

**Course Title:** Post-transcriptional Regulatory Mechanisms

**Course Location:** Room 1622 MaRS West Tower

**Course Time and Date:** Mondays from 12pm-2pm

**Course Instructor(s):** Julie Claycomb and Craig Smibert

**Instructor Contact Information (email):** [julie.claycomb@utoronto.ca](mailto:julie.claycomb@utoronto.ca); [c.smibert@utoronto.ca](mailto:c.smibert@utoronto.ca)

### **Course Overview:**

This course will cover topics related to the mechanisms underlying post-transcriptional control of gene expression.

Students will be organized into 6 groups. Each group will be assigned a topic, develop a ~45 min power point-assisted lecture that would be suitable to teach this topic to a class of first year graduate students, and present the lecture to the class.

Following the presentation the class will discuss a paper related to the topic. Students (either volunteers or chosen at random) who were not involved in that week's presentation will present individual figures from the paper.

### **Course Objectives:**

- To obtain a detailed understanding of select topics in post-transcriptional regulation
- To gain experience researching a field and generating an oral presentation
- To gain experience reading papers and critically evaluating them

### **Marking Scheme:**

- 25% In-class participation - we expect all students to participate in all aspects of each class. This includes asking questions of the lecturers and participating in the evaluation and discussion of the methods, data and conclusions, as well as the significance of the results for the field
- 25% In-class presentation of paper figures
- 10% Figure summary forms-filled out weekly
- 40% Introductory lecture:
  - Slide and presentation organization/quality 10 %
  - Ability to answer questions 10 %
  - Content 20 %

### **Course schedule:**

Oct. 2, 2023	12pm-12:30pm	Organizational meeting (MaRS 1622)
Nov. 6, 2023	12pm-2pm	Topic 1: RNA/protein interactions
Nov. 13, 2023	**NO CLASS**	
Nov. 20, 2023	12pm-2pm	Topic 2: The closed loop model
Nov. 27, 2023	12pm-2pm	Topic 3: Specialized Ribosomes
Dec. 4, 2023	12pm-2pm	Topic 4: tRNA Modification
Dec. 11, 2023	12pm-2pm	Topic 5: P bodies: What are they good for?
Dec. 18, 2023	12pm-2pm	Topic 6: miRNA synthesis/degradation

**PLEASE NOTE: ALL GROUPS WILL BE REQUIRED TO SET UP A MEETING WITH JULIE AND CRAIG ON OR BEFORE THE DATE LISTED ABOVE. AT THIS MEETING YOU WILL TAKE THEM THROUGH AN OUTLINE OF YOUR PRESENTATION, SO THEY CAN PROVIDE CONSTRUCTIVE FEEDBACK.**

### **Attendance:**

*Attendance is mandatory, and we will not make exceptions for foreseeable absences (i.e. pre-planned out-of-town travel, etc). Students who know in advance that they cannot be present for all classes should not enroll in the course this year. Exceptions will be made for illness that is documented with a doctor's note. Students must notify instructors before the absence whenever possible. In such cases students will be provided with an assignment based on the reading for that week that can be used to make up for the lost class.*

### **Withdrawal:**

Students may withdraw from the course up to the end of the second two hour session (when up to 33% of the course has been completed). To request withdrawal from a module, please email the instructors.