MEDICAL FOUNDATIONS

The Master of Medical Foundations (MMF) is a three-semester (12-month) hands-on graduate program that is designed to take students to the next level in their healthcare professional endeavours. More specifically, students gain advanced theoretical and practical understanding of human anatomy and physiology, strong problem-based thinking skills applicable to the diagnosis, management, and treatment of disease, a robust foundation on infection and immunity, and a comprehensive understanding of social determinants of health. Students explore all these topics from a lifestyle medicine perspective and have the opportunity to use state-of-the-art anatomy and research facilities. This program is suited for those who wish to pursue medical school or roles in the frontiers of medical research, allied health professionals, pharmaceuticals, health policy, health information management and knowledge mobilization, medical equipment development and sales, patient safety, and medical insurance, among others.

Administrative Staff

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Graduate Faculty

This list may include Regular Graduate Faculty, Associated Graduate Faculty and/or Graduate Faculty from other universities

Danielle Bentley
BSc B.PHE MSc Queen's, PhD Toronto - Associate Professor
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BA Johns Hopkins, MA, PhD Princeton - Professor and Dean, College of Biological Sciences
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Priyanka Pundir
B.V.Sc. G.B. Pant (India), PhD Atlantic Veterinary - Assistant Professor
Graduate Faculty

Angela Scott
B.Sc. Saskatchewan, PhD British Columbia - Assistant Professor
Graduate Faculty

Admission Requirements

To be admitted into this program, students must have successfully completed a bachelor/baccalaureate of science in an honours program or the equivalent from a recognized university in any field. The minimum average for admissions is B- in the last two years of full-time equivalent study.

If the students' first language is not English, they will be required to submit an acceptable result from one of the approved standardized English language tests. Minimum acceptable test scores are as follows:

- For TOEFL, a minimum score of 93, with a minimum score of 22 in each of the four categories
- For IELTS, a minimum score of 7.0, with a minimum of 6.5 in each component
- For Duolingo, a minimum overall score of 130, with a minimum score of 120 in each of the four categories

Language test exemptions will be granted students with degrees completed in English from a university in Canada, Australia, New Zealand, the United States, and/or the United Kingdom.

Please note that these test score requirements are higher than the general university requirements. We cannot accept applicants with test scores lower than the minima stated above.

Learning Outcomes

By the end of the program, students will have the capacity to:

1. Describe the anatomical structures of the human body relative to systems, location, and planes of the body, and evaluate how alterations in anatomical structures are associated with pathologic outcomes of system dysfunction.

2. Identify and explain the interrelated functions of individual physiological systems in complex, integrated body functions, including neuro-endocrine, cardiovascular, renal, reproductive, digestive, bone and blood, and skeletal systems and functions.

3. Discuss and predict how disease, injury, or other stressors can lead to disordered function and disrupt homeostasis of the human body.

4. Explain the origins (aetiologies) and developmental mechanisms (pathogenesis) of diseases, including chronic inflammation, abnormalities of immunity, bacterial infections, obesity, cardiovascular disease, and tumours.

5. Apply integrative thinking to develop models and hypotheses as to how complex, multifactorial disease conditions may evolve, how they

may be diagnosed and treated, and how they may present and progress differently due to health inequities.

6. Integrate research knowledge on the pillars of lifestyle medicine — sleep, nutrition, exercise, social connection, stress reduction, and avoidance of harmful substances — and evaluate their potential application to professional practice to prevent, diagnose, and treat disease.

7. Analyze and explain the cellular and molecular mechanisms by which the immune system detects, responds to, and eliminates various pathogens, and evaluate how this knowledge can be applied to the diagnosis and management of infectious diseases.

8. Analyze and disseminate evidence-based research, using advanced written and oral communication skills in a multimodal way for academic and non-academic audiences.

9. Evaluate cultural, socioeconomic, behavioral, and environmental determinants of human health and their impact on society and healthcare systems.

10. Develop an ethical and compassionate approach to human health and propose how it can be implemented to respect the autonomy, dignity, and cultural diversity of people.

Program Requirements

Students are required to complete five mandatory courses for a total of 4.0 credits, as follows: 2.0 credits are completed in the Summer semester, 1.0 in the Fall, and 1.0 in the Winter.

Code	Title	Credits
MEDF*6050	Clinical Human Anatomy	1.00
MEDF*6060	Multisystem Human Physiology	1.00
MEDF*6070	Mechanisms of Disease	1.00
MEDF*6080	Lifestyle Medicine	0.50
MEDF*6090	Infection and Immunity	0.50