is in recommender systems. With so much data online, it can be hard to find the right information at the right time. Recommender systems learn what users like and then use that knowledge to recommend things that users may like next, which creates a more positive online experience.”



# Financial Mathematics

Good Things Come to Those Who Rate

If you're attracted to the fast-paced and competitive world of finance, this is the program that will teach you to drive our economy forward by leveraging cash flow and creating wealth. Gaining an advanced expertise in mathematics, you will analyze markets, manage investments and evaluate risk. In addition to in-class study, there are opportunities for work placement, research and practical investing experience. You will also work on real-world case studies on current issues within the financial industry.



“Financial math research at TMU is truly cutting edge! Right now, I’m exploring how to combat climate change by making it attractive for financial markets to support eco-friendly investment projects. We all have a serious social responsibility here, and mathematics has the power to make a huge contribution. TMU’s Financial Mathematics Research Group is also one of the largest in Canada. With campus just steps from the Toronto financial district, I love helping students connect with industry and giving them exposure to the latest applications in artificial intelligence (AI), machine learning and more!”

**Dr. Alexey Rubtsov**  
PROFESSOR OF MATHEMATICS



“Financial Mathematics was the perfect balance to capitalize on both technical and interpersonal skills. I was surprised at the variety of career paths I could pursue. After graduating from the co-op program in 2019, I was immediately hired at RBC Capital Markets where I’m now a Quantitative Analyst and Scrummaster in the Risk-Facing Core Quant team.”

**Sadia Billoo**  
BSc, FINANCIAL MATHEMATICS '19



“Financial Math at Toronto Met checked off all my boxes. Being so close to Toronto’s financial district helps with connections. The program has given me such a deeper understanding of math and finance, with room to also study a minor. There are also amazing opportunities such as conferences, internships and events.”

**Karolina Surowiec**  
BSc, FINANCIAL MATHEMATICS '21



# Mathematics and Its Applications

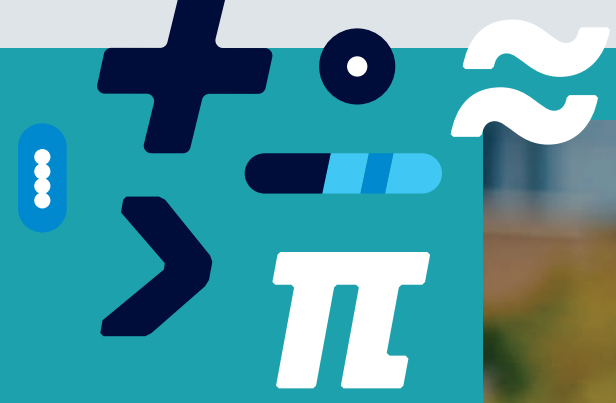
Easy as  $\pi$

In this program, you can study math on its own, combine it with computer science or economics, or specialize in management science. The flexibility and range of mathematics is exciting if you're a person who loves to solve problems using logic, principles and your own imagination. As a graduate from this program which offers work placement and research opportunities, you'll become a valued and in-demand professional who can innovate solutions for business, government or industry.

"After visiting campus, I knew I wanted to come to TMU, and I haven't regretted it at all. The upper-year classes are challenging, but so worth the effort! When I learned about mathematical biology, I wouldn't have thought I'd love it as much as I did. The applications could potentially help so many lives!"

**Pam Huntley**

BSc, MATHEMATICS AND ITS APPLICATIONS '21



I love using the language of mathematics to describe and solve real world problems. Toronto Met's math department has experts in many diverse application areas, and students have opportunities to work one-on-one with us on research. My specialty is in building mathematical models to gain insight into the progression of cancer and how it responds to treatment. The results can help improve patient survival. I think that's really cool!"

**Dr. Kathleen Wilkie**

PROFESSOR OF MATHEMATICS



I was attracted to TMU for its city experience but community feel. The school is large enough to provide everything students need, but small enough not to overwhelm. The mathematics program helped me develop critical thinking, problem solving and attention to detail – skills that I now use daily as a project manager."

**Gabriela Franco**

BSc, MATHEMATICS AND ITS APPLICATIONS '17



# Medical Physics

## You Ain't Screened Nothing Yet

Combine your interests in medicine and physics to explore the ways in which physics is applied in the diagnosis and treatment of illnesses. You will apply physics-based concepts and methodologies to procedures such as medical imaging, radiation therapy, radiation protection and dosimetry. If you're interested in helping businesses improve and achieve their goals, you may want to specialize in management science. Medical physics is a unique field that prepares you to make a difference in healthcare and medicine.



**“I chose physics at TMU because I love physics, and the program has applications that can positively impact people’s lives. Campus is in a great location and everyone is extremely friendly and helpful. This program has given me a strong foundation in the mathematics, physics, and coding needed to continue pursuing physics.”**

### Faheem Mosam

BSc, MEDICAL PHYSICS '21  
MSc, BIOMEDICAL PHYSICS STUDENT



**“TMU set the stage for my academic and career success. Years later, I’m still using the material I learned from the program. It’s applicable in many fields beyond medical physics. I’m now passionate about my career as a defence scientist in radiation and nuclear technology for Canada’s Department of National Defence.”**

### Helen Moise

MSc, BIOMEDICAL PHYSICS '10

**“In my research, I find practical ways to improve cancer treatment technology, particularly radiation therapy. I work with X-ray photons, very high energy light used to treat cancer. I’ve lately been trying to improve pancreatic cancer outcomes through combined use of nanoparticles and X-rays. I’m fascinated by the many applications of radiation such as medical imaging, detection for border security, power generation and communications.”**

### Dr. James Gräfe

PROFESSOR OF MEDICAL PHYSICS







### How To Apply



For detailed instructions and related links to apply to a TMU Faculty of Science program visit:

<https://www.torontomu.ca/admissions/undergraduate/apply>

### English-Language Requirements



If English is not your first language, or if you've lived in Canada for four years or less, you are required to present proof of English language proficiency at a satisfactory level. For more information please visit:

<https://www.torontomu.ca/international/admissions/how-to-apply/english-language>

### TMU Entrance Scholarships



For information on awards and scholarships available please visit:

<https://www.torontomu.ca/admissions/scholarships-awards>



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