

Biochemistry

MSc, PhD



Within a diverse and inclusive cluster of faculty and students, the Department of Biochemistry is a leader in its field. Dedicated to training the next generation of scientists and leaders, our students are supported by world-renowned faculty who make significant research contributions in key areas - from signal transduction and regulation, to molecular medicine, to gene expression and development, and everything in between.

Our students are engaged in research training that focuses on cutting-edge problems in areas such as proteomics and bioinformatics, biomolecular structure and function, and drug discovery. Our facilities are world class and continually updated to modern standards, including state-of-the-art instruments for nuclear magnetic resonance, mass spectrometry, light and electron microscopy, X-ray crystallography and high-speed computation. Our rotation system is a key feature of our training that allows newly admitted students to experience 3 different labs before deciding on a "best fit" thesis lab. This allows students to explore the breadth and depth of the research conducted and find the ideal learning environment to succeed.



Master of Science (MSc)

In addition to completing a thesis, students take 1.5 FCE*: BCH2020Y (Seminar Course in Biochemistry, 1.0 FCE), BCH2101H (Scientific Skills for Biochemists, 0.25 FCE) and one elective (0.25 FCE). Students successfully finish this program in 2 years.



Doctor of Philosophy (PhD)

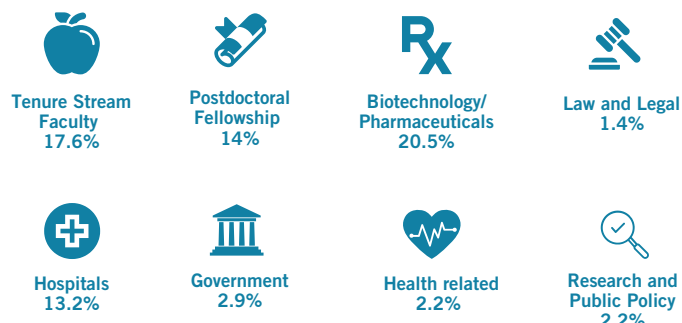
In addition to conducting independent and original research that will form their thesis, students complete 2.0 FCE: BCH2020Y (Seminar Course in Biochemistry, 1.0 FCE), BCH2101H (Scientific Skills for Biochemists, 0.25 FCE)**, and 0.75 FCE in electives. Typically, students successfully complete this program in 6 years.

* Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.

** In the event the student has completed this course, the student will need to take another course that should be approved by the Graduate Coordinator.

Potential career paths

In 2016, the School of Graduate Studies (SGS) tracked the career outcomes of 10,000 PhD students who graduated from the University of Toronto between 2000 to 2015. Below are some career trajectories of alumni from the PhD program in Biochemistry (n = 136).



Application Deadlines

Prospective MSc and PhD students can apply to either application cycle (i.e., Round 1 or 2).

ADMISSIONS

Winter 2024
Fall 2024

ROUND 1

October 1, 2023
January 15, 2024

ROUND 2

March 31, 2024

By the numbers



How to Apply:

biochemistry.utoronto.ca

Email: carrie.harber@utoronto.ca

Alumni profile

April Pawluk, PhD Graduated 2016



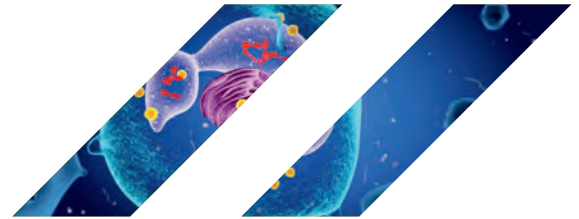
My name is April Pawluk and I completed my doctoral studies under the supervision of Professor Alan Davidson. I then continued my research into the mechanisms of CRISPR-Cas systems as a postdoctoral fellow at the University of California Berkeley.

I fulfilled my long-time dream of being a scientific journal editor with the publication Cell in 2017. Rising to the position of Senior Editor over 4 years, I handled hundreds of submitted manuscripts across the biological sciences, mediating the peer review process and making decisions about which papers to publish.

I used my perspective as a journal editor to help scientists write better grants and papers – first at Harvard's Microbiome Center and then at the Arc Institute, a non-profit organization, whose mission is to accelerate scientific progress, understand the root causes of disease, and narrow the gap between discoveries and impact on patients. In my spare time, I do freelance scientific editing with a group of former journal editors at Life Science Editors and I lead workshops on scientific writing and publishing.

Applied Immunology

MSc



The MSc Program in Applied Immunology is a two year, research-based, non-thesis degree program. Through course work and a major research project in a host laboratory, we train students to design, implement, and evaluate immunological research that measures immune responses and/or immune function. Instead of a thesis, students complete oral and written presentations throughout the program to summarize their findings and discoveries. Students can personalize their learning from a wide array of graduate courses to fulfill their electives, available within and outside of our department.

Students can also, if they choose, complete a four month internship or an international research opportunity. Students receive a guaranteed stipend (equivalent to tuition + incidental fees).



Students in this program
complete 7.0 FCE*

Year One

- IMM1450Y – Major Research Project I, 1.0 FCE
- IMM1550Y – Major Research Project II, 1.0 FCE
- IMM1436H – Techniques in Immunology, 0.5 FCE
- 1.0 FCE from the following courses: IMM1428H (Molecular Immunology, 0.5 FCE), IMM1429H (Developmental Immunology, 0.5 FCE), IMM1430H (Clinical Immunology, 0.5 FCE), IMM1431H (Immunotherapy, 0.5 FCE)

Year Two

- IMM1050H – Easton Seminar Series, 0.5 FCE
- IMM1075H – Special Topics in Immunology 0.5 FCE
- IMM1650Y – Major Research Project III, 1.0 FCE
- IMM1651H – Applied Research in Immunology, 0.5 FCE
- 1.0 FCE electives

**Successful students typically complete this program within 2 years. Students from U of T who completed a specific set of pre-requisites can enter the program with advanced standing and complete their degree requirements in 16 months.*



Potential career paths

Alumni from the program have very diverse careers, including but not limited to, consulting, medical editing, marketing, as well as research and development in biotechnology. Alumni have also successfully transitioned into further education such as PhD programs, medical school, and law school.

Application Deadlines

Fall 2024 Admissions

Deadline: January 15, 2024

Spring 2024 Admissions (Advanced Standing only)

Admissions Deadline: March 1, 2024

By the numbers

12

average
class size

25

current number
of students in
the program

85

active research
faculty



How to Apply:

immunology.utoronto.ca

Email: applied.immuology@utoronto.ca

Alumni profile

Christina Maria Ditlof, MSc Graduated 2020



I was co-supervised by Dr. Thomas Eiwegger and Dr. Julia Upton at the Hospital for Sick Children. I conducted research in the field of allergy and immunology, specifically investigating a potential treatment option for children with nut allergies. Since graduating, I have transitioned from academia into industry, primarily working as a Data Manager for clinical trials.

The Master of Science in Applied Immunology program includes theory and lab-based courses, a research component, and an internship opportunity. This allowed me to further develop scientific knowledge and enhance my technical and soft skills in both a lab and clinical research setting. I was also involved in several initiatives led by graduate students in the Department of Immunology. This helped me create a community within the department and allowed me to explore other passions in science such as science education and communication.

I would advise prospective students to take advantage of the internship portion, as this allows students to explore various career options and experience a role that they are interested in within industry.

Fundamental Immunology

PhD



The Doctor of Philosophy (PhD) Program in Fundamental Immunology is an advanced research-intensive degree to train future independent research scientists and scientific leaders. Through the completion of their coursework and research activities, students acquire substantial knowledge of modern immunological concepts and methods, hone their critical thinking and problem-solving skills, and develop strong oral and written communication skills. This breadth and depth in training prepares our graduates for a wide range of careers in academia or other professional sectors.

Areas of study include developmental immunology, cancer immunotherapy, microbiome-immune system interactions, immune responses to pathogens, autoimmunity, and comparative immunology. Our graduate students conduct cutting-edge research with one of our internationally recognized faculty and will become experts in their respective fields. Their findings typically lead to publication(s) in recognized refereed journals. A key feature of our training is our rotation system which allows newly admitted students to experience 3 different labs before deciding on a "best fit" thesis lab. This allows students to explore the range of research conducted and find the ideal learning environment to succeed.



