Department	Code	Course Title	Course Description	Term	Schedule	Course Director Contact Information
IMS	MSC1006H	Neuroanatomy- Introduction to Anatomical Organization of the Brain	This course will focus on detailed review of the fundamental organization of the nervous system, at both the gross and cellular levels. The major components of the nervous system will be discussed in a lecture format. The lectures will be supplemented with interactive anatomy sessions, either in the laboratory or using multimedia platforms. Student-led presentations will maximize the students' contact with techniques employed to study neuroanatomy. This course is suitable for students who have some background in the neurosciences who are now embarking in a neuroscience project as part of their graduate degree. Course assessment will be based on quizzes, presentations as well as a final examination. Textbook: Neuroanatomy, text and atlas, by John H. Martin, 4th edition.	F	Wednesday	George Ibrahim (george.ibrahim@sickkids.ca)
IMS	MSC1090H	Introduction to Computational Biostatistics with R	The goal of this class is to prepare graduate students to perform scientific data analysis. Successful students will learn how to use statistical inference tools to gain insight into their data, as well as be exposed to techniques and best practices to store, manage and analyze data.	F	Tuesday and Thursday 10-11:30 am	cc.medscience@utoronto.ca
IMS	MSC2010Y	Molecular Medicine in Human Genetic Disease	This course should encourage students to develop an approach to the genetic analysis, investigation and treatment of human disease.	F	Wednesday 3-5 pm	Lucy Osborne (lucy.osborne@utoronto.ca)
IMS	MSC7000Y	Regenerative Medicine	MSC7000Y is a unique flagship course of wide interest to students with a health professional background (i.e. MDs, RNs, clinicians), and scientists across Canada. This course will provide students with an understanding of the science behind the field, the bio-processes, new and emerging technologies, the ethical and regulatory aspects of implementation and the academic/industry partnerships on which clinical success is likely to be based. Interested students must complete the following form: https://forms.office.com/pages/responsepage.aspx?id=Bc4N2T0GT0Gu_sKS_xjYsEe-xvxLzLhDhHWE4VeBPYVUREg3SVdQRVdFMElxN1ZYMTZUWFNaRFJXVS4u	F	Thursday 9-11 am	Sonya MacParland (Sonya.MacParland@uhnresearch.ca)
IMM	IMM1000Y	Recent Advances in Immunology	Using a combination of lectures and seminars, this course will give students an in-depth knowledge of recent key advances in various Immunological topics.	Y	M 13:30 - 16:00	Dr. Dana Philpott(dana.philpott@utoronto.ca)
IMM	IMM1428H	Molecular Immunology	This course will focus on the molecular and cellular biology of immune recognition. The course will emphasize historical and recent experimental evidence leading to our current understanding of immune recognition. Subtopics are subject to change and have recently included mechanisms of diversification of immunoglobulin receptors, T cell –MHC interactions, T cell activation and signaling mechanisms; receptors of the innate immune system; biology of innate lymphoid cells.	F	T 10:00 - 11:00 TH 10:00 - 11:00	Dr. Alberto Martin(alberto.martin@utoronto.ca
IMM	IMM1429H	Developmental Immunology	This course covers the topics of hematopoiesis, myelopoiesis, lymphopoiesis, a study of the development of cells involved in the immune system including their ontogeny, physical, molecular, and biochemical characteristics, regulation of differentiation and selection of lymphocytes.	F	T 15:00 - 17:00	Dr. JC Zúñiga-Pflücker (jczp@sri.utoronto.ca)
IMM	IMM1430H	Clinical Immunology	This course will address the underlying pathogenesis as well as highlight the challenges of treating immune-related conditions such as autoimmunity, cancer, HIV, and transplantation and graft rejection. Half of the lectures will address the genetics and cellular pathogenesis of autoimmune diseases such as multiple sclerosis, type I diabetes and lupus. Other lectures will overview a number of immunological challenges faced in the clinic, such as preventing graft rejection after transplantation or boosting the immune system to fight cancer and HIV.	S	T 15:00 - 17:00	Dr. Shannon Dunn (shannon.dunn@utoronto.ca) Dr. Stuart Berger (stuart.berger@utoronto.ca
IMM	IMM1431H	Immunotherapy	Therapies that enhance, or suppress, the body's immune response have proven remarkably efficient for the treatment of human diseases such as cancer, autoimmunity and chronic inflammation. Some of these therapies, such as the so-called checkpoint inhibitors and CAR-T cell therapies have recently leaped from bench to bedside. This course will cover the fundamental immune principles at play, how they were discovered, as well as the existing and future immune therapies to treat these diseases.	S	F 13:00 - 16:00	Dr. Tracy McGaha(tmcgaha@uhnresearch.ca
IMM	IMM2400	Translational Immunology	Using a combination of lectures, guest speakers, discussion and case studies, students will explore how fundamental advances in immunology are being developed as next generation reagents, biomarkers, therapeutics, vaccines and therapeutic immune cells. The course will be composed of 12 2-hour sessions. Each of the first 10 sessions will be composed of a lecture component followed by related discussion of the topic. For some sessions, experts in industry will be brought in as guest lecturers and discussants. Students will present their case studies in the final two sessions.	S	M 13:00 - 15:00	Dr. Stuart Berger* (stuart.berger@utoronto.ca) *contact instructor for permission to enroll
