**BIO260H1S – CONCEPTS IN GENETICS**

48L, 12T

**Lecturers:**

Prof. P. McCourt (Team leader) peter.mccourt@utoronto.ca

 Prof. D. Guttman david.guttman@utoronto.ca

**Course Administrator:**

Peggy Salmon RW 424E 416-978-8608 peggy.salmon@utoronto.ca

**Prerequisite:** BIO230H1/255H1

**Exclusion:** HMB265H1

Genetics is at the very core of modern biology, and becoming increasingly important as the advances of genomics begin to find their way into our everyday lives. A strong understanding of the fundamental concepts of this field is essential for anyone wishing to pursue a career in biology or the health sciences. BIO260 provides an introduction to fundamental genetic concepts, with an emphasis on transmission genetic, evolutionary genetics, and genomics. We will focus on the nature of genes, mechanisms of genetic inheritance and regulation, the relationship between genotype and phenotype, the use and significance of genetic variation for the study of gene function and evolutionary processes, the use of genomic methods to further our understand of the organization, structure, function and interaction of genes, and the power of model systems for elucidating fundamental genetic questions. This course will discuss how genetic experiments can revolutionize our knowledge and lead to the development of new scientific concepts. Problem solving is an important component of genetic analysis, and is strongly emphasized in this class.

**Evaluation:** Eight quizzes (20%), four tests (80%)