In addition to conducting independent and original research for their thesis, students complete 4.5 FCE*:

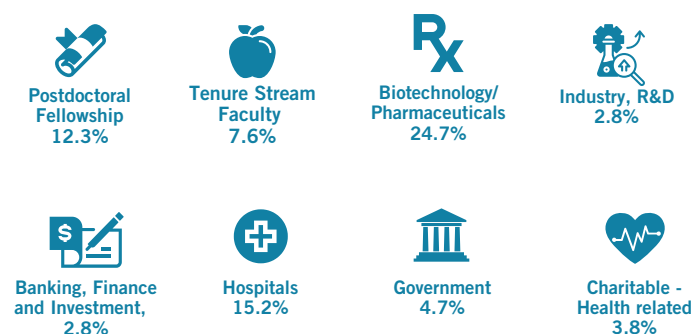
IMM1000Y (Recent Advances in Immunology, 1.0 FCE), IMM1200H (Scientific Skills for Immunologists, 0.5 FCE), IMM2000H (PhD Proposal in Immunology, 0.5 FCE), IMM2025H (Student Seminar Series, 0.5 FCE), IMM2050H (Easton Seminar Series, 0.5 FCE), IMM2075H (Special Topics in Immunology, 0.5 FCE), and 1.0 FCE elective. Typically, students successfully complete this program within 4-5 years.

* Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.



Potential career paths

In 2016, the School of Graduate Studies embarked on a project to track the career outcomes of 10,000 PhD students who graduated from 2000 to 2015. Below are some career trajectories of alumni from the PhD program in Fundamental Immunology (n = 105).



By the numbers



Application Deadline

Fall 2024 Admissions

Deadline: January 15, 2024

Alumni profile

Mahmoud El-Maklizi, PhD
Graduated 2022



I wanted to be an immunologist for as long as I can remember and my PhD journey started as a step towards that goal, but ended with much deeper lessons, both for the lab and outside the lab. It taught me flexibility, creativity, accuracy, risk taking and, most importantly, focus. As I moved on to the next stage in my career, those lessons allowed me to approach my career choices from a different perspective. I looked for opportunities to allow me to step outside of the comfort zone of my PhD expertise and push me to learn new skills, new topics and subjects while keeping those skills geared towards a clear goal.

That mindset is one of the best lessons I learned, as a graduate student and as I transition to a postdoctoral fellow. Based on that lesson, the advice I would give to prospective students is not to be afraid of stepping outside of your comfort zone; it's how the best lessons are learned and how the most impactful science is made.



How to Apply:

immunology.utoronto.ca

Email: graduate.immunology@utoronto.ca

Biomedical Communications

MScBMC



Clear and compelling illustrations, animations, and simulations are vital to discovery and communication in science, medicine, and health. As a cohort-based program, students in the professional Master of Science in Biomedical Communications (MScBMC) program engage in the creation and evaluation of a range of visual tools, including medical illustration, media and user experience design, animation, and virtual simulations. The MScBMC program is unique in Canada and one of five accredited Master's level medical visualization programs in the world. The program's state-of-the-art facilities are principally based on the University of Toronto Mississauga campus.



Students in this program complete 8.5 FCE*.

Year One

- MSC1001Y, Human Anatomy, 1.0 FCE
- MSC2001Y, Visual Representation of Medical Knowledge, 1.0 FCE
- MSC2003Y, BMC Technology, 1.0 FCE
- MSC2004H, Research Methods, 0.5 FCE
- MSC2009H, Ethics and Professionalism in BMC, 0.5 FCE
- MSC2020H, Visual Representation of Biomolecular Structure & Function, 0.5 FCE
- MSC2023H, Information Visualization, 0.5 FCE

Year Two

- MSC2002H, Sequential Medical Communication, 0.5 FCE
- MSC2012H, Neuroanatomy, 0.5 FCE
- MSC2018H, Pathology, 0.5 FCE
- MSC2025Y, Master's Research Project for BMC

In addition to the courses above, students are required to take 4 electives toward completion of a capstone project:

- MSC2015H, Cinematic Design and Preproduction, 0.5 FCE
- MSC2017H, Visualization Technology, 0.5 FCE
- MSC2006H, Advanced Media Design Technologies, 0.5 FCE
- MSC2008H, Community-Centred Design, 0.5 FCE
- MSC2011H, Special Topics in Biomedical Communications, 0.5
- MSC2022H, Graphic Medicine Seminar, 0.5 FCE,
- MSC2013Y, Masters Research Evaluation Paper, 1.0 FCE,
- Any other appropriate graduate course(s)

Successful students typically complete this program within 2 years.

1 Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week



Potential career paths

MScBMC graduates take on diverse leadership roles in industry, including:

- [Animators](#) in the pharmaceutical and biotechnology industries
- [Lead illustrators](#) in textbook and journal prepress companies
- [User experience designers](#) in mobile health application development
- [Communications specialists](#) for non-profit health organizations
- [Developers](#) in the educational gaming industry
- [Creative directors](#) in medical advertising
- [Creators of medical demonstrative evidence](#) for the courtroom
- [Hospital-based designers](#) of educational health communication materials
- [Researchers and educators](#) in higher education

Application Deadline

Fall 2024 Admissions

Deadline: December 18, 2023



How to Apply:

bmc.med.utoronto.ca

Email: bmc.info@utoronto.ca

Alumni profile

Shehryar Saharan, MScBMC Graduated 2022

My name is Shehryar (Shay) Saharan and I am proud to be a recent graduate of the Master of Science in Biomedical Communication (MScBMC) program at the University of Toronto.



Throughout my graduate studies, I had the opportunity to refine my skills in visual media, design, and storytelling, which led me to establish an award-winning scientific visualization and design studio, [ss design studio Inc.](#) Since graduating, I have had the privilege of collaborating with renowned organizations such as Digizyme, Boston Scientific, and Switch Health to communicate complex science in a compelling and accessible manner. In addition to my entrepreneurial ventures, I hold a contractually limited term appointment as assistant professor in the MScBMC program, and I have embarked on a PhD journey to further research in scientific visualization as applied to engineering education.

For prospective students who possess a keen interest in the convergence of science, design, and visual art, I wholeheartedly endorse the MScBMC program. Although it demands a high level of dedication, commitment and initiative, the rewards are immeasurable. The program boasts an exceptional faculty who not only serve as remarkable mentors, but who also guide students to delve deep into their skills, fostering exploration and mastery. Through this program, aspiring biomedical communication specialists are equipped with the necessary tools to excel in their future roles, all while cultivating a sense of passion and purpose for their craft.

Medical Science

MSc, PhD



The Institute of Medical Science (IMS) offers stimulating, research-intensive MSc and PhD programs in one of four areas of research: basic sciences, clinical sciences, health systems and services, and population health research. Each stream offers a variety of multidisciplinary studies in fields such as cardiovascular sciences, neuroscience, bioethics, stem cell biology, respiratory medicine, transplantation and psychiatric and brain health. This breadth is also reflected in our elective courses - from neuroanatomy to regenerative medicine and cardiovascular science.

Our programs are full-time and offer an immersive graduate training experience. We specialize in multidisciplinary translational research with bench-to-bedside clinical applications. Under the mentorship of one of our world-renowned faculty, IMS students receive specialized graduate training and exposure to Toronto's finest cutting-edge biomedical research. Students can also participate in numerous Graduate Collaborative Specializations that provide more opportunities to develop multidisciplinary research skills and collaborations.



Master of Science (MSc)

In addition to completing a thesis, students take 2.0 FCE*: MSC1010H (MSc Student Seminars in Translational Research, 0.5 FCE), two 0.25 FCE courses and 1.0 FCE elective. Students successfully finish this program in 2 years.



Doctor of Philosophy (PhD)

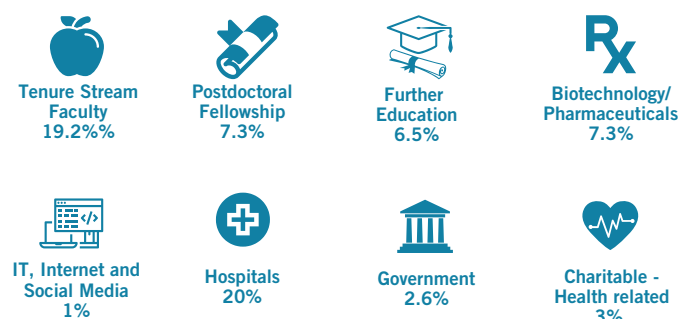
In addition to conducting independent and original research that will form their thesis, students complete 2.0 FCE: MSC1011H (PhD Seminar Series in Translational Research, 0.5 FCE), two 0.25 FCE courses, and 1.0 FCE elective. Students typically complete this program within 5 years.

* Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1 - 2 times per week.



Potential career paths

In 2016, the School of Graduate Studies (SGS) tracked the career outcomes of 10,000 PhD students who graduated from the University of Toronto between 2000 to 2015. Below are some career trajectories of alumni from the PhD program in Medical Science (n = 489).



