

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

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.

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

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 3300	Selected Topics in Translational and 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	

3 course units from:

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 3300 Selected Topics in Translational and Molecular Medicine

TMM 3902 Current Topics in Precision Medicine

Compulsory course for the neuroscience program

3 course units from:

NSC 5102 Cellular and Molecular Neuroscience

NSC 5104 Systems Neuroscience

Seminar:

3 units of seminar courses from the list depending on the discipline of the Doctorate 3 Units

BCH 8366 PhD Seminar

CMM 8325 Seminars II

MIC 8366 PhD Seminar

NSC 8325 Seminar for PhD Students

Thesis

THD 9999 Doctoral Thesis

Comprehensive Exam

3 units from the list depending on the discipline of the Doctorate 3 Units

BCH 9998 Comprehensive-Examination (PhD)

CMM 9998 Comprehensive Examination (PhD)

MIC 9998 Comprehensive Examination

NSC 9998 Comprehensive Examination (Ph.D.)

Optional Courses

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

Elective Courses

6 elective course units from another faculty ¹ 6 Units

Note(s)

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PHI 2396 is strongly recommended.