Department of Biology Course Outline

SC/BIOL 2030 4.00 Animals
FALL 2019/2020

Course Description

A study of the diversity of animals, their structure, physiology and evolution. Three lecture hours, three laboratory hours. One term. Four credits.

Prerequisites

SC/BIOL 1010 6.00 or SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00. Course credit exclusions: SC/BIOL 2030 5.00, SC/BIOL 2031 4.00, SC/BIOL 2031 3.00.

Course Instructors and Contact Information

Course Director: Dr. Scott P. Kelly spk@yorku.ca
201 Farquharson Building

Lab Coordinator: Chun Chih Chen, PhD Candidate biol2030@yorku.ca

Technical Staff: Krystina Strickler

Schedule

Lecture Times: Tuesday and Thursday: 11:30 AM to 1:00 PM in Lassonde C (LAS C)

Lab Times: Tue, Wed, Thur & Fri: 2:30-5:30pm in Lumbers 124
Mon, Tue, Wed & Thurs: 6:30 – 9:30pm in Lumbers 124
Wed & Frid: 10:00am to 1:00pm in Lumbers 124
Labs are a mandatory component of BIOL 2030 and you must attend the lab section in which you are registered. No exceptions.

Evaluation

Laboratory Work (quizzes, performance, marked dissections):	30%
Laboratory Exam:	10%
Midterm Exam:	20%
Final Exam (In December Formal Exam Period):	40%

Important Dates

Midterm Exam: Tuesday October 22nd, 2019
Lab Exam: Week starting Monday November 25th 2019 – Each lab sections will write the lab exam during their regularly scheduled lab period
Laboratories: Labs are Mandatory**.** There is a lab each week, consult the detailed schedule under course content in this course outline and/or the laboratory manual

Drop Deadline: November 8th 2019 (last date to drop without receiving a grade)
Course Withdrawal Period: Nov 8th – Dec 3rd 2019 (receive a grade of "W" on transcript)

NOTE: for additional important dates such as holidays, refer to the "Important Dates" section of the Registrar's Website at https://registrar.yorku.ca/enrol/dates/

Resources

Textbook: Hickman, CP, SL Keen, A Larson, D Eisenhour. Animal Diversity, 8th (2018) or 7th (2015) Editions. McGraw Hill, Toronto.

Laboratory Manual: YORK SC/BIOL 2030 4.0 Animals Fall 2019 Laboratory Manual
Course Director: Dr. Scott P. Kelly
Lab Coordinator: Chun Chih Chen

Moodle website: Lecture slides will be posted AFTER class. Extra Lab Resources are posted for each lab.

Learning Outcomes

Upon successful completion of this course, students should be able to:
1. Discuss what an animal is using specific characteristics that unify the group.
2. Discuss the diversity of animals in terms of development, structure and habitats.
3. Define major animal phyla based on their respective major unifying characteristics.
4. Describe, with specific examples, how animal body form and structure relates to function.
5. Describe, using examples, how animals can impact human health.
6. Describe the evolution of vertebrate animals from aquatic ancestors to terrestrial forms.
7. Outline mechanisms that specific (select) animals have evolved for locomotion, osmoregulation, feeding and digestion, development/reproduction, and sensing the world around them.
8. Possess hands-on skills in the following areas:
   - Procedures related to microscopic observation and determination of unicellular eukaryote morphology, size and architecture as well as metazoan size, morphology and architecture
   - Procedures related to the microscopic observation of animal cells and tissue types
   - Procedures related to macroscopic observation of animal size, morphology and architecture, including the isolation, identification and arrangement of internal organs, organ-systems and supportive structures

Course Content

The purpose of this course is to introduce you to the diversity of animals. We discuss the lifestyles of animals, relationships between structure and function, and the evolutionary history of the kingdom Animalia. In this course, we consider both living and fossil forms (although primarily living), surveying the basic approaches to living, across a range of phyla. General topics for consideration include phylogeny and development, as well as the systems involved in support, locomotion, feeding, digestion, circulation, communication, osmoregulation, gas exchange, reproduction and sensory operations.