By the numbers



Application Deadlines

The deadlines below apply to both the MSc and PhD programs.

ADMISSIONS	ROUND 1	ROUND 2
Winter 2024	October 15, 2023	
Fall 2024	February 1, 2024	June 15, 2024

Alumni profile

Alaa Youssef, PhD Graduated 2021



During my graduate training I developed many transferrable skills such as understanding research problems and identifying research methodologies, gathering evidence, problem-solving, collaborating with teams, and most importantly, communicating and learning from others. I apply these skills, today, studying organizational readiness to implement and use artificial intelligence (AI) in healthcare to promote diagnostic excellence in patient care.

My training in mixed-method research well-positioned me to investigate how organizational processes and policies influence technology adoption and integration in clinical workflow. Moreover, the plethora of extra-curricular opportunities during my graduate training allowed me to develop my leadership and communication skills, enabling me to build collaborations and lead educational initiatives in my current position.

My advice to all prospective students is to enjoy your graduate training in all its highs and lows. Get to know your lab, mentors and research team very well. Most importantly, try to engage and meet other people, push yourself out of your comfort zone by building connections and seeking advice when needed; you will be surprised by how inspiring and illuminating people's research and career journeys can be.



How to Apply:

ims.utoronto.ca

Email: adm.medscience@utoronto.ca

Laboratory Medicine

MHSc



The Department of Laboratory Medicine and Pathobiology (LMP) in collaboration with the Department of Obstetrics and Gynecology (OB/GYN), offers a two-year, full-time professional master's graduate program to educate clinical laboratory scientists in one of two fields in Laboratory Medicine: Pathologists' Assistant (PA) or Clinical Embryology (CE).

This unique program requires students to take 9.5 FCE*. The goal of the curriculum is to train students in the practical aspects of laboratory work in these fields, and teach critical thinking and research skills that will position you to advance in these fields of laboratory medicine. You will apply your knowledge to finding solutions to complex problems, resolving serious ethical issues, and developing a strong sense of personal accountability, intellectual rigour, and become a lifelong learner.



Year one

You focus on core academic competencies required to succeed in the field. All PA and CE students take some courses together, including topics such as Cell and Molecular Biology and Biomedical Research Methods, then courses specific to your field.

Year two

You complete a mix of academic and practical components and work on your Capstone research project throughout the year. PAs rotate in laboratories in our partner hospital sites, and CEs train in our dedicated simulation lab: the Clinical Embryology Skills Development Laboratory (CESDL), then in ART lab rotations.

You will learn from and be mentored by world-class faculty and interact with a broad range of professionals working in clinical laboratories. Depending on the field you choose, you will have access to multiple training sites across our partner hospitals such as Mount Sinai Hospital and the Ontario Forensic Pathology Services (OFPS).

** Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.*



Potential career paths

What is a Clinical Embryologist?

You are an essential member of an IVF team. You typically work in a hospital or fertility clinic, responsible for all the laboratory components contributing to the generation and continuing development of healthy embryos that lead to pregnancy.

Number of incoming students: 10

Graduates who found employment: 100%

What is a Pathologists' Assistant?

You are a highly trained healthcare professional who provides various services in surgical and autopsy pathology under the direction and supervision of a certified pathologist. You will often work in a hospital, Forensic Services office, or other laboratory in a private or university setting.

Number of incoming students: 10

Graduates who found employment: 100%

Application Deadline

Please note that we are only accepting applications from domestic students at this time.

Fall 2024 Entry

Deadline: March 4, 2024



How to Apply:
[Imp.utoronto.ca](https://imp.utoronto.ca)
Email: Imp.grad@utoronto.ca

Alumni profiles

Christiana Legaspi, Pathologists' Assistant, Graduated 2022

The program gave me a deeper understanding of the foundations of diseases and how to apply this knowledge in a laboratory setting. Each case during practicum provided an opportunity to think about the biological underpinnings of a disease, and exercise the technical skills of a PA. After the program, I was able to confidently handle, process and cut a specimen

with an appreciation of the pathology at hand. Being able to acquire the technical skills of a PA is fundamental. Every PA has their own style of executing this and with the practicum, I was able to practice these skills frequently enough to acquire my own technique.



Jenna Baffa, Embryologist at Mount Sinai Fertility, Graduated 2022

I am part of a team that handles sperm and oocytes, from the time of collection to fertilization and transfer. The skills I learned throughout my time in the program play an integral role in my current position. The

theoretical knowledge gained through coursework, laid the foundation for understanding what is done in the lab and why. The technical experience I was able to gain during my time in the simulation lab and placement, gave me a unique opportunity to learn the processes and procedures carried out in an embryology lab, before starting a career. I felt prepared to enter this job because the program had trained my brain and my hands, and these are the skills I use each and every day.



Translational Research in Health Sciences

MHSc



This is your opportunity to impact healthcare and improve the lives of people and communities. With the Translational Research Program (TRP), build on your own experiences and on expertise across disciplines to develop health innovations. You'll collaborate with learners from varied backgrounds who are passionate about improving health. You'll learn from peers and mentors in industry and healthcare through feedback and support rather than lectures and exams.

Designed to be flexible, an Individual Development Plan will help you identify opportunities to build the skills that facilitate your personal and professional goals throughout the 8.0 FCE*, two-year graduate program.

**If you want to be challenged,
If you want to think differently,
If you want to have impact,
Join us.**



Year One

Focus on foundational and modular courses that cover real-world issues through case studies and projects.

Year Two

Focus on your Capstone Project which is the culmination of your degree. You'll identify, propose, and execute a translational research project with substantial benefits for human health, while completing electives that complement your research focus and professional goals.

The customizable coursework options and classes are rallying points for discussions and peer learning, while hands-on projects and co-curricular activities allow you to tackle real-world challenges while building your networks and skills.

*Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.

Potential career paths

Our alumni have influential careers as clinician-scientists, government analysts, entrepreneurs, industry leaders and consultants. They are making positive differences in the lives of patients and communities.



By the numbers

30

average number
of year-1
students

Application Deadlines

ADMISSIONS
Fall 2024

INTERNATIONAL
May 10, 2024

DOMESTIC
June 7, 2024



How to Apply:
trp.utoronto.ca
Email: trp@utoronto.ca

Alumni profile

Sally Moy, MHSc
Graduated 2022



My name is Sally Moy. One of the reasons I applied to the Translational Research in Health Sciences program was because of its focus as a competency-based program. It's not necessarily about what you learn, but the skills that you develop.

For example, I learned how to navigate ambiguity (having confidence to lead despite uncertainty and risk), communications (knowing how to speak to different audiences) and structured problem solving (breaking down a complex problem and working towards a solution). I use all of these skills in my current role as a Senior Strategy Analyst at Ontario Health to improve healthcare access, quality and equity.

This program recognizes the value of bringing together different perspectives. From clinicians to entrepreneurs, students learn a lot from their classmates' unique experiences. I've learned to base my ideas on not just what I read in the literature, but also on real experiences from real people.

The skills I gained throughout the program have allowed me to pursue many different avenues and areas of interest. This program helped to broaden my thinking on how big the healthcare field really is. The program gives graduates a unique opportunity to explore what they love doing, learn about various roles in healthcare and truly make a positive impact in our world.

Laboratory Medicine and Pathobiology

MSc, PhD



At Laboratory Medicine and Pathobiology (LMP), you choose your research path - whether it's basic, translational, or clinical. As one of the largest and most diverse departments of its kind, LMP offers you unprecedented opportunities to pursue your MSc or PhD degree. We occupy a special place at the interface between basic biomedical science and clinical practice, with research and clinical scientists located on campus and throughout our affiliated hospitals and research institutes.

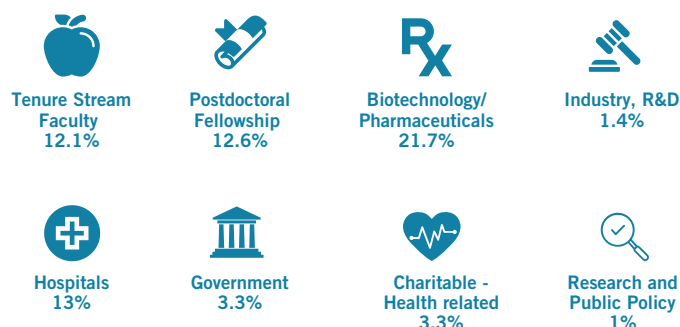
Join our 390+ world-renowned research-active faculty and 250 graduate students pursuing basic, translational, and clinical research. We are engaged in exciting areas of investigation ranging from molecular and cellular biology, to genomics and bioengineering, that will improve our understanding of fundamental processes and our ability to treat human diseases such as neurological disorders, cardiovascular disease, infectious diseases, diabetes and cancer.

