

# 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)

### 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: |  | 3 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 3300 Selected Topics in Translational and Molecular Medicine

TMM 3301 Introduction to Inquiry Based Research

TMM 3302 Current Topics in Precision Medicine

TMM 3902 Current Topics in Precision Medicine

### Compulsory course for the microbiology program

MIC 5100 Pathogen Interactions and Host 3 Units

### Compulsory course for the neuroscience program

3 course units from: 3 Units

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 Master's Degree 3 Units

BCH 5366 MSc Seminar

CMM 8324 Seminars I

MIC 5366 MSc Seminar

NSC 8324 Seminar for MSc Students

### Thesis

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) or neuroscience (NSC) at from the 5000, 6000, 7000 or 8000 level 6 Units

### Elective Courses

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

Note(s)

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PHI 2396 is strongly recommended.