Week:	Lecture (material for following week)	Class	Topic	Lab
1	Introduction	Sept 5	Introduction/Classification	**NO LAB**
2	Animal Architecture & Unicellular Eukaryotes	Sept 10	Animal Architecture	**NO LAB**
		Sept 12	Unicellular Eukaryotes	
3	Porifera & Cnidaria	Sept 17	Porifera/Cnidaria	Lab 1 Unicellular Eukaryotes
		Sept 19	Cnidaria	
4	Platyhelminthes	Sept 24	Platyhelminthes I	Lab 2 Porifera, Cnidaria
		Sept 26	Platyhelminthes II	
5	Acoelomates & Mollusca	Oct 1	Acoelomates	Lab 3 Platyhelminthes/Nematode
		Oct 3	Mollusca	
6	Annelida & Course Content Review for Midterm	Oct 8	Annelida	Lab 4 Mollusca
		Oct 10	Review & Midterm Exam preparation	
Oct 12 – 18 – **FALL READING WEEK** NO CLASSES OR LABS				
7	Midterm Exam & Arthropoda I	Oct 22	Midterm Exam	Lab 5 Annelida Marked Dissection 1
		Oct 24	Arthropoda I	
8	Arthropoda II & Echinodermata	Oct 29	Arthropoda II	Lab 6 Arthropoda
		Oct 31	Echinodermata	
9	Vertebrate Beginnings & Fishes I	Nov 5	Vertebrate Beginnings	Lab 7 Echinodermata/Chordata I
		Nov 7	Fishes I	
10	Fishes II & Amphibians	Nov 12	Fishes II	Lab 8 Chordata II Marked Dissection 2
		Nov 14	Amphibians	
11	Reptiles & Aves	Nov 19	Reptiles	Lab 9 Chordata III
		Nov 21	Aves	
12	Lab Exam Week - No Lectures & optional review sessions	Nov 26	Optional course content review	**LAB EXAM**
		Nov 28	Optional course content review	
13	Mammals	Dec 3rd	Mammals	**NO LAB**

Experiential Education and E-Learning

Accessory Laboratory materials (images, videos), Lecture slides on Moodle

Other Information

Who do I ask what?

The **Course Director** (Dr. Scott P. Kelly) will be teaching the course and is the person to ask any questions pertaining to the lectures. Dr. Kelly can also help with lab material related questions BUT students are encouraged to first ask your TA about lab related material.

The **Lab Coordinator** (Chun Chih Chen) organizes the labs, lab scheduling, lab marking, TA meetings ahead of labs, student attendance in labs.

Take note of your **TA's** name! Your TA runs your lab section, administers your quizzes, decides your lab performance grade, marks your graded dissections. Your TA is the first person you should ask any question that relates to lab material.

Course Policies

Midterm Exam and Missed Midterm Exam Policy: READ CAREFULLY and ENTIRELY

- The Midterm Exam will be held (during regularly scheduled class time) on Oct 22nd 2019
- The Midterm Exam will examine students on evenly sourced lecture material only. That is, the Midterm Exam will not cover lab material unless it has appeared in lecture
- Midterm Exam format will be 75% multiple choice questions + 25% written format
- If a student misses the Midterm Exam on Oct 22nd 2019, there will be **ONE** opportunity to take a Make Up Midterm Exam
- A Make Up Midterm Exam will be held on Oct 29th 2019 during regularly scheduled class time (i.e. from 11:30 AM – 12:45 PM)
- The Make Up Midterm Exam will be **written format only** (i.e. short answer essay style questions with **NO** multiple choice questions)
- If a student does not sit the Midterm Exam or the Make Up Midterm Exam, a mark of **ZERO** (**0%**) will be assigned for this graded component of the course

  Note*:* No documentation or reason is requested or required if you miss the Midterm Exam. The Make Up Midterm Exam is a final opportunity to acquire a mark for this graded component of the course and no documentation will provide an additional opportunity.

