

# HUMAN AND MOLECULAR GENETICS (HMG)

The following courses are offered by the Faculty of Medicine.

## **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.

## **HMG 8506 Cytogénomique clinique (3 crédits)**

Revue exhaustive des principes de base et des techniques en cytogénomique et de leur application clinique à des fins diagnostiques et pronostiques. Les inscriptions peuvent être limitées selon la participation.

**Volet :** Cours magistral

## **HMG 8507 Génétique biochimique clinique (3 crédits)**

Présentation des bases biochimiques et moléculaires des maladies innées du métabolisme. Les inscriptions peuvent être limitées selon la participation.

**Volet :** Cours magistral

## **HMG 8508 Génétique moléculaire clinique (3 crédits)**

Revue exhaustive de tous les aspects de la génétique moléculaire clinique donnant aux étudiants des exemples des applications cliniques des différentes techniques en génétique moléculaire. Les inscriptions peuvent être limitées selon la participation.

**Volet :** Cours magistral

## **HMG 8600 Special Topics in Human and Molecular Genetics (3 crédits)**

Current topics in molecular genetics, developmental genetics, cancer genetics, neurogenetics, population genetics, clinical genetics and other areas depending on available expertise and interest expressed. Offered alternate years subject to sufficient demand.

**Volet :** Cours magistral

Permission of the Department is required.