

Program Description

The Master of Science in Medical Physiology Program at MCW is a one-year special Master's program designed for college graduates strengthen their academic credentials for medical school. Our program includes the first-year medical student curriculum at MCW, courses and exams, providing students with experience comparable to MCW medical students. Our program also offers an MCAT course in collaboration with Wisconsin Lutheran College. We maintain a small cohort size to ensure each student receives the personalized academic and career development they need to succeed. Graduates of this program have a solid foundation for medical school, graduate school, and jobs in academia, industry, or government positions, as supported by our strong placement data.

Admission Requirements: SAT or ACT scores are preferred, but other health professional school test scores are acceptable. GRE scores are not available.

Credits Required to Graduate

32 credits

Required Courses

MCW 100 Foundations of Medicine. 6 credits

The purpose of the Foundations of Medicine Block is to establish a strong, broad foundation of basic scientific knowledge to prepare Phase 1 learners for future systems-based units. This block integrates concepts of biochemistry, cell biology, genetics, physiology, anatomy, microbiology, pharmacology, and biostatistics to form a wide base of knowledge related to cellular and tissue biology, organ systems, patients and communities, which are applied to solve clinical problems in the context of patient-based scenarios. Learning experiences are reinforced with small group discussions, interpretation of molecular diagnostic tests, and laboratory activities.

MCW 110 Hematology/Immunology. 5 credits

The Hematology/Immunology block is designed to teach medical students the biochemical, genetic, and physiological etiology of hematological and immunological pathologies and physiological responses to infection. This course will be anchored in hematopoiesis and concern the biology of hematopoietic stem cell progeny. This will include the physiology and pathophysiology of red blood cells, white blood cells and platelets, and related pathologies including immune system disorders, autoimmunity, leukemia and lymphoma, and clotting

disorders. This course will be divided into three sections: (i) immunology, (ii) leukemia and

consistent with the second 18 weeks of The Good Doctor course in the MCWfusion curriculum (INTE 12103), but with some content and assessments adapted for MMP students. This course includes

PHYS 08295 Reading and Research. 1-9 *credits* (*elective*).

The course of study for Reading and Research is designed by each student with his/her advisor to focus on readings in literature in the student's field, to build bibliographic resources for the dissertation, and to conduct supervised, independent research.

INBS 16271 Fundamentals in Neuroscience. 3.5 *credits* (*elective*).

Fundamentals of Neuroscience follows a multidisciplinary approach to current knowledge about the structural and functional properties of the nervous system. The mechanisms of the nervous system are described at the molecular, cellular, systems and complex brain function levels. The course includes in-class lectures, seminars from prominent scientists (video archives), and written assignments. The purpose of this course is to introduce 1st year graduate students to the structure and function of the human nervous system.

INBS 16278 Functional Genomics. 3 *credits* (*elective*).

This course will use a variety of didactic lecture, paper discussions, and hands on bioinformatics learning to provide students with fundamentals in genomics, transcriptomics, proteomics, genetic manipulation, epigenetics, protein modeling and molecular simulation. Theory, practical applications, and analysis methods will be taught.

Contact information: gradschool@mcw.edu | (414) 955-8218