

Department of Biology Course Outline

SC/BIOL 2030 3.00 Animals
Winter 2020/2021

Course Description

A study of the diversity of animals, their structure, physiology, and evolution. Three lecture hours. One term. Three 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 Instructor and Teaching Assistant Contact Information

<p>Course Director: Dr. Stephanie Wales Tobin (she/her) swtobin@yorku.ca</p> <p>Office Hours (via Zoom): Reserve 15 minute sessions on eClass (<u>Monday 2-3</u>) pm or by appointment. I encourage you to also use the Student Forum to discuss topics with your peers. Please allow 48 hr. turnaround for email responses.</p>	<p>Teaching Assistants: TBD</p> <p>TAs will be assigned to a subset of students based on students' last names. TAs are responsible for grading exams and assignments and are your first point of contact for feedback on evaluations (see course policy).</p>
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Schedule

Lecture times (listed in EST):

M W F 12:30-1:20

Attendance is **expected** and all in-class information (even material not written on lecture slides) is testable material in the exams.

Lecture material (PDF slides and recorded lectures) will be posted to eClass.

Synchronous content:

All lectures will be delivered synchronously. From time to time, however, I may have pre-recorded lectures uploaded. You should watch these at the designated time to stay on top of the material.

All synchronous content will be recorded for you to watch later, should you miss a lecture. You will be able to access the PDF version of my slides to follow along. I encourage you to ask questions during the lectures.

Exams will be administered during designated lecture times*. Make sure you clear your schedule on these days as there are NO make-up tests (See course policy). *Exception is Exam 3.

Some lectures will incorporate Breakout rooms in the following format: I will post homework questions 2-3 days before a breakout room discussion is scheduled. You should prepare answers *on your own* to facilitate the in-class discussion. Questions may be in the format of short and long answer exam questions. This is your chance to test your understanding of the material in an interactive environment with peers.

Evaluation

Exam 1: 20% - Feb 5th

Exam 2: 25% - March 12th

Term Assignment: 30% - April 1st

Exam 3: 25% - TBD *during final exam period

Exam Format: A mixture of multiple choice, labelling, matching, and short and long answer questions. Exams are not considered to be cumulative. They will each cover a subsection of the material. **Exams will be approximately 40-50 minutes during lecture time (except for Exam 3, which is held during the final exam period).**

Term Assignment: The purpose of this assignment is to improve your scientific writing and presentation skills. You could think of this as a mini thesis. Students will choose their animal topic from one of three animals (decided by the course director).

Part 1: An approximately three (3) page "Animal Fact Sheet" (15%). Each "Animal Fact Sheet" will provide the reader with succinct BUT complete information on an animal species, must be in the student's own words and should include the topics listed below.

Part 2: Three-minute thesis style report of an assigned animal (15%). More details will be discussed in class, however the general format will be similar to the Three-minute thesis style presentation done by graduate students (<https://3mt-ontario.gradstudies.yorku.ca/watch/>). The content is similar to Part 1 but instead you must describe your animal report in three minutes, using only 1 slide. You will pre-record your lecture, via Zoom or another platform, and send it to your TA for grading. You will be required to submit your slide as a PDF to facilitate marking. To make our class more interactive, students will have an opportunity to present their work in the last week of class to the entire class (*Optional*). Students will vote for the best presentations. The top 2 (per Animal Group 1, 2 or 3) will receive a 2% bonus mark to their overall grade. A deadline to register interest in this will be provided near the end of term. Due to limited class time, a total of 10 students per animal will be allowed to compete (30 total). If interest in this bonus competition is high, alternate arrangements may be organized, such as a lottery draw for presenters.

Both Part 1 and 2 should include the following topics (detailed marking schemes provided in late Jan.):

1. Taxonomy
2. General morphology, including figures drawn by the student
3. Ecological information (i.e., range/distribution, habitat, abundance)
4. Life-history information (e.g., reproduction, life stages, food, predators, behaviour etc.), including figures drawn by the student.
5. Relevance to humans
6. Bibliography (not required for Part 2).

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

Technology requirements

York's eClass website is where all course information, announcements and class communications are posted. If you have trouble accessing eClass, please contact the Help Desk: <https://lthelp.yorku.ca/moodle>

Other: Computer access, internet connection (**stable** and ideally high speed), audio