HONOURS BACHELOR IN
TRANSLATIONAL AND
MOLECULAR MEDICINE AND
DOCTORATE OF PHILOSOPHY
CELLULAR AND MOLECULAR
MEDICINE

Overview
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 e-learning, 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/PhD, 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.

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 5900 Research Project 12 Units
- TMM 4950 Science Communication 3 Units
- TMM 3300 Selected Topics in Translational and Molecular Medicine 3 Units
- TMM 4910 Advanced Methods in Biomedical Research - Special Topics 1.5 Units
- MED 8166 Professionalism and Professional Skills
- PHI 2396 is strongly recommended.

3 course units from:
- PHS 3341 Physiology of Sensation, Regulation, Mechanisms, Movement and Reproduction 3 Units
- PHS 3342 Physiological Regulation of Intake, Distribution, Protection and Elimination

TMM 3105 Immunity and Infectious Diseases
TMM 3106 Introduction to Neurobiology
TMM 3107 Introduction to High-throughput and Systems Biology Methods Relevant to Diseases
TMM 3300 Selected Topics in Translational and Molecular Medicine

3 course units from:
- TMM 4910 Advanced Methods in Biomedical Research - Special Topics
- TMM 4911 Advanced Methods in Biomedical Research - Cell Biology and Microscopy
- TMM 4912 Advanced Methods in Biomedical Research - Biochemistry and Biophysics
- TMM 4913 Advances Methods in Biomedical Research - Nucleic Acids
- TMM 4914 Advanced Methods in Biomedical Research - Flow Cytometry
- TMM 4915 Specialized Workshops in Biomedical Research - Epigenetics and Genomics
- TMM 4916 Advanced Methods in Biomedical Research - Electrophysiology
- TMM 4917 Advanced Methods in Biomedical Research - Microbiology

TMM 4918 Seminar:
- CMM 8325S Seminars II 3 Units

Comprehensive Exam:
- CMM 9998 Comprehensive Examination (PhD)
- MED 8166 Professionalism and Professional Skills

Thesis:
- THD 9999 Doctoral Thesis

Optional Courses:
- 6 optional course units at the 5000 and 8000 level 6 Units

Elective Courses:
- 6 elective course units offered by another faculty 6 Units

Note(s)
1 PHI 2396 is strongly recommended.