

# HONOURS BACHELOR OF SCIENCE IN TRANSLATIONAL AND MOLECULAR MEDICINE AND MASTER OF SCIENCE

The Bachelor of Science with Honours in Translational and Molecular Medicine (TMM) is a unique collaborative effort between the Faculty of Medicine's researchers and its affiliated institutes. The program integrates theoretical and practical courses with elearning, offering students an enriching educational environment and exposing them to innovative research throughout their studies. TMM offers the largest number of advanced laboratories for an undergraduate program in Canada. Students are taught by both basic scientists and clinicians, providing them with the skillsets required to perform cutting-edge biomedical research.

Three program options are available: Honours in Translational and Molecular Medicine, Integrated Honours BSc/MSc in Biochemistry, Cellular and Molecular Medicine, Microbiology and Immunology or Neuroscience, and the Integrated BSc/PhD program in the same disciplines.

## Admission Requirements

For the Integrated Honours BSc/MSc, all the requirements for admission for the Honours BSc in Translational and Molecular Medicine must be met along with minimum admission average of 8.0 (CGPA) and an admission interview.

## Program Requirements

The French immersion stream is available with this program.

Basis of admission: two full years of study in a BSc. (60 units)

Requirements for this program have been modified. Please consult the 2025-2026 calendars (<https://catalogue.uottawa.ca/en/archives/>) for the previous requirements.

### Compulsory Courses

TMM 3009	Biomedical Research Laboratory	9 Units
TMM 3101	Molecular Biology and Inherited Disorders	3 Units
TMM 3102	Proteins: Structure, Function and Disease	3 Units
TMM 3103	Metabolic Pathways of Human Diseases	3 Units
TMM 3104	Cellular Basis of Disease	3 Units
TMM 4311	Seminars in Translational Molecular Medicine	3 Units
TMM 4906	Life in a Lab I	1.5 Units
TMM 4907	Life in a Lab II	1.5 Units
TMM 4950	Science Communication	3 Units
TMM 5900	Research Project	12 Units
MED 8166	Professionalism and Professional Skills	

### Optional Courses

6 course units from:	6 Units
PHS 3341	Physiology of Sensation, Regulation Mechanisms, Movement and Reproduction
PHS 3342	Physiological Regulation of Intake, Distribution, Protection and Elimination

TMM 3105	Introduction to Immunology
TMM 3106	Introduction to Neurobiology
TMM 3107	Introduction to Genomics
TMM 3108	Introduction to Medical Bioinformatics
TMM 3111	Phage Hunters: Genome Annotation and Analysis <sup>1</sup>
TMM 3112	Bioinformatics for Neurodegenerative Disease <sup>1</sup>
TMM 3300	Selected Topics in Translational and Molecular Medicine
TMM 3301	Introduction to Inquiry Based Research
TMM 3302	Current Topics in Precision Medicine

## For the Master's in Microbiology and Immunology

### Compulsory Courses:

MIC 5100	Pathogen Interactions and Host	3 Units
MIC 5366	MSc Seminar	3 Units
THM 7999	Master's Thesis	

### Optional Courses:

3 units of optional courses from biochemistry (BCH), cellular and molecular medicine (CMM), medicine (MED), microbiology and immunology (MIC), clinical science and translational medicine (CTM) or neuroscience (NSC) at the 5000, 6000, 7000 or 8000 level	3 Units
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### Elective Courses:

6 elective course units from another faculty <sup>1</sup>	6 Units
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<sup>1</sup> PHI 2396 is strongly recommended.

## For the Master's in Neuroscience

### Compulsory Courses:

NSC 8324S	Seminar for MSc Students	3 Units
THM 7999	Master's Thesis	

### Optional Courses:

3 course units from:	3 Units
NSC 5102	Cellular and Molecular Neuroscience
NSC 5104	Systems Neuroscience
3 units of optional courses from biochemistry (BCH), cellular and molecular medicine (CMM), medicine (MED), microbiology and immunology (MIC), clinical science and translational medicine (CTM) or neuroscience (NSC) at the 5000, 6000, 7000 or 8000 level	3 Units

### Elective Courses:

6 elective course units from another faculty <sup>1</sup>	6 Units
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<sup>1</sup> PHI 2396 is strongly recommended.

## For the Master's in Clinical Science and Translational Medicine

### Compulsory Courses:

CTM 7101	MSc Seminar	3 Units
CTM 7104	MSc Thesis Entrustable Professional Activities	
CTM 8101	Research Methods and Experimental Design	3 Units

This is a copy of the 2026-2027 catalog.

THM 7999 Master's Thesis

**Optional Courses:**

3 units of optional courses from biochemistry (BCH), cellular and molecular medicine (CMM), medicine (MED), microbiology and immunology (MIC), clinical science and translational medicine (CTM) or neuroscience (NSC) at the 5000, 6000, 7000 or 8000 level 3 Units

**Elective Courses:**

6 elective course units from another faculty <sup>1</sup> 6 Units

<sup>1</sup> PHI 2396 is strongly recommended.

## For the Master's in Biochemistry

**Compulsory Courses:**

BCH 5366 MSc Seminar 3 Units

THM 7999 Master's Thesis

**Optional Courses:**

6 optional course units in biochemistry (BCH), cellular and molecular medicine (CMM), medicine (MED), microbiology and immunology (MIC), clinical science and translational medicine (CTM) or neuroscience (NSC) at the 5000, 6000, 7000 or 8000 level 6 Units

**Elective Courses:**

6 elective course units from another faculty <sup>1</sup> 6 Units

<sup>1</sup> PHI 2396 is strongly recommended.

## For the Master's in Cellular and Molecular Medicine

**Compulsory Courses:**

CMM 8324S Seminars I 3 Units

THM 7999 Master's Thesis

**Optional Courses:**

6 optional course units in biochemistry (BCH), cellular and molecular medicine (CMM), medicine (MED), microbiology and immunology (MIC), clinical science and translational medicine (CTM) or neuroscience (NSC) at the 5000, 6000, 7000 or 8000 level 6 Units

**Elective Courses:**

6 elective course units from another faculty <sup>1</sup> 6 Units

<sup>1</sup> PHI 2396 is strongly recommended.