Machine learning and artificial intelligence will play a core role in medical research and patient care in the near future. We are proud to have the Temerty Centre for Artificial Intelligence Research and Education in Medicine (T-CAIREM) based in our department.

We train our research-stream graduate students to think critically and to communicate effectively. As an LMP student, you will be a member of our student union, Confederation of Laboratory Medicine & Pathobiology Students (CLAMPS), that offers academic and research support to all of its members, as well as social and wellness events throughout the year.

Potential career paths

In 2016, the School of Graduate Studies (SGS) tracked the career outcomes of 10,000 PhD students who graduated from the University of Toronto between 2000 to 2015. Below are the career trajectories of alumni from the PhD program in Laboratory Medicine and Pathobiology (n = 207).



By the numbers

87

active labs
across 16 sites

400

active research
faculty

237

current number
of MSc and PhD
students

Application Deadline

ADMISSIONS

Fall 2024

ROUND 1

February 1, 2024

ROUND 2

June 1, 2024

Alumni profile

Dr. David Douda, PhD

Graduated 2013



I was very impressed with the depth and breadth of research work that occurs at LMP. The number one reason for choosing to do my

PhD at LMP was the research topic of my PhD supervisor.

Additionally, the department, as a whole, is very student focused and provides a lot of support. It was also apparent that the LMP student body is a very close knit social group, which made it an easy choice for me.

I learned how to be a critical thinker and a good scientist because of my PhD training at LMP. There are so many essential skills above and beyond bench science that are critical in your success as a professional, no matter what career path you take. LMP has a breadth of training/workshops that were very helpful, such as networking, negotiations, and oral presentations. Furthermore, this program provides the opportunity to become extremely resilient. It will test you in many ways. I'm glad I was in LMP because of the support I received from the program, as well as my peers, making this tough process so enjoyable.



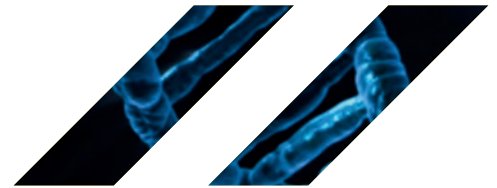
How to Apply:

Imp.utoronto.ca/graduate

Email: Imp.grad@utoronto.ca

Medical Biophysics

MSc, PhD



The Department of Medical Biophysics offers interdisciplinary research-focused graduate studies at both the Masters (MSc) and PhD level. Focusing on basic and translational research, we offer students a diverse and highly integrated modular curriculum which reflects the increasing specialization in biomedical science. Our rotation system is a key feature of our training that allows newly admitted students to experience 3 different labs before deciding on a "best fit" thesis lab. This allows students to explore the breadth and depth of the research conducted and find the ideal learning environment to succeed.

Cancer research remains our principal focus, followed by cardiovascular disease and neuroscience. We bring together researchers from diverse scientific areas, who work on multidisciplinary projects. In our labs, you will find faculty and students with backgrounds in molecular and cell biology, physiology, biochemistry, chemistry, physics, mathematics, engineering, computer science and beyond. The department stresses an interdisciplinary approach to medical research, which is the hallmark of Medical Biophysics.



Master of Science (MSc)

In addition to completing a thesis, students take 2.5 FCE*: MBP 1015Y (Biomedical Seminar, 1.0 FCE), MBP 1200H (Scientific Exposition and Ethics, 0.25 FCE), MBP 1201H (Biostatistics, 0.25 FCE), 0.25 FCE in biology-related course and 0.75 FCE in electives. Students successfully finish this program in 2 years.



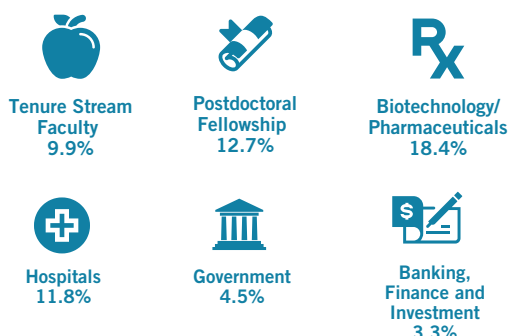
Doctor of Philosophy (PhD)

In addition to conducting independent and original research that will form their thesis, students take 3.5 FCE: MBP 1015Y (Biomedical Seminar, 1.0 FCE), MBP 1200H (Scientific Exposition and Ethics, 0.25 FCE), MBP 1201H (Biostatistics, 0.25 FCE), 0.25 FCE in a biology-related course and 1.75 FCE in electives. Typically, students successfully complete this program within 6 years.

* Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.

Potential career paths

In 2016, the School of Graduate Studies (SGS) tracked the career outcomes of 10,000 PhD students who graduated from the University of Toronto between 2000 to 2015. Below are some career trajectories of alumni from the PhD program in Medical Biophysics (n = 331).



Application Deadlines

Prospective MSc and PhD students can apply to either application cycle (i.e., Round 1, 2 or 3) for Fall 2024 admissions.

ADMISSION DEADLINE	WHEN TO EXPECT DECISIONS
November 10, 2023	January 2024
January 8, 2024	March 2024
March 15, 2024	May 2024

By the numbers



How to Apply:
medbio.utoronto.ca
Email: medbio.info@utoronto.ca

Alumni profile

Dr. Hui Guo, PhD Graduated 2022

My name is Hui Guo and I am a postdoctoral fellow at the Max Planck Institute of Biochemistry in Germany.



During my PhD, I developed an interest in research and decided to pursue a career as an independent researcher. In the PhD program, I received extensive training in designing, conducting and communicating my research. These skills allowed me to pursue further training as a postdoctoral fellow in my current institution and will remain useful in my career down the road.

For new graduate students, the most important thing in graduate school is to find a lab with a supportive supervisor and lab mates. Suggestions from your supervisor and peers are essential to help you stay on the right track and avoid pitfalls.

Additionally, as once suggested to me by my PhD supervisor: focus on doing good science and the rest will follow. Whatever your eventual goal might be, a solid MSc or PhD can be a plus. Try to be patient and enjoy the process!

Medical Genomics

MHSc



Genomics – the ability to read and interpret information contained within our DNA – is a rapidly growing field, with implications reaching from the bench all the way to the bedside.

The fast-paced nature of this field is creating a widening knowledge gap between cutting-edge genomics research and current clinical practices, and this has created an emerging need for laboratory professionals and clinicians to generate, integrate, and interpret genetic and genomic data. The Master of Health Science (MHSc) in Medical Genomics is meeting this need head on, training the next generation of genomics experts who are helping to drive a new era of healthcare and patient management, and a vibrant academic healthcare system.

This is a 9.0 FCE* fast-paced, content-dense degree program consisting of a core set of lecture, discussion, and project-based courses across two years (five terms). Enrolling students in either a laboratory professional stream or a clinical stream, the program provides medical trainees, clinicians, research scientists, and laboratory professionals with the theory and practical knowledge necessary to incorporate genomics data into research, medical practice and business. In addition to lecture-based learning, students participate in a hands-on, stream-specific capstone practicum during the final academic term of the program. During the practicum, students engage in dynamic placements with a huge breadth of available project topics, including clinical genomics research, clinical diagnostics, bioinformatics, public health policy, commercial development, and communications, and working with groups in hospitals, academic institutions, industry, and government agencies, among many others.

* Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.

By the numbers

20

average class size

35

different Capstone
Practicum projects

91%

employed immediately
after graduation

Alumni profile

Sierra Scodellaro, MHSc
Graduated 2022



I am currently a Pharmacogenomics Data Analyst at SickKids Hospital, which is a role that links pharmacology and genomics. When I started, pharmacology and genome diagnostics were very isolated from each other; my work helps to bridge the gap between them. I am passionate about finding new ways to use whole genome sequencing data to optimize medication safety. I am excited to continue to my professional growth, perhaps with a more patient-facing role in the future, consulting with patients and their healthcare providers on their pharmacogenomics profiles.

As a graduate student, I focused on creating opportunities to gain experience in pharmacogenomics, both in and out of the classroom. This initiative led to my Capstone Practicum project at SickKids, where I gained valuable experience working with a variety of medical and scientific experts, including pharmacists, clinicians, genetic counsellors and company stakeholders. I encourage you to reach out, make connections and pursue the ideas that fascinate you. Expand your horizons, see what different genomics fields are like, learn how the field is progressing and figure out how to enter it.

