

Department of Biology Course Outline

BIOL 4245 Conservation Biology Winter 2017

Course Description

This course explores the role of biological science in efforts to conserve natural resources, systems and the organisms therein. Two lecture hours, three laboratory hours. One term. Three credits.

Prerequisites

SC/BIOL 2050 4.00, SC/BIOL 2060 3.00.

Course Instructors and Contact Information

Instructor: Andrew Medeiros (fraggle@yorku.ca), Department of Geography, 411 N Ross Building
Office Hours: W 2:00-3:00 pm

TA LAB1: Melissa Paula Galicia (mgalicia@yorku.ca)

TA LAB2: Katie Florko (kflorko@yorku.ca)

TA LAB3: Heidi Van Vliet (hvanvlie@yorku.ca)

Schedule

Lectures: MW 11:30-12:30pm LSB106

LAB1: W 2:30-5:30pm BC 322

LAB2: F 2:30-5:30pm0 VH 2016

LAB3: R 2:30-5:30pm SC 211

Evaluation

Midterm Exam: 15%
Final Exam: 35%
Lab Assignments (x5): 50%

Important Dates

Week		Lecture Topics	Readings	Schedule notes
1	Jan 9, 11	What is Conservation Biology? Population Biology recap	Ch. 1, 16	Lab 1 begins this week
2	Jan 16, 18	Biodiversity and macro-ecology	Ch. 2, 3	
3	Jan 23, 25	Habitat Loss, Global Crises	Ch. 4, 5	Lab 1 Due
4	Jan 30, Feb 1	Midterm Exam, Climate Change and Conservation	Ch. 8	Midterm exam in class Jan 30
5	Feb 6, 8	Extinction and Invasive Species	Ch. 7, 10	Lab 2 Due
6	Feb 13, 15	Conservation priorities	Ch. 11	
7	Feb 20, 22	Reading Week	Tahiti?	
8	Feb 27, March 1	Ex-situ conservation	Ch. 13	Lab 3 Due
9	March 6, 8	Systematic conservation planning	Ch. 14	
10	March 13, 15	Monitoring and protected areas	Ch. 12, 14	Lab 4 Due
11	March 20, 22	Conservation Synthesis	Ch. 15	
12	March 27, 29	Restoration and the future	Ch. 6	Lab 5 Due
13	April 3, 5	Final exam review	All of the things	
14	Exam	TBD		

Resources

Text: Sodhi, N.S. & Ehrlich, P.R. 2010. "Conservation Biology for All" Oxford University Press (available as an online resource via the YorkU library)

Students must regularly check moodle for all other course materials.

Learning Outcomes

Students will learn concepts in conservation biology, including biodiversity, island biogeography, patch dynamics, ecosystem function, habitat fragmentation, invasive species ecology, conservation planning and management, and restoration ecology. The emphasis of this course will be on the understanding physical and ecological processes forming the basis behind conservation strategies. This course will also involve quantitative fundamentals of environmental biology, and link each topic to basic understanding of ecosystems.

Course Content

The field of conservation biology incorporates the principles of ecology, biogeography, population genetics, economics, sociology, anthropology, and philosophy to the mitigation of anthropogenic impacts on the environment. The course will familiarize the student with the concepts and principles of conservation biology, the threats to ecological integrity of natural systems, and the ways scientists attempt to cope with these threats.

Experiential Education and E-Learning

Moodle is used extensively for this course

Other Information

Class Participation:

I *strongly* encourage class participation. Student questions about lecture topics are welcome. In addition, I always make every effort to present ideas and concepts as clearly as possible. However, some topics are more difficult than others, and I encourage students to ask when concepts are not clear.

Lab Assignments:

There will be **five** assignments in this class. Due to the large class size, many of these assignments will be group-projects. This is a 4th year course that focuses on conservation issues, which in the real-world are large collaborative projects that involve multiple stakeholders working together. Thus, it is critically important that you are able to work with others, and your grading for group assignments is shared. Assignments may require interpretation of data, including basic statistics, in order to synthesize a constructive argument. Lab assignments will also involve media-based formatting (e.g. video projection for YouTube).

Course Policies

Missed midterm or exam: Students who miss a test or exam due to an illness or emergency must notify Dr. Medeiros via email within 48 hours, and provide supporting documentation to Dr. Medeiros, via the undergraduate Biology office, within 5 calendar days. A midterm or exam missed due to medical circumstances must be supported by an Attending Physician's Statement, which can be downloaded from: http://www.registrar.yorku.ca/pdf/attend_physician_statement.pdf

Late assignments: material submitted late will be levied a penalty of 10% per day.

Accommodations: Students with physical or learning disabilities who require reasonable accommodations in teaching style or evaluation methods need to register with Counselling & Disability Services (<http://cds.info.yorku.ca/>) and notify Dr. Medeiros at the beginning of term.

Religious accommodation: should any of the dates for midterms, exams, assignments etc. pose a conflict with a religious observance day for your particular religion, you must inform Dr. Medeiros at least 14 working days (ie. 3 weeks) prior to the date. Conflict with a final exam date requires completion of an Examination Accommodation Agreement Form (available at http://registrar.yorku.ca/sites/registrar/files/pdf/exam_accommodation.pdf), with submission to Dr. Medeiros at least 14 working days (ie. 3 weeks) prior to the date

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.

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 - <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-andor-harassing-behaviour-in-academic-situations-senate-policy/>