

BIO C99 – TEAM RESEARCH IN BIOLOGICAL SCIENCES
Fall 2019
COURSE SYLLABUS

Location: Wed, 14:00-16:00, HW408

NOTE: WE WILL NOT MEET EVERY WEEK (SEE SCHEDULE BELOW)
THIS TIME AND LOCATION IS NEGOTIABLE (WE WILL DISCUSS AS A CLASS)

COURSE COORDINATOR: **Dr. Mark Fitzpatrick**
mark.fitzpatrick@utoronto.ca
Office: SW558
416-208-2703 (emergencies only please)
Office Hours: TBA

OTHER IMPORTANT PEOPLE: i) your faculty supervisor
 ii) your group TA

WHAT IS BIO C99?

This course introduces students to academic research and collaboration. A group of 3-5 students work together to develop a research proposal and/or implement a research project under the general guidance of a faculty researcher and the direct supervision of a teaching assistant. In addition to learning about the process of scientific investigation, students learn to work as part of a team, and about the stages in research design, implementation and communication.

REQUIRED PREPATORY TRAINING

Students working in a lab or doing field research must complete WHMIS & Lab Safety Training. Students must contact Human Resources for this training (416-287-7073). Students working with animals must undergo animal care training. Students working with biohazards must undergo biosafety training. All students should consult with their TA and supervisor regarding the training that is required.

COURSE OVERVIEW

This course typically combines a few sessions of in-class discussion and presentations with majority of intensive time in the research laboratory. Classes are taught by Prof. Fitzpatrick and research time is facilitated and directed by your group TA, in consultation with your faculty supervisor.

Questions regarding research challenges/issues are best directed to your TA and faculty supervisor. Questions regarding collaboration, scientific communication, accessing library resources etc. are best directed to Prof. Fitzpatrick.

OBJECTIVES:

By the end of the term students should be able to:

- 1) Efficiently search for and critically read the primary literature.
- 2) Identify underlying assumptions in research papers.
- 3) Understand methodologies of research papers.
- 4) Evaluate data and assess the validity of inferences based on these data.
- 5) Synthesize information from a variety of sources to support an argument
- 6) Explain and discuss the relative merits of conflicting hypotheses in their field
- 7) Propose new investigations that could extend knowledge in their field.
- 8) Gain a better understanding of personal strengths and weaknesses when doing teamwork.

Your research supervisor may have other learning goals that centre around the theory and methodologies specific to their discipline.

COURSE STRUCTURE

Each team will meet weekly with the group TA, and periodically (typically 1x per month) with the faculty supervisor on a schedule worked out at the beginning of the term. All teams will participate in 2-3 class meetings with the course coordinator in a time set by the course coordinator at the beginning of the term.

GRADING

10% of your grade in this course will be assigned by the course coordinator and will be based on the group meetings and associated assignments. Your faculty supervisor, as specified in the Team Research course form, will assign the remaining 90% of your grade.

MARKING SCHEME

- 10 % -- Based on presentations and participation in meetings (2-3) with course coordinator
 90 % -- Determined by your faculty supervisor as outlined on the 'BIOLOGICAL SCIENCES PERMISSION FORM: BIOC99 Team Research' form.

TENTATIVE* SCHEDULE:

DATE	TASK
Week of 03 Sept	Assemble team. Meet with research supervisor & TA
10 Sept	Meet from 14:00-16:00 in HW408 to determine class meeting days and discuss a paper on collaborative work (see Quercus/email)
30 Sept	Informal talk: Research proposal & research work plan (15-20 min)
Week of 04 Nov	Research update, discussion of key references, outline of writing plan
25 Nov	Research paper due (to faculty supervisor)
02 Dec	Formal Research talk (20 - 45 min)

* = these times may be modified by the instructor

Academic Policies: The University of Toronto has strict policies on academic integrity and plagiarism. Academic dishonesty tarnishes U of T's reputation and discredits the accomplishments of students. The university is committed to providing students every possible opportunity to grow in mind and spirit; however, this pledge can only be redeemed in an environment of trust, honesty, and fairness. As a result, all members of the academic community at large regard academic dishonesty as a serious offense. This policy sanctions students engaging in academic dishonesty with penalties up to and including expulsion from the university for repeat offenders.

For more information, please follow this link below for the University of Toronto's Code of Behaviour on Academic Matters. <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>

Disclaimer: The instructor reserves the right to modify this syllabus and schedule as necessary throughout the term to better achieve course objectives and/or enhance the quality of instruction. As such, outlines provided are tentative. Notification of changes will be made in class and the most up-to-date version will always be the one available on Quercus You are responsible for being aware of the contents of this syllabus.