

Department of Biology Course Outline

BIOL3200 Evolution FALL 2020

Course Description

The processes and principles of evolution, the mechanisms by which genetic change occurs, the patterns of genetic variation and molecular studies that relate the structure of organisms to their evolution are examined. One term. Three credits.

Prerequisites (strictly enforced)

SC/BIOL 2040 3.00.

Course Instructor(s) and Contact Information

Dr. Sandra Rehan
e-mail: sanrehan@yorku.ca

Schedule

Date and Time: Tuesdays/Thursdays 1-2:30pm; asynchronous lectures posted on Moodle weekly – test times synchronous and during class times (midterms 1 & 2 – see below for exact dates) or during the final exam period (final exam date/time to be scheduled).

Location: Moodle

Course Session: FALL 2020 - Start date: September 10, 2019.

Course Dates: Sept. 10 – Dec. 8, 2020

Evaluation

Three tests. Tests are of equal value (1/3 each of total mark).

They are based on multiple choice and/or short answers. **The weight of one test cannot be transferred to another.**

Important Dates

First class: September 10

Last date to drop course without receiving a grade November 6

Test 1: October 8

Test 2: November 12

Last Class: December 8

Test 3: To be scheduled sometime during the December 9 – 23 exam period

Resources

Readings and other online resources including peer-reviewed publications provided on Moodle.

Learning Outcomes

Upon successful completion of this course, students should be able to:

1. Understand and apply key evolutionary terminology, concepts and mechanisms
2. Acquire basic knowledge of major evolutionary patterns and transitions
3. Make solid inferences about evolutionary processes and mechanisms from observational and experimental data
4. Improve communication skills via evolutionary topics
5. Identify examples of evolution in a range of contexts: ecological, medical, agricultural, conservation, etc. – and articulate their significance
6. Gain tools for time management, including dedicated writing time and multitasking organization.

Course Content

LECTURE SCHEDULE (estimated; may shift)

Week 1 (R 9/10): Introduction

Week 2 (T 9/15, R 9/17): History of Evolution & Phylogeny

Week 3 (T 9/22, R 9/24): Biogeography & Major Transitions

Week 4 (T 9/29, R 10/1): Fossil Record & Natural Selection

Week 5 (T 10/6, R 10/8): Exam Preparation & Exam
Exam 1 10/8

Week 6 (T 10/13, R 10/15): NO CLASSES – READING WEEK

Week 7 (T 10/20, R 10/22): Population Genetics & Life History Evolution

Week 8 (T 10/27, R 10/29): Social Evolution & Brain & Behaviour

Week 9 (T 11/3, R 11/5): Evolution and Development & Guest lecture/topic TBA

Week 10 (T 11/10, W 11/12): Exam Preparation & Exam
Exam 2 11/12

Week 11 (T 11/17, R 11/19): Extinction and Origination & Macroevolution

Week 12 (T 11/24, R 11/26): Coevolution & Human Evolution

Week 13 (T 12/1, R 12/3): Domestication & Evolutionary Medicine

Week 14 (T 12/8): Exam Preparation

Exam 3: To be scheduled sometime during the 12/9-12/23 exam period

Note: this schedule is approximate, and will probably shift as the term progresses.

Course Policies

Missed mid-term Test: You must contact (email) me within two days (48 hours) of missing a midterm test. If you miss a test with a legitimate documented reason, permission **may** be granted to take a **makeup test**. All documentation supporting your excuse for missing a test must be received **within one week of the missed test**.

Exam make-ups will be offered only under extraordinary circumstances. However, if you do have a personal or medical event that would seriously interfere with your exam performance, please notify me right away (email is best) and we will make necessary arrangements. (Having multiple exams on the same day or week doesn't qualify.)

Makeup mid-term tests will generally be held within 10 days of the regular test. They typically differ in format from the original test (i.e., include more long answer/oral exam questions). **There will be no second make up tests offered.**

Missed Final Exam

All students who miss the final examination must petition if they are seeking deferred standing. No student will be granted deferred standing by the professor via a Deferred Standing Agreement Form (DSA). Students must seek deferred standing by submitting a petition to their home faculty. It will be the Petition Committee's decision whether deferred standing is granted and, if granted, that committee will also set the deadline for writing the deferred examination.

The format of the make-up final exam for this course may be an oral exam, essay, short answer, and/or multiple choice.

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.

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 - <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-and-or-harassing-behaviour-in-academic-situations-senate-policy/>