HUMAN AND MOLECULAR GENETICS (HMG)

**HMG 8103 Advanced Topics in the Molecular Biology of Human Diseases I (3 units)**
Topics will be selected and representative of current developments in the field. The course consists of a repeated series of a 3 hour lecture by an expert in the field one week, followed by student presentations, discussions and critique of assigned papers on that topic the following week. Topics on selected diseases will focus on various aspects of cancer, apoptosis, disease gene identification and gene therapy. In the past these topics have included the molecular aspects of various cancers, spinal muscular atrophy, tissue regeneration, the discovery of disease genes, infectious disease (HIV) and gene therapy. Students will write a grant proposal and participate in mock grant review panels. Depending on enrolment, the course may be limited to HMG students only.

**Course Component:** Lecture  
Prerequisite: Permission of the HMG program director.

**HMG 8105 Advanced Topics in the Molecular Biology of Human Diseases II (3 units)**
Topics will be selected and representative of current developments in the field. The course consists of a repeated series of a 3 hour lecture by an expert in the field one week, followed by student presentations, discussions and critique of assigned papers on that topic the following week. Topics on selected diseases will focus on various aspects of cancer, apoptosis, disease gene identification and gene therapy. In the past these topics have included the molecular aspects of various cancers, spinal muscular atrophy, tissue regeneration, the discovery of disease genes, infectious disease (HIV) and gene therapy. Students will write a grant proposal and participate in mock grant review panels. Depending on enrolment, the course may be limited to HMG students only.

**Course Component:** Lecture  
Prerequisite: Permission of the HMG program director.

**HMG 8106 Clinical Cytogenomics (3 units)**
Comprehensive review of the basic principles and technologies in cytogenomics and their clinical application for diagnostic and prognostic purposes. Registrations may be limited depending on enrolment.

**Course Component:** Lecture  
Prerequisite: Permission of the course coordinator.

**HMG 8107 Clinical Biochemical Genetics (3 units)**
Presentation of the biomechanical and molecular bases of inborn errors of metabolism. The course consists of a series of lectures followed by student discussion of a related paper assigned the previous week. Registrations may be limited depending on enrolment.

**Course Component:** Lecture  
Prerequisite: Permission of the course coordinator.

**HMG 8108 Clinical Molecular Genetics (3 units)**
Comprehensive review of all aspects of clinical molecular genetics acquainting students with clinical applications of various molecular technologies. Registrations may be limited depending on enrolment.

**Course Component:** Lecture  
Prerequisite: Permission of the course coordinator.