Application Deadlines

ROUND 1

Fall 2024 Admissions Jan. 15, 2024

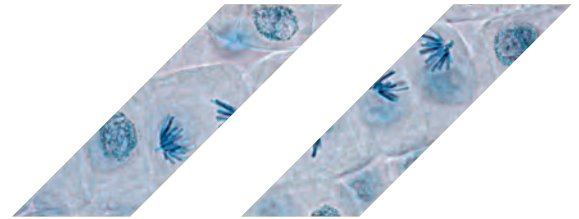
ROUND 2

May 1, 2024



How to Apply:
moleculargenetics.utoronto.ca/medicalgenomics
Email: medicalgenomics@utoronto.ca

Genetic Counselling MSc



The MSc program in Genetic Counselling is a full-time graduate program that prepares students with the academic and clinical skills to function as highly competent genetic counsellors in a variety of work settings.

Genetic counsellors work in many areas of healthcare and are involved in the provision of genetic counselling and risk assessment to individuals and families with, or at risk for genetic disorders. The program is accredited by the Accreditation Council for Genetic Counseling.

Students complete 13.0 FCE* which includes didactic coursework, clinical rotations and an independent research project. The curriculum is designed exclusively for genetic counselling students and delivered by local and international experts in this field. Under the supervision of a faculty member, the independent research project is an opportunity to engage in the full spectrum of conducting research – from developing a protocol, to obtaining research ethics approval, analyzing data and presenting findings. Through this project, students gain an understanding of the research process and learn to appreciate the skills required to undertake clinical research.

Students are exposed to a variety of clinical rotation opportunities offered at University of Toronto affiliated teaching hospitals, or at other hospitals in the Greater Toronto Area. Students choose from over 10 options to fulfill an elective rotation in the areas of research, fertility, or in the private sector setting. Successful students typically complete this program within 2 years.

** Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.*

By the numbers

100%

student retention

100%

job placement

100%

board pass rate
on the first
attempt

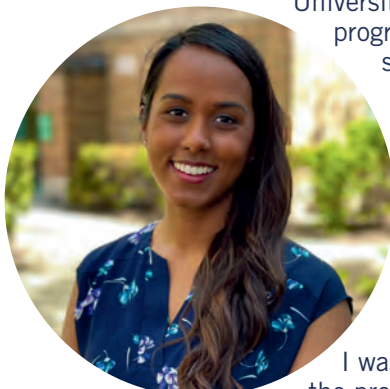
Alumni profile

Meaghan Leslie, MSc

Graduated 2022

My name is Meaghan and I'm a Certified Genetic Counsellor at the Cancer Genetics Clinic within the Juravinski Cancer Centre in Hamilton, Ontario. I support patients who have a personal and/or family history of cancer by assessing their likelihood of having hereditary cancer syndromes, contributing to their understanding of cancer genetics, while supporting them in their decision-making regarding genetic testing and cancer screening/management.

Prior to starting the MSc Genetic Counselling program, I completed a research-based Master's degree in Molecular Genetics at the University of Toronto. The MSc Genetic Counselling program allowed me to continue to develop my research skill set, with a greater focus on patient-centered research. I had the opportunity to conduct my own research project, which involved assessing patient interest in app-based educational tools. I translated this interest into my new role as a Cancer Genetic Counsellor, where I am actively involved in developing educational materials, such as infographics, to enhance patient education.



I was grateful to have the support and mentorship of the program directors, supervisors, and instructors throughout the MSc Genetic Counselling program. I am especially appreciative of the countless learning opportunities. My clinical supervisors allowed me the opportunity to develop my own style as a genetic counsellor, while offering invaluable guidance and encouragement throughout the process. The MSc Genetic Counselling program was always a dream program for me, and the learning experiences and lifelong connections that were established along the way certainly exceeded all of my expectations.

Application Deadline

Fall 2024 Entry

Deadline: January 5, 2024



How to Apply:
moleculargenetics.utoronto.ca
Email: mscgc.inquiries@sickkids.ca

Molecular Genetics

MSc, PhD



The MSc and PhD graduate programs in the Department of Molecular Genetics draw students from across Canada and around the world. A central feature of our program is our rotation system, which allows newly admitted students to experience three different labs before deciding on a "best fit" thesis lab. We are the first and remain among the few programs in Canada to offer such a matching system. To support our students throughout their degrees, as part of the Faculty of Medicine, we also offer the largest stipend in Canada of all comparable degrees in medical science research.

Recruiting students from a variety of backgrounds, we provide a first-year core curriculum to impart essential foundational knowledge in genetics, genomics, proteomics, and computational biology. Additionally, our dynamic student seminar course engages the entire department and leading invited scientists from around the globe to train our students to become exceptional scientific communicators, by building skills in public speaking and scientific reasoning. Our community is diverse and collegial, offering students the opportunity to interact with leading experts, while developing close relationships with their fellow class members.



Master of Science (MSc)

Students complete their thesis and the following 1.5 FCE*: MMG1001H (Foundational Genetic Approaches I, 0.5 FCE), MMG1003H (First Year Colloquium, 0.25 FCE), MMG 1104H (A Practical Course in Programming for Biologists, 0.25 FCE), MMG 1113H (MSc Presentation Skills, 0.25 FCE), MMG 1114H (MSc Presentation, 0.25 FCE). Typically, students successfully complete this program within 2 years.



Doctor of Philosophy (PhD)

Students complete their thesis and the course requirements for MSc. In addition, they take 1.0 FCE*: MMG1115H (PhD Presentation, 0.5 FCE) and two 0.25 FCE courses. Typically, students successfully complete this program within 6 years.

* Full course equivalent. A typical 0.5FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0FCE is over two terms (26 weeks), meeting 1 – 2 times per week.

Potential career paths

In 2016, the School of Graduate Studies (SGS) tracked the career outcomes of 10,000 PhD students who graduated from the University of Toronto between 2000 to 2015. Below are some career trajectories of alumni from the PhD program in Molecular Genetics (n = 304).



Application Deadlines

Interested MSc and PhD candidates are welcome to submit their application by one of the three deadlines below. All successful applicants are admitted in the Fall term.

DEADLINE

Nov. 15, 2023
January 15, 2024
May 1, 2024

WHEN TO EXPECT DECISIONS

December 2023
March 2024
June 2024



How to Apply:

moleculargenetics.utoronto.ca/graduate-studies-research
Email: mgy.info@utoronto.ca

Alumni profile

Nicole Park, PhD Graduated 2017



My name is Nicole Park and I'm currently an Annotation Specialist at the University Health Network, where I contribute to the analysis and interpretation of cancer genomes. I report on genetic findings that are relevant to patient management. I have been contributing to cancer research my entire career, primarily focused on cancer genetics.

I completed my Ph.D. researching glioblastoma stem cells under the supervision Dr. Peter Dirks at SickKids Hospital. After completing my PhD, I transitioned into the clinical world and began working in genome analysis. As a fellow with the Canadian College of Medical Geneticists, I am now on the path to leading and directing a genome diagnostics lab.

My advice to incoming students is to be very thoughtful in the beginning of the program and find a lab that aligns well with your research interests and personality. The rotation system is unique to Molecular Genetics – it's a privilege to sample different labs and also experience first-hand the breadth of research this program.

Nutritional Sciences

MSc, PhD



The Department of Nutritional Sciences positions itself as a leader in its field by leveraging the resources of the Temerty Faculty of Medicine and its strong affiliation with the Dalla Lana School of Public Health at the University of Toronto. This provides our graduate students with unparalleled access to the highest concentration of university-affiliated hospitals, clinicians, and health researchers in North America. In fact, Toronto is home to the largest research and development (R & D) hub in Canada and the second largest food cluster in North America.

The department offers both MSc and PhD degree programs. Our graduate students work on the front lines of research with internationally recognized professors on competitive, peer-reviewed research projects. They present their research at international conferences and publish their work in high-impact journals and are frequently awarded prestigious scholarships.



Master of Science (MSc)

In addition to completing a thesis, students must present annually for two years to complete 1.0 FCE*: NFS1204Y (Master Seminars in Nutritional Sciences, 1.0 FCE) and two 0.5 FCE electives. Students successfully finish this program in 2 years.



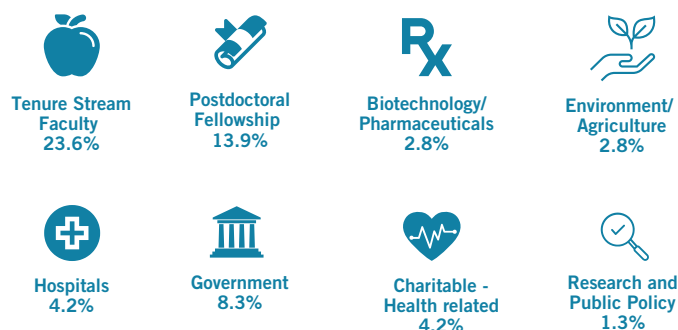
Doctor of Philosophy (PhD)

In addition to conducting independent and original research that will form their thesis, students must present annually for 4 years to complete 1.0 FCE: NFS1304Y (Doctoral Seminars in Nutritional Sciences). They must also complete and four 0.5 FCE electives. Typically, students successfully complete this program within 4 years.

* Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1 – 2 times per week.

Potential career paths

In 2016, the School of Graduate Studies (SGS) tracked the career outcomes of 10,000 PhD students who graduated from the University of Toronto between 2000 to 2015. Below are some career trajectories of alumni from the PhD program in Nutritional Sciences (n = 72).



Application Deadlines

Below are the deadlines to apply to the MSc and PhD programs.

ADMISSIONS CYCLE	DOMESTIC	INTERNATIONAL
Winter 2024	October 15, 2023	October 15, 2023
Fall 2024, Round 1	January 15, 2024	January 1, 2024
Fall 2024, Round 2	January 15, 2024	June 15, 2024

By the numbers



Contact

nutrisci.med.utoronto.ca
Email: grad.nutrisci@utoronto.ca

Alumni profile

Zhila Semnani-Azad, PhD Graduated 2021



During my time at the University of Toronto, I was lucky to be exposed to many areas of research throughout my undergraduate career and graduate training in the Department of Nutritional Sciences. These experiences helped me identify my passion in pursuing further training in cardiometabolic disease epidemiology and taught me that a career in research can allow me to express my unique creativity. I had great mentors and collaborators who provided me with invaluable opportunities to learn and explore the field and to develop critical and transferable skills.

I also had several opportunities to teach courses while at U of T, which showed me the importance of not only knowing the research, literature, and course material, but being able to teach to the next generation of future scientists. Meeting experts and early-career scientists through seminars and conferences during my training provided me with the motivation to pursue a career as a research scientist where I can contribute to an ever-evolving field.

My advice to prospective students is to be open to new experiences and opportunities and to never let pre-existing notions of what you would or would not be interested in, or self-doubt, limit you from exploring. Also, never underestimate the importance of networking and mentorship. The best way to learn and to broaden your horizons is to talk to as many people as you can!

Occupational Therapy

MScOT



The need for skilled occupational therapists has never been greater. Occupational therapists (OTs) are on the front lines of healthcare providing critical services. OTs are in high demand across a wide range of settings – traditional and emerging, hospital- and community-based. They are indispensable members of interprofessional/integrated healthcare teams for their role in enabling people to lead healthy, meaningful lives regardless of ability, illness or age.

The Master of Science in Occupational Therapy (MScOT) creates graduates with advanced academic and professional knowledge as well as applied research skills for leadership positions in occupational therapy practice. Our emphasis is on applying theory and research evidence to clinical practice through rigorous studies in occupational therapy and research production and utilization. Students in this program complete 18.5 FCE* over the duration of two years. The curriculum is a combination of courses and field work and students can choose to take the program at either the St. George downtown campus or at University of Toronto Mississauga.

As a graduate of the program, you will be eligible to write the certification examination of the Canadian Association of Occupational Therapists, a requirement for registration with the College of Occupational Therapists of Ontario and other professional regulatory colleges in Canada. You may also be eligible to practice occupational therapy elsewhere by passing the licensing requirements specific to that state or country.

** Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.*

By the numbers

90

number of
incoming students
at St. George
Campus

40

number of
incoming students
at UT Mississauga

400

number of clinical
faculty

100+

number of placement
sites

Application Deadline

Fall 2024 Entry

Deadline: early January, 2024

Visit:

<https://www.ouac.on.ca/guide/orpas-dates>

Alumni profile

Meera Premnazeer, MScOT
Graduated 2021



Based on my own experience, I would say three things are important. One, take part in extracurricular

opportunities throughout the OT program. This includes applying to work-study positions or volunteering with professors to assist in their research. Having taken part in multiple work-study opportunities throughout the

MScOT program, I found them to be a great opportunity to participate in research by the department's faculty members. This research experience helped me to gain more clinical skills and evidence-based strategies. Volunteering is another great opportunity to make connections with faculty and current OTs in meaningful ways.

Two, make time for yourself, friends and family to enjoy your two years in the program as much as possible. After being in a pandemic while in this program, I see the value of self-care and making time for those whom you are close to more than ever. Having that in-person interaction and connection with others has helped me get through the past two years. Three, research your area of interest and try to plan for your third or fourth placement accordingly, as many OTs end up getting jobs through the connections they make while on placement.



How to Apply:

ot.utoronto.ca

Email: ot.studentservices@utoronto.ca

Applied Clinical Pharmacology

MSc



Applied Clinical Pharmacology (ACP) is a highly customizable, course-based master's degree program. Our integrated curriculum incorporates greater breadth of study than a traditional thesis-based degree while still providing meaningful research opportunities. Our dynamic program aims to enhance the scientific, analytical, communication and professionalism skills of our learners. Our students complete interactive courses in clinical pharmacology, focusing on drug development, clinical trial design and drug safety, and the application of pharmacokinetic and pharmacodynamic principles. Throughout the ACP program, students interact with pharmacologists, physicians, pharmacists, and other healthcare professionals and trainees, gaining knowledge and skills related to clinical pharmacology and its application.

Small class sizes facilitate individualized programs of study. Students are encouraged to explore a variety of career interests through specialized coursework, a supervised research project, networking events and full-time placements in a variety of workplace settings. These settings can include the pharmaceutical industry, government, medical communications, healthcare and consulting agencies. Many of our students are offered full-time employment as they approach graduation, resulting from successful job placements during their program.

ACP students have a unique opportunity to develop team and leadership skills through participation in a wide variety of academic courses and extracurricular activities. Many graduates return to contribute to the success of our program by serving as mentors for current students.



Students in this program complete 8.0 FCE*

Year One

- PCL1002Y, Graduate Pharmacology (1.0 FCE)
- PCL1004Y, Clinical Pharmacology (1.0 FCE)
- PCL1100H, Applied Skills in Clinical Pharmacology (0.5 FCE)
- PCL1101H, Technology, Techniques and Translation in Pharmacology & Toxicology (0.5 FCE)
- PCL1400H Systems Pharmacology I (0.5 FCE)
- PCL1402H, Pharmacology and Toxicology in Drug Development (0.5 FCE)
- PCL1491H, Clinical Pharmacology: Principles in Practice (0.5 FCE)
- PCL1500H, Systems Pharmacology II (0.5 FCE)
- PCL2200Y Major Research Project (1.0 FCE)

Year Two

- 2.0 FCE electives

**Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.*



Careers in Pharmacology



Graduating Class of 2022



By the numbers

practicum placements led to

100%

graduate employment rate

40

research project supervisors
in 12 hospitals and research
institutes

50+

practicum placement
employers

16

annual class size

Application Deadlines

ADMISSIONS

Fall 2024 Entry

DOMESTIC

April 26, 2024

INTERNATIONAL

January 26, 2024



How to Apply:

pharmtox.utoronto.ca/acp

Email: pharmtox.dept@utoronto.ca

Pharmacology

MSc, PhD



Pharmacology is the study of drugs and involves examining the interactions of chemical substances with living systems. The intent is to understand the properties of these drugs and their actions, including the interactions between drug molecules and drug receptors and how these interactions elicit an effect. Our pharmacology courses examine the different classes of drugs, how they are used therapeutically, their mechanisms of action, how they are handled by the human body, and their role in society.

As the largest pharmacology department in North America, we have a breadth of research interests that encompass our four research foci: mechanisms of drug action and drug discovery; drug safety and toxicology; neuropharmacology and addiction; and variability in drug response and pharmacogenetics. Research laboratories are located on the St. George campus, and across our nine university-affiliated research institutes and teaching hospitals. This strategic positioning enables a wealth of potential opportunities for interdisciplinary collaboration with internationally recognized investigators within one of the largest and densest existing concentrations of biomedical research expertise in North America.



Master of Science (MSc)

In addition to completing a thesis, students will take PCL 1002Y (Graduate Pharmacology, 1.0 FCE*). Typically, students successfully complete this program within 2 years.



Doctor of Philosophy (PhD)

In addition to conducting independent and original research that will form their thesis, students complete 3.0 FCE: PCL 1002Y (Graduate Pharmacology, 1.0 FCE), PCL 1003Y (Seminars in Pharmacology, 1.0 FCE), 1.0 FCE elective and any graduate courses advised by the student's Graduate Curriculum Committee. Typically, students successfully complete this program within 5 years.


*Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.