IMM	IMM2500H	Recent Advances in Clinical Immunology	This course is designed to give basic science students in immunology an appreciation of clinical issues and diseases relevant to the broad field of Immunology, hopefully planting the seeds for future collaboration between bench and clinical science researchers. The topics covered by the lecturers are numerous such as Type 1 Diabetes, RA, MS, Malignancies of the Hematopoietic System, Cytokines, GVH, Immunotherapy, Infectious Diseases (AIDS), Transplantation etc.	S	T 13:00 - 16:00	Dr. Adrian Sacher(Adrian.Sacher@uhn.ca)
NUSCI	NFS1201H F	Public Health Nutrition	This lecture-discussion course focuses on food and nutrition problems in the setting of the general community. The course is designed to provide students with a basic understanding of theoretical and practical issues underpinning population-level assessment in nutrition and an appreciation of nutrition within the broader context of public health or 'population health'. Specific topics include the derivation and application of nutrient requirement estimates and nutrition recommendations, the measurement of food intake and food insecurity, and the development of individual- vs. population-based intervention strategies. Prerequisite: Prior specialized knowledge in nutrition; basic statistics.	F	Wed 10:00am – 12:00pm	Dr. Laurie Ricciuto - laurie.ricciuto@utoronto.ca
NUSCI	NFS1212H F	Regulation of Food Compositions, Health Claims and Safety	The Canadian food industry is producing new foods and food ingredients in response to consumer demand and lifestyle, new crops that offer advantages over traditional crops (e.g., improved resilience against pathogens or environmental stressors or enhanced nutritional attributes), and functional foods for the maintenance of health and prevention of disease. The goal of this course is to provide students with an understanding of the regulatory frameworks that are in place to ensure a safe food supply and to ensure communications made in food labeling and advertising are not deceptive. Through a series of guests lectures from individuals in government, industry, and academia, students will be exposed to several aspects of scientific and regulatory affairs and will have a unique opportunity to interact and discuss topics with experts in a variety of fields. Students will be exposed to such topics as the structure and application of the Canadian Food and Drugs Act and Regulations, health claim and labelling requirements, study design and standards of evidence for regulatory submissions, and the roles of government, industry and academia in controlling food products in Canada and internationally. This course is an excellent opportunity for students to form networks with current subject matter experts, and to gain exposure to career opportunities in industry, government and academia.	F	Thu 1:00pm – 4:00pm	TBD Dr. Hvroje Fabek - hrvoje.fabek@utoronto.ca

NUSCI	NFS1220H S	Clinical Nutrition	This course is concerned with the nutritional component of various clinical topics dealing both with normal physiological states such as pregnancy, growth and development and aging, and with disease states such as are encountered in the clinical setting. Emphasis is placed on the interrelationship between the concepts in nutritional/biological sciences and clinical medicine.	S	Mon 4:00pm – 6:00pm	Dr. David Jenkins - david.jenkins@utoronto.ca
NUSCI	NFS1224H S	Nutritional Epidemiology	The overall objective of this course will be to provide students with a critical understanding of theoretical and practical considerations in the conduct of epidemiologic research related to nutrition. The focus will be on studies of the role of diet and nutrition inchronic disease (as opposed to food-borne infectious disease outbreaks and associated issues). The material will have a strong methodological emphasis, and is intended for graduate students with an interest in understanding how epidemiologic studies of diet and chronic disease are conducted. Specifically, students will be expected to gain a critical understanding of the design, conduct, analysis and interpretation of nutritional epidemiologic studies, including the usual methods applied for assessment of this exposure, familiarity with methodological issues related to nutritional epidemiologic studies such as the appropriateness of various study designs for specific research questions, and issues regarding data analysis and interpretation.	S	Thu 10:00am – 1:00pm	Dr. Anthony Hanley - anthony.hanley@utoronto.ca
NUSCI	NFS1484H F	Advanced Nutrition	Physiological and biochemical features of intermediary metabolism will be discussed as determinants of nutrient needs. The roles of various nutrients in determining the development and adaptability of the whole body, organs and cells will be addressed. The course will provide an introduction to the interpretation of research data.	F	Thu 9:00am – 12:00pm	Dr. Adam Metherel - adam.metherel@utoronto.ca