

Department of Biology Course Outline

SC/BIOL 3100 2.00 Current Topics in Biological Research Fall 2015

Course Description

A review of faculty research in the Department of Biology. Students develop critical analytical skills to evaluate scientific literature and enhance communications skills in Biology. Designed to prepare students for the Honours Thesis course SC/BIOL 4000 3.0/8.0. Two lecture hours per week. Two credits. Note: Open only to Honours students majoring in Biology, Environmental Biology or Environmental Science (life sciences stream). Required for all students taking SC/BIOL 4000 3.0/8.0. Normally taken in the year prior to completing the Honours Thesis.

Prerequisites

Course Instructors and Contact Information

Dr. Samuel Benchimol
Department of Biology
Farquharson Building, Room 243A / Room 246
416 736-2100 Ext. 20726, 77851
benchimo@yorku.ca

Schedule

Mondays 2:30 – 4:30 pm
Life Sciences Building, Room 103

Evaluation

The final grade for the course will be based on the following assignments weighted as indicated:

1. Short 2-paragraph summaries on 5 out of 10 faculty presentations: 20%
2. Critical summary article on a specific research paper: 25%
3. Review article based on a faculty member's published research: 25%
4. Student presentation / Student evaluation: 30%

Important Dates

1. Short 2-paragraph summaries on 5 out of 10 faculty presentations:
due on the Friday following the presentation
2. Critical summary article on a specific research paper:
due on Friday, November 6, 2015
3. Review article based on a faculty member's published research:
due on Monday, December 7, 2015
4. Student presentation / Student evaluation:
November 23, 30 and December 7

NOTE: for additional important dates such as holidays, refer to the "Important Dates" section of the Registrar's Website at <http://www.yorku.ca/yorkweb/cs.htm>

Resources

Course Text (recommended resource):

McMillan VE. 2012. Writing Papers in the Biological Sciences, 5th edition. Boston: Bedford/St. Martin's.

Learning Outcomes

The course has 2 learning objectives:

- (i) The course provides insight into the research programs of several faculty members in the Department of Biology.
- (ii) The course provides students with the opportunity to develop skills to read and evaluate scientific research papers, and to enhance their written and oral communication skills in Biology.

Course Content

Sep 14 NO CLASS

Sep 21

Topic: Introduction to the course, learning objectives and evaluation; writing a 2-paragraph summary on a Research Presentation (Assignment 1)

Benchimol presentation: The involvement of the p53 tumour suppressor protein in progeria (premature aging)

Sep 28

Dawn Bazely: HERBIVORY: plant-animal interactions in forests and grasslands

Michael Scheid: Molecular therapeutic targets in cancer

Oct 5

Jan Sapp: The symbiotic self in a neo-Darwinian world

Thilo Womelsdorf: Brain networks underlying flexible attention

Oct 12

NO class (Thanksgiving)

Oct 19

Topic: Reading a scientific paper and preparing a critical summary (Assignment 2)

Oct 26

Topic: Review paper on a faculty member's published research (Assignment 3)

Chun Peng: Female reproduction and women's reproductive health

Nov 2

Keith Schneider: Structural and functional imaging of the human thalamus

John McDermott: Genomic and proteomic analysis of MEF2 transcriptional programs in cardiac and skeletal muscle

Nov 9

Topic: Student presentations and evaluations (Assignment 4); BIOL 4000 UG Honours Thesis

Peter Cheung: Chromatin and epigenetic regulation of gene expression

Nov 16

Vivian Saridakis: Viral protein manipulation of human deubiquitinase USP7

Arthur Hilliker: Genetic and molecular analysis of heterochromatin in *Drosophila*

Nov 23

Student presentations

Nov 30

Student presentations

Dec 7

Student presentations

Experiential Education and E-Learning

Student presentations

Other Information

Course Policies

Assignments submitted past the due date are not marked. There is no final exam.

University Policies

Academic Honesty and Integrity

York students are required to maintain the highest standards of academic honesty and they are subject to the Senate Policy on Academic Honesty (<http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>). The Policy affirms the responsibility of faculty members to foster acceptable standards of academic conduct and of the student to abide by such standards.

There is also an academic integrity website with comprehensive information about academic honesty and how to find resources at York to help improve students' research and writing skills, and cope with

University life. Students are expected to review the materials on the Academic Integrity website at - <http://www.yorku.ca/academicintegrity/>

Access/Disability

York University is committed to principles of respect, inclusion and equality of all persons with disabilities across campus. The University provides services for students with disabilities (including physical, medical, learning and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. These services are made available to students in all Faculties and programs at York University.

Students in need of these services are asked to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs. Please note that registering with disabilities services and discussing your needs with your professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet your needs.

Additional information is available at the following websites:

Counselling & Disability Services - <http://cds.info.yorku.ca/>

Counselling & Disability Services at Glendon - <http://www.glendon.yorku.ca/counselling/personal.html>

York Accessibility Hub - <http://accessibilityhub.info.yorku.ca/>

Ethics Review Process

York students are subject to the York University *Policy for the Ethics Review Process for Research Involving Human Participants*. In particular, students proposing to undertake research involving human participants (e.g., interviewing the director of a company or government agency, having students complete a questionnaire, etc.) are required to submit an *Application for Ethical Approval of Research Involving Human Participants* at least one month before you plan to begin the research. If you are in doubt as to whether this requirement applies to you, contact your Course Director immediately.

Religious Observance Accommodation

York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for an in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class. Similarly, should an assignment to be completed in a lab, practicum placement, workshop, etc., scheduled later in the term pose such a conflict, contact the Course director immediately. Please note that to arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete an Examination Accommodation Form, which can be obtained from Student Client Services, Student Services Centre or online at

http://www.registrar.yorku.ca/pdf/exam_accommodation.pdf (PDF)

Student Conduct in Academic Situations

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and other academic settings, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. The policy and procedures governing disruptive and/or harassing behaviour by students in academic situations is available at - <http://secretariat-policies.info.yorku.ca/policies/disruptive-and-or-harassing-behaviour-in-academic-situations-senate-policy/>