

Course Code: MMG1311H

Course Title: Functional Genomics – Experimental Approaches

Course Location: TBD

Course Time and Date: TBD

Course Instructor(s): Charlie Boone and Andy Fraser

Instructor Contact Information (email): andyfraser.utoronto@gmail.com and charlie.boone@utoronto.ca

Course Overview:

The course provides a survey of current and emerging approaches in functional genomics and proteomics, with a focus on experimental design and data interpretation.

The course consists of a series of presentations and guided discussions by researchers that are developing cutting-edge functional genomics and/or proteomics approaches. The course is designed to be highly interactive — the presentations by invited speakers provide a framework for discussion and students are expected and encouraged to engage as fully as possible. It's a great opportunity for students to explore cutting edge genomics methods with great invited speakers and to learn through these discussions.

Topics to be covered this year will include: a) Next Generation nucleic acid sequencing, b) Genetic interactions in model organisms, c) Proteomics and protein interactions, d) High content screening, e) CRISPR technologies, and f) Systematic assay development, g) computational analysis.

Marking Scheme:

Graduate student grades will be based on participation to the discussions (15%), presentation of a research paper in a journal club format (15%), a short presentation of a CIHR-style grant concept, and, ultimately, a written grant proposal (70%).

Policy for absence:

If you anticipate missing a class you must let the instructors know in advance, given the weight on participation and the fact that there are only six classes. Providing that you had a legitimate reason for missing the class, you will be provided with an assignment based on the reading for that week that you can use to make up for the missed class.