Why GRADUATE STUDIES in TRANSLATIONAL MEDICINE?

The new and innovative Master of Science (MSc) in Translational Medicine is a unique research-based graduate program. The program provides students with a fresh perspective, offering a curriculum interweaving graduate level research with authentic clinical experiences in a multidisciplinary environment across departments at Queen's University.

Combining the fields of medicine and research, this program links graduate level research skills with a variety of clinical experiences including patient interactions, clinical observerships and medical rounds to enhance professional thinking and action. This innovative curriculum will offer important foundation work for future careers in the biomedical field, and will provide critical skills for pursuing careers that include clinician scientists, biomedical researchers, leaders in industry and public health and/or health policy.

What is TRANSLATIONAL MEDICINE?

Translational Medicine is driven by our patients and their diseases. Guided by this primary focus, translational research spans across the spectrum from molecular and cell biology to preclinical models to patient studies and back again (see Figure). Our programs aim to train the next generation of researchers to be effective translators of biomedical discovery. Our graduates will operate at the intersection of clinical and related sciences and will have the expertise to generate and lead discovery through an integrated process, increasing the efficiency of translating science knowledge into health improvement.

Program STRUCTURE

The MSc in Translational Medicine is a 2-year research-based program, which requires the completion of 12-credit courses (3 core courses, 3-credit electives) and a thesis.

Mini-Master’s: Students registered in the MSc in Translational Medicine with first-class standing, and who show exceptional promise in their research may be considered for promotion to the PhD in Translational Medicine, without completion of the MSc.

Core COURSES

- TMED 800* Translational Medicine
- TMED 801 Profession of Medicine
- TMED 802 Research Success Skills

Program HIGHLIGHTS

- Build on your academic education or enhance your career with advanced knowledge and skills
- Learn about translational medicine from an interdisciplinary perspective with authentic clinical experiences
- Experience team-based learning with other students
- Network with students, alumni, and leaders in this emerging field
- Complete a supervised project on a topic of your choice

Elective COURSES (Pick 3 credits)

- TMED 811 Next Generation Sequencing (1 credit)
- BMED 862 Cellular Techniques (1 credit)
- BMED 865 Imaging Analysis (1 credit)
- BMED 869 Reproduction (1 credit)
- BMED 809* Principles and Drug Discovery and Development
- BMED 811* Advanced Molecular Biology
- NSCI 844* Controversies in Neuroscience
- EPID 803* Public Health System in Canada
- EPID 810* Controlled Clinical Trials
- PATH 822* Experimental Cancer Therapeutics
- PATH 826* The Molecular Basis of Disease

* = Courses that are one term in length. Courses are 3 credits unless otherwise stated.

Additional existing courses may be approved by the program director and students’ supervisor, depending on the research interests of the students.
Translational Medicine MSc Map *

WHAT WILL I LEARN?
A Master’s degree in Translational Medicine can equip you with:

- **Knowledge and technical skills**
- **Effective communication skills** in multiple forms for diverse audiences
- **Information management:** prioritize, organize and synthesize large amounts of information
- **Time management:** Meet deadlines and manage responsibilities despite competing demands
- **Project management:** develop ideas, gather information, analyze, critically appraise findings, draw and act on conclusions
- **Creativity and innovation**
- **Perseverance**
- **Independence and experience as a collaborative worker**
- **Awareness:** understanding of sound ethical practices, social responsibility, responsible research and cultural sensitivity
- **Professionalism in all aspects of work, research, and interactions**
- **Leadership:** initiative and vision leading people and discussion

WHERE CAN I GO?
A Master’s degree in Translational Medicine can take your career in many directions. Our students are equipped with a strong foundation for careers such as:

- **Medicine**
- **Public Health and Health Policy**
- **Health research** (research associates in universities, hospitals, government, public health units)

Taking time to explore career options, build experience, and network can help you make a smooth transition to the world of work after graduation.

GETTING STARTED

- **Achieve your academic goals**
  - Start with key priorities like scheduling an initial meeting or meetings with your supervisor, forming your committee, and doing your coursework.
  - Have your first committee meeting, identify a research topic and consider how your course assignments/papers can contribute to your master’s thesis.
  - Complete the ethics review process if applicable.
  - Complete your core courses and electives.

- **Maximize research impact**
  - Start to think about the audiences for your research project.
  - Apply for external funding after discussion with supervisors about appropriate granting agencies.

- **Build skills and experience**
  - Consider positions in student services, the SGS, or media outlets like the Queen’s Journal, CFRC, and the SGS Blog.
  - Serve on departmental, faculty or university committees.
  - Check out professional development workshops from Expanding Horizons and the Department of Medicine.

- **Engage with your community**
  - Explore how you can connect with your community through experiential opportunities on- and off-campus.
  - Consider volunteering with different community organizations, such as Kingston Health Sciences Centre, KFL&A Public Health Unit, and Kingston Community Health Centres.