Potential career paths

In 2016, the School of Graduate Studies (SGS) tracked the career outcomes of 10,000 PhD students who graduated from the University of Toronto between 2000 to 2015. Below are some career trajectories of alumni from the PhD program in Pharmacology and Toxicology (n = 93).


Tenure Stream
Faculty
8.6%


Further Education
6.4%


Biotechnology/
Pharmaceuticals
25.8%


Hospitals
9.6%


Government
6.4%


Charitable -
Health related
4.3%



Alumni profile

Chidera Chukwueke, PhD Graduated 2021

My name is Chidera and I began my MSc in Pharmacology under the supervision of Dr. Bernard Le Foll at the Centre for Addiction and Mental Health (CAMH). My thesis focused on neuroimaging and behavioural experimental tools to explore the role of neurotransmitter systems in addiction. I continued my graduate training as a PhD student in 2017, where I explored the influence of dopamine D3 and cannabinoid CB1 receptors in substance use disorders. My thesis research led to three first-author published research articles and three first-author book chapters.

In 2022, I received the Amar K. Sen award in recognition of my dedication and outstanding scientific contributions made as a PhD student in Pharmacology. During my doctoral research, I became interested in business and explored opportunities to broaden my exposure outside the world of academia. I completed courses through the Rotman School of Management and took on leadership roles with the Graduate Management Consulting Association and the University Consulting Group. Following the completion of my PhD, I transitioned to a role with Oliver Wyman, a global top 10 strategy firm, as a management consultant.

Application Deadlines

ADMISSIONS	DOMESTIC	INTERNATIONAL
Winter 2024 PhD	October 27, 2023	
Fall 2024 MSc and PhD	April 26, 2024	January 26, 2024

By the numbers

89	180	12
number of graduate faculty	number of MSc and PhD students	average class size for electives



How to Apply:
pharmtox.utoronto.ca
 Email: pharmtox.dept@utoronto.ca

Physical Therapy

MScPT



The Master of Science in Physical Therapy (MScPT) is a 24-month professional graduate program designed for students who have completed an undergraduate degree.

We select candidates who are well-rounded and from a variety of backgrounds and life experiences. Individuals who are compassionate, have excellent problem-solving abilities, strong people skills, and have a desire to engage in leadership activities, will find the study of physiotherapy to be an excellent fit and will flourish in this program.

Recognized as one of the top programs in Canada, students complete 18.75 FCE* through 30 weeks of full-time clinical education over 5 internships. Graduates are eligible to write the Physiotherapy Competency Examination (PCE), administered by the Canadian Alliance of Physiotherapy Regulators, which qualifies them to practise physical therapy in Canada. Graduates will be eligible to register in the Canadian Physiotherapy Association and the Colleges of Physiotherapy in all Canadian provinces.

** Full course equivalent. A typical 0.5FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0FCE is over two terms (26 weeks), meeting 1-2 times per week.*

By the numbers

110

number of
incoming students

300

number of clinical
teaching facilities

30

number of weeks of
clinical internship

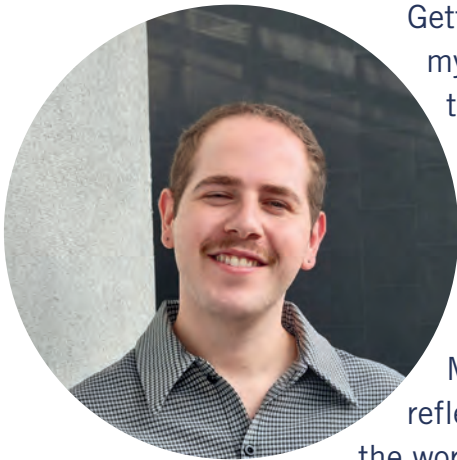
100%

employment rate



Alumni profile

Corey Grunberg, MScPT
Graduated 2022



Getting involved with student government was a very important part of my experience as a U of T PT student. Beginning the program during the height of the COVID-19 pandemic was a challenge; however, being a part of the student council allowed me to meet so many of my future colleagues and to engage with them in meaningful ways, even if from our remote environments on video calls.

I had an excellent experience in the PT program at Temerty Medicine, where I learned clinical skills, honed my critical reflexivity, and was encouraged to follow my passions to improve the world around me. In particular, I found the SPEC curriculum (social, political, ethical, and cultural features of PT) to be impactful on the way I view my position working in healthcare. Our discussions about intersectionality and social factors in providing care have made me more critical of my assumptions and how they may influence my work. As new grads entering the workforce, it is our responsibility to adapt our techniques to maintain culturally safe practice and advocate for the needs of our patients.

Currently, I am working as a Physiotherapist Resident with Sinai Health System at Hennick Bridgepoint Hospital in the Medical Rehabilitation unit. I am also a member of the planning committee for Queer Physiotherapy Collective, a newly formed group of queer PTs, PT Residents, and PT students focused on community building advocacy.

Application Deadlines

Fall 2024 Entry

Deadline: early January, 2024

Visit: <https://www.ouac.on.ca/guide/orpas-dates>



How to Apply:
physicaltherapy.utoronto.ca
Email: physther.facmed@utoronto.ca

Medical Physiology

MHSc



Within a vibrant learning atmosphere, the Department of Physiology offers the Master of Health Science (MHSc) in Medical Physiology. This program is designed to address the rapidly emerging need for professionals who can interpret near-infinite amounts of data generated by clinicians at the bedside, researchers at the bench, and emergent health technologies every single day. Students successfully complete this program in one year.

Led by world-class faculty, the unique combination of coursework and hands-on experience ensures our graduates are equipped with the knowledge and skills sought in today's competitive health-related workforce. The program culminates with a work placement in an industry, hospital, or government setting. A professional development component runs throughout the program to ensure our students succeed and help them find a career they love.



**Students in this program complete
6.0 FCE***

Year One

- PSL4000Y, Seminars and Graduate Professional Development (1.0 FCE)
- PSL4010Y Mentored Literature Review Project in Physiology (1.0 FCE)
- PSL4020Y Medical Physiology Practicum (1.0 FCE)
- PSL4030H Clinical Physiology (0.5 FCE)
- PSL4040H Big Data and Health (0.5 FCE)
- PSL4050H Collaboration and Commercialization in Physiology (0.5 FCE)
- 1.5 FCE elective courses

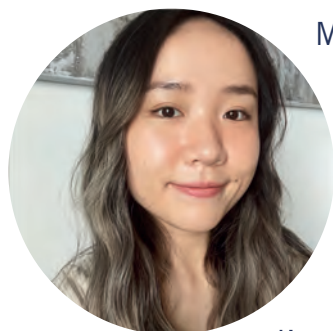
**Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.*



Alumni profile

Elly Zhou, MHSc

Graduated 2021



My name is Elly and I recently finished my MHSc in Medical Physiology. I loved the Big Data component of the program, especially the machine learning aspect. After I graduated, I was hired full-time as a research assistant by UHN's Latner Thoracic Surgery Research Lab, where I did my summer placement during my MHSc.

I'm able to apply a lot of the concepts from my MHSc to my current project – trying to improve AI-based diagnostics in lung transplants. It feels meaningful and we can hopefully help more patients as we develop the algorithm. My advice to prospective students is to work hard, stay open minded, and follow your heart!

By the numbers

24

number of
students in the
program

12

number of months
to complete the
program

1 in 2

students employed
after graduation via
placement

Application Deadlines

ADMISSIONS

Fall 2024 Entry

ROUND 1

January 2024

ROUND 2

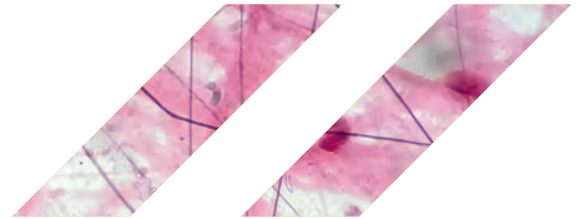
April 2024



How to Apply:
physiology.utoronto.ca/overview-programs
Email: graduate.physiology@utoronto.ca

Physiology

MSc, PhD



The Department of Physiology is dedicated to understanding fundamental physiological processes and translating these to clinical care. It is home to the discovery of insulin, the scientific intuition and curiosity that led Banting and Best to their seminal studies of diabetes.

Our research-based MSc and PhD programs provide advanced training in physiology and significant experience conducting research in a lab. Under the direct supervision of a member of our world-class faculty, students will apply modern experimental methods to further discover and understand of the systems of the human body. Students will also broaden and deepen their knowledge through coursework and seminars. Both programs culminate with an oral defense of a written thesis based on original research.



