Department of Biology Course Outline

BIOL4265 BIOLOGY IN ENVIRONMENTAL MANAGEMENT 3.0, FALL 2021

Course Description

Official Calendar Course Description
This course summarizes our progress in conceptualizing, understanding and in solving large-scale ecological problems caused by the introduction of pollutants and exotic species to the environment.

Prerequisites (strictly enforced)

Prerequisites: SC/BIOL 2050 4.00, SC/BIOL 2060 3.00; or permission of the Instructor.

Course Instructor(s) and Contact Information

Dr. C. Lortie
218 Lumbers
Telephone: 416-736-2100
e-mail: lortie@yorku.ca
Office hours: Please email to set up an appointment.

Schedule

Date and Time: TUESDAY AND THURSDAY: 10:00AM
Location: ONLINE
Course Session: FALL - Start date: September 9.
Course ID: Q72N01

Evaluation

Final course grades may be adjusted to conform to Program or Faculty grades distribution profiles.

Test.	40%
Scientific comic or infographic.	20%
Synthesis paper.	40%

All summative work must be submitted to turnitin.com as PDFs.
Class ID: **30104827**
Key: **bio4enviro**

Important Dates

October 19th. Test due.
November 2nd. Scientific comic or infographic due.
December 7th. Final paper due.

Drop Deadline: Nov. 12 (last day to drop without course on transcript)
Course Withdrawal: Nov. 13 to Dec. 7 (course still appears on transcript with 'W')

Resources

Links to peer-reviewed publications & slide decks provided.

Learning Outcomes

Upon successful completion of this course, students should be able to:
1. Critically read environmental science peer-reviewed journal publications.
2. Reverse-engineer the critical reproducible science tools using peer-reviewed publications.
3. Appreciate the extent and scope of environmental challenges we face globally.
4. Explain the balance between direct human needs and environmental health.
5. Do a formal synthesis such as meta-analysis or systematic review.
6. Effectively communicate scientific synthesis findings to the public.

Course Content

All resources for the course will be freely provided online by Dr. Lortie.

Module 1.
Read a total of 9 useful peer-reviewed science publications.
Test your practical knowledge by applying to a new challenge.

Module 2.
Choose your own adventure (i.e. a dimension of an environmental challenge you care about).
Draw a comic or infographic to communicate challenge to the public.
Write a short synthesis paper on this topic for a scientific audience.

Rationale
For each environmental management challenge case examined, students will be responsible for reading the literature provided at their own pace. The professor will facilitate learning as needed.

The goal is to become more literate environmental citizens and develop, consolidate, and evaluate critical environmental science thinking and problem solving.

The first module highlights some of the most pressing challenges and more common replicable tools used by the scientific community. The summative test is provided immediately at the start of course to enable asynchronous work and provide a clear, transparent, and testable outcome for this module.

The second module provides an opportunity for students in this upper-year offering to do a deep dive into a topic that care about deeply. The dimension of the challenge and the solution they pick is open provided it is well articulated. The graphical assignment is a stepping stone or scaffolding to the final paper. It is also a chance to be as creative as students elect to be with communicating science to the public. The final paper is an Ignite, Forum, or Mini-review format contribution on their topic appropriate for a general science journal. These types of papers are increasingly common and important in science and used extensively for evidence-informed decision making by leaders.

Experiential Education and E-Learning

Numerous open science tools will be highlighted including R for statistics, twitter for scientific communication, big data resources, and open data repositories such as FigShare.

Other Information

EXPECTATIONS
All information provided is testable.
Teamwork, team science, collaboration, and open dialog is strongly encouraged and promoted in this course. However, effective scientific writing is also a critical professional skill we will develop. Consequently, students are provided time and opportunity to discuss all topics and research, but all final writing for weekly exercises and tests should be done independently. The submission service turnitin provides effective and comprehensive plagiarism checking, and students must thus ensure writing is done independently.

Course Policies

Alternative dates for assignments/evaluations are not available in this course. If documentation is provided for valid absences on test dates, accommodation will be granted in mutual discussion with the professors. To promote fairness and student responsibility, all exercises are due on the dates specified herein. A 10% penalty will be applied for the first day the exercise is late and 5% every day thereafter.

Students who anticipate being unable to submit the exercises on the due date are encouraged to submit early.

Grades on exercises and exams are not negotiable. Every reasonable action is made to ensure advance reminders are provided and instruction. Thus, the course director should only be contacted if there is calculation or clerical error present.

The Document Submission System must be used to submit all documentation associated with absences.
https://science.apps01.yorku.ca/machform/view.php?id=84113

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/

Important A note from the Faculty of Science Committee on Examinations and Academic Standards:
Numerous students in Faculty of Science courses have been charged with academic misconduct when materials they uploaded to third party repository sites (e.g. Course Hero, One Class, etc.) were taken and used by unknown students in later offerings of the course. The Faculty's Committee on Examinations and Academic Standards (CEAS) found in these cases that the burden of proof in a charge of aiding and abetting had been met, since the uploading students had been found in all cases to be wilfully blind to the reasonable likelihood of supporting plagiarism in this manner. Accordingly, to avoid this risk, students are urged not to upload their work to these sites. Whenever a student submits work obtained through Course Hero or One Class, the submitting student will be charged with plagiarism and the uploading student will be charged with aiding and abetting.

Note also that exams, tests, and other assignments are the copyrighted works of the professor assigning them, whether copyright is overtly claimed or not (i.e. whether the © is used or not). Scanning these documents constitutes copying, which is a breach of Canadian copyright law, and the breach is aggravated when scans are shared or uploaded to third party repository sites.

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.
Student's 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 - https://www.glendon.yorku.ca/counselling/
York Accessibility Hub - http://accessibilityhub.info.yorku.ca/

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 and submit an Examination Accommodation Form at least 3 weeks before the exam period begins. The form can be obtained from Student Client Services, Student Services Centre or online at http://www.registrar.yorku.ca/pdf/exam_accommodation.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-andor-harassing-behaviour-in-academic-situations-senate-policy/