- **Launch your career**
  - Finding a career that fits starts with knowing yourself. Get help by taking a Career Services workshop or meeting with a career counsellor. Check out books like *So What Are You Going to Do With That?* or planning a Scientific Career in Industry from the Career Resource Area for advice on various career options.
  - Start reading publications like *University Affairs* and the *Chronicle of Higher Education*. Browse non-academic labour market websites. Stay on the lookout for special events like Graduate Student Career Week to explore your career pathways.
  - Check admission test deadlines if needed for further studies.

INTERMEDIATE STATE

- **Achieve your academic goals**
  - Present your research to faculty and fellow graduate students.
  - Schedule regular meetings with your supervisor and meet thesis committee at least twice a year.
  - Find your way through the academic process with help from departmental and Expanding Horizons academic workshops, the program director, the SGS Habitat, and Student Academic Stress Services (SASS).

- **Maximize research impact**
  - Consider participating in the 3 Minute Thesis (3MT) competition.
  - Expand your research audience through social media.
  - Attend or present at a conference based on the discussion with your supervisor.

- **Build skills and experience**
  - Start keeping an eportfolio of your skills, experiences and competencies.
  - Use a Research Assistant position to develop your research skills.
  - For help with teaching, get support from the Centre for Teaching and Learning.

- **Engage with your community**
  - Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.
  - Prepare for work or studies in a multi-cultural environment by taking the Intercultural Awareness Training Certificate hosted by QUIC and Four Directions Indigenous Student Centre.
  - If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.

- **Launch your career**
  - Explore different careers of interest by reading alumni profiles on the SGS website, and using Queen’sConnects on LinkedIn to connect with Queen’s alumni, or find alumni in various careers through “Ask an Alum”.
  - If you are considering a PhD, MD, or MD PhD, reach out to faculty, and apply for the programs of your interest and external scholarships if applicable.

WRAPPING UP

- **Achieve your academic goals**
  - Write and revise your research and thesis draft.
  - Defend your thesis and submit to the GSpace.
  - Present your research at the TMED Seminar Day.

- **Maximize research impact**
  - Consider publishing elements of your research. Learn from the Expanding Horizons Publishing workshop.
  - Attend a major conference in your field based on the discussion with your supervisor.
  - Set up a meeting with the School of Graduate Studies for a Grad Chat to discuss your research interests.

- **Build skills and experience**
  - Practice articulating the skills you have been developing in different forums: casual conversation, networking, interviews.
  - Check out opportunities for extra training through CTL, Expanding Horizons, MITACS, or other sources to boost your skills.
  - Investigate internships from MITACS and other sources.

- **Engage with your community**
  - Do some targeted networking with people working in careers of interest. Research organizations of interest, through Queen’sConnects on LinkedIn, the Queen’s Alumni Association, professional associations, and at conferences.
  - Consider joining appropriate professional associations in consultation with your supervisor.

- **Launch your career**
  - Investigate internships for advice on various career options.
  - Participate in hiring committees and attend job talks. Research careers of interest. Craft your CV or resume and job application materials.
  - Start focusing on areas of interest. Research organizations of interest and start putting together your industry resume and beginning of your job search plan. Get help from Career Services with job searching, resumes, or interviews.

*This map is intended to provide suggestions for activities and careers, but everyone’s abilities, experiences, and constraints are different. Build your own Grad Map using our online My Grad Map tool.
Application FAQs

What do I need to know to APPLY?

ACADEMIC REQUIREMENTS
• An undergraduate honours degree from a recognized university with a minimum of a B+ average in the last two years. At Queen’s, a B+ is equivalent to a percentage conversion of 77-79.9% and a Grade Point Average of 3.3 (out of 4.3).

ADDITIONAL REQUIREMENTS
• Applications for admission are completed and submitted on the School of Graduate Studies website, including an online application form and specific instructions regarding how to submit the following documents:
  • A Statement of Interest about how applicants’ background experiences and career aspirations make them ideally suited for the program (up to 4000 characters in the online application);
  • Transcripts for all postsecondary education;
  • Two references from individuals familiar with the applicant’s academic performance;
• Applicants are required to submit an electronic resumé/curriculum vitae to tmed@queensu.ca.

LANGUAGE REQUIREMENTS
• In cases where English is not the first language, nor was the language of instruction in undergraduate studies, applicants must demonstrate English language proficiency. Those applicants will need to provide proof of English language proficiency through one of the following:
  • International English Language Testing System (Academic module) with a minimum score of 7 in each component, or
  • TOEFL iBT with a passing score of 93 including a minimum score of 24 on the speaking section.

Before you start your application, please review the Graduate studies application process.

What about FUNDING?

We offer our master’s students a minimum funding of $21,000 per year for two years.

Apply for external funding from OGS, CIHR/NSERC and other sources. Queen’s will automatically issue a one time $5,000 award to incoming Masters students who have won federal government tri-council awards. See the School of Graduate Studies’ information on awards and scholarships for more.