Master of Science (MSc)

In addition to completing a thesis, students complete 1.5 FCE*: PSL1000H (MSc Seminar in Physiology, 0.5 FCE), 0.5 FCE physiology graduate course and 0.5 FCE graduate course in physiology or outside of the department. Students successfully finish this program within 2 years.



Doctor of Philosophy (PhD)

In addition to conducting independent and original research that will form their thesis, students complete 2.5 FCE: PSL2000H (PhD Seminars in Physiology, 0.5 FCE), PSL1066H (Research Grant Proposal, 0.5 FCE), 0.5 FCE physiology graduate course, and 1.0 FCE graduate course in physiology or outside of the department. Typically, students successfully complete this program within 6 years.



Temerty Medicine

Potential career paths

In 2016, the School of Graduate Studies (SGS) tracked the career outcomes of 10,000 PhD students who graduated from the University of Toronto between 2000 to 2015. Below are some career trajectories of alumni from the PhD program in Physiology (n = 140).



Tenure Stream
Faculty
18.6%



Postdoctoral
Fellowship
16.4%



Biotechnology/
Pharmaceuticals
13.5%



Hospitals
11.4%



Government
2.1%



Banking, Finance
and Investment
2.1%

Alumni profile

Dr. Gareth Lim, PhD
Graduated 2009



My name is Gareth and during my time in the Department of Physiology, I was amazed by the encouraging and stimulating environment offered by trainees and faculty members. My supervisor was Dr. Patricia Brubaker and, in her lab, I was given the opportunity to grow scientifically and realize my own independence as a researcher.

My advice is to always be willing to ask questions and remember there are never right or wrong questions. Questions may lead to unexpected discoveries that can open new areas of research. It was this line of thinking that led to my interest in the physiological functions of 14-3-3 proteins, which remains the primary area of research in my lab today. I currently lead my own lab at Université de Montréal, where I focus on new treatments of metabolic diseases, including diabetes and obesity.

By the numbers

89

number of
graduate faculty

186

number of MSc
and PhD students

10

average class size

Application Deadlines

Below are the deadlines for the MSc and PhD programs.

ADMISSIONS

Winter 2024

Spring 2024

Fall 2024

RECOMMENDED DEADLINE

October 1, 2023

January 15, 2024

January 15, 2024 (round 1)

June 1, 2024 (round 2*)

FINAL DEADLINE

October 15, 2023

January 28, 2024

January 28, 2024 (round 1)

June 15, 2024 (round 2*)

(* domestic only)



How to Apply:

physiology.utoronto.ca

Email: graduate.physiology@utoronto.ca

Rehabilitation Sciences

MSc, PhD

The Rehabilitation Sciences Institute (RSI) is an interdisciplinary doctoral stream program that offers MSc and PhD degrees for students interested in researching issues related to rehabilitation. Our student body comes from a broad range of disciplines including speech-language pathology, occupational sciences and occupational therapy, physical therapy, biology, epidemiology, health studies, kinetics and more. Our faculty are among the most world renown in the rehabilitation field and also come from a broad range of backgrounds.

At RSI, we integrate research across scientific disciplines focused on understanding human function and participation in family, community, and society and its relationship to health and well-being. The academic activities of students cover the full breadth of rehabilitation sciences and the 100+ RSI cross-appointed faculty members are distributed throughout the University of Toronto, including teaching hospitals and research institutes. The program has 5 recognized fields: movement science, occupational science, speech language pathology, rehabilitation health services studies, rehabilitation technology sciences, and social and cognitive rehabilitation sciences. RSI is ranked #1 in North America for publications and citations for rehabilitation science, according to Thomson Reuters.

We offer:

- Full breadth of rehabilitation sciences covered in the academic program
- 12 collaborative programs
- Guaranteed minimum funding package* for full-time students
- Interdisciplinary research-stream training

*not including work hours (e.g., RA & TA roles)



Master of Science (MSc)

In addition to completing a thesis, students take 2.0 FCE**: REH 1100H (Introduction to Rehabilitation Sciences, 0.5 FCE), REH 2001H (RSI MSc Seminar – Foundations of Professional Development, 0.5 FCE), 0.5 FCE in research methods and 0.5 FCE elective. Students typically finish this program within 2 years.



Doctor of Philosophy (PhD)

In addition to conducting independent and original research that will form their thesis, students take 1.5 FCE: REH 3001H (RSI PhD Seminar – Foundations of Professional Development), 0.5 FCE in advanced research methods and 0.5 FCE elective. Students must also complete a qualifying exam within the first 18 months of registration. Typically, students successfully complete this program within 6 years.

***Full course equivalent. A typical 0.5 FCE is over one term (13 weeks), meeting 1-2 times per week. A typical 1.0 FCE is over two terms (26 weeks), meeting 1-2 times per week.*

Potential career paths

In 2016, the School of Graduate Studies (SGS) tracked the career outcomes of 10,000 PhD students who graduated from the University of Toronto between 2000 to 2015. Below are some career trajectories of alumni from the PhD program in Rehabilitation Sciences (n = 41).



Application Deadlines

ADMISSIONS

Fall 2024, Round 1
Fall 2024, Round 2

DOMESTIC

January 15, 2024
May 15, 2024

INTERNATIONAL

December 15, 2023
N/A

By the numbers

#1

in North America for publication and
citations in rehabilitation sciences
(Thomas Reuters)

125

number of
graduate faculty

Alumni profile

Tyler Saumur, PhD Graduated 2021



I was fortunate enough to be at RSI for 6 years and formed many great memories over the years. The Student and Alumni Networking Event is one of the highlights that I hope students can benefit from for years to come. My involvement in the Rehabilitation Sciences Graduate Students' Union also allowed me to create great relationships with the fantastic staff and incoming cohorts of students.

I'm currently working as a Medical Writer II at Everest Clinical Research. As I continue to advance my career, I look forward to applying the amazing skills I developed at RSI and take on additional leadership and mentorship opportunities to support colleagues. There is so much advice that I would love to share with new students. Overall, I would suggest saying "yes" to whatever opportunities present themselves because you never know what may come of them. That also comes with the caveat of knowing when to say "no," which can sometimes be more difficult. Lean on your fellow students when possible, make time for yourself, and embrace the experience!



How to Apply:

rsi.utoronto.ca

Email: rsi.admin@utoronto.ca

Speech-Language Pathology

MHSc



The Master of Health Science in Speech-Language Pathology is a 22-month professional graduate program designed for students who have completed an undergraduate degree.

The Master of Health Science (MHSc) in Speech-Language Pathology is a full-time professional graduate program. The primary aim of the program is to prepare practitioners for entry into the practice of speech-language pathology. Graduates are prepared to assume varied professional responsibilities including the assessment, treatment and management of speech, voice, language and swallowing disorders.

The MHSc program offers a unique and internationally acclaimed curriculum that extends over 22.5 months and comprises five academic and four clinical units. The integrated curriculum places equal emphasis on theoretical and practical competencies regarding normal development, as well as the assessment and treatment of disorders in human communication and swallowing. The themed academic units are directly followed by full-time clinical placements targeting the same areas of practice, enabling a strong research-to-practice focus.

Throughout the two-year program, students will develop a strong focus on evidence-based and inter-professional practice through lectures, learning activities, mentorship, and self-directed projects. As part of SLP1509Y, students will participate in the Interprofessional Education curriculum offered by the Centre for Interprofessional Education at the University of Toronto. At the conclusion of their MHSc program, students will have an opportunity to showcase their learning outcomes and entry-level competencies.

MHSc Timelines

Year 1: Units 1-5

- Unit 1 provides coursework in anatomy, speech science, audiology, child language and clinical practice issues;
- Unit 2 relates to developmental disorders, including language intervention, articulation and phonology, and fluency;
- Unit 3 is an eight-week internship in developmental disorders;
- Unit 4 covers augmentative and alternative communication, voice, and aural rehabilitation;
- Unit 5 is a four-week summer internship in speech, language and/or hearing disorders.

Year 2: Units 6-9

- Unit 6 includes coursework in neurogenic and structurally related disorders;
- Unit 7 includes an eight-week internship in neurogenic disorders;
- Unit 8 includes advanced course work in the principles of clinical practice, research, and clinical analysis of communication disorders and swallowing. A capstone portfolio requirement that documents achievements and competencies in academic and clinical areas is also completed;
- Unit 9 is a 10-week clinical internship during which students assess and treat clients with a variety of communication disorders.



By the numbers

60

number of
incoming students

30

number of weeks of
clinical internship

Application deadlines

Fall 2024 Entry

Deadline: early January, 2024

Visit: <https://www.ouac.on.ca/guide/orpas-dates>



How to Apply:
slp.utoronto.ca
Email: slp.studentaffairs@utoronto.ca