Molecular Microbiology and Immunology (MS) Program Objectives

The primary objective of our Master of Science program is to prepare students for a career in the broad field of biomedical sciences with focus on, but not limited to, microbiology, virology, immunology, and cancer research.

Graduates of this program will be able to do the following:

1. Understand theory in combination with hands-on basic biomedical research in microbiology
2. Demonstrate a core knowledge in the areas of microbiology, virology, and immunology with the ability to describe how pathogens interact with normal cells and their influence on cell biology, biochemistry, cancer biology, molecular genetics, virology, cellular physiology, stem cell biology, and experimental pathology
3. Learn how to perform cutting-edge biomedical research, in a variety of areas, including themes in in virology (AIDS, hepatitis, herpes, papilloma, virus-induced cancers, viral pathogenesis), immunology (vaccine development, autoimmune diseases, allergy, asthma, immune therapy, immune evasion by viruses), cancer (oncogenes and tumor suppressor genes, cell cycle, apoptosis, signal transduction, drug development, mechanisms of virally-induced cancers, chemical carcinogenesis), stem cells (cancer and embryonic), premature ageing (Werner syndrome, Progeria), and others. The students will be able to select a laboratory for rotation. For optional thesis work, a mutual agreement can be made between the student and the respective lab leader. Typically, students take two years to complete the degree requirements (34 units), and thereafter they are awarded the Master of Science degree in Molecular Microbiology and Immunology.
4. Develop a solid foundation for further professional studies towards higher degrees, including the PhD and/or MD degrees.