Policy for a Missed Final Exam:

- If you miss the Final Exam you must petition for Deferred Standing. Information and instructions with forms can be found at http://myacademicrecord.students.yorku.ca/deferred-standing
- **all documentation related to a petition for Deferred Standing must reach the course director no later than 7 days after the missed Final Exam or before the end of term (whichever comes first)**
- if a petition for Deferred Standing is not approved by the course director, a student may choose to submit an academic petition
- a Deferred Final Exam may differ in format from the original Final Exam

Policy for Laboratories and missed labs: READ CAREFULLY AND ENTIRELY

LABORATORIES ARE MANDATORY AND YOU MUST ATTEND THE LABORATORY SECTION THAT YOU ARE OFFICIALLY ENROLLED IN.

There are 9 labs which you are required to complete.

- Each lab will be graded out of 10 (lab quiz worth 5, lab performance worth 5). At the end of term, the attended and completed lab in which you received the lowest grade will be dropped and the remaining 8 labs will be used to calculate your overall lab grade which is worth 30% of the final course grade. **Missed labs cannot be dropped.**
- Lab 5 and Lab 8 also include a marked dissection graded out of 10. Hence, Labs 5 and 8 are

graded out of 20 each. Combined, the marked dissections are worth 5% of the final overall course grade.

- **There are NO make up labs. There are NO make up marked dissections.**
- If you miss a lab you may write the quiz associated with that lab on the following Tuesday (at a time when the regularly scheduled class is running). This is the only time the quiz will be offered and if it is missed, the mark will be zero.
- **Taking the above into consideration, the maximum grade that you may earn for a missed lab is 5/10 (i.e. if you earn 5/5 on the make-up quiz).**
- **The maximum grade that you may earn for a missed lab with a marked dissection is 5/20 (i.e. if you earn 5/5 on the make-up quiz).**

Note: No documentation or reason is requested or required for missed labs. It is your responsibility to ensure you write the make up quiz at the designated time. If you miss the make up quiz you will earn a grade of 0/10 for the missed lab.

Policy on Missed Laboratory Exam:

- You **must email your lab coordinator at biol2030@yorku.ca within 24 hours of missing the laboratory exam, and if you are ill, you must see a physician while you are ill, within 24 hours of the missed laboratory exam, as explained below.**
- You **must submit (to the lab coordinator within three [3] days of the missed laboratory exam) valid and appropriately detailed documentation (typically medical or emergency related) that clearly supports the circumstances that prevented your exam attendance.**
- Documentation should cover the date of the missed laboratory exam.
- If you are ill: You must see a physician while you are ill – within 24 hours of the missed laboratory exam – ideally on the same day – so that the physician can confirm you are too ill to attend the exam based on medical examination. If you see the physician when you are not ill, the documentation will not be accepted.
- Acceptable documentation for illness is an "Attending Physician's Statement" filled out in detail. A blank Attending Physicians's Statement can be downloaded from the registrar petitions package webpage. A note that simply states you were seen in a clinic will not be accepted.
- Death of an immediate family member: death certificate or letter from the funeral director.
- Other circumstances: Contact your lab coordinator (biol2030@yorku.ca) to determine the appropriate documentation required.
- **If appropriate documentation is not provided within three (3) days, a zero will be earned on the missed laboratory exam.**
- Not all situations can be accommodated, meaning that a zero may be earned on the missed laboratory exam. Examples of circumstances that are not accommodated include, but are not limited to, schedule confusion, sleeping in, missing the bus, traffic jam, personal endeavours (including job and personal appointments), busy lives.
- If you choose to enter the exam room and then leave before completing the exam, you will receive the grade for the portion of the exam that you have completed whether it is left blank or some questions completed regardless of the reason that you chose to leave, including illness.
- Where appropriate and possible, a makeup laboratory exam will be scheduled. This may differ in format from the original laboratory 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/

A note on sharing assignments, tests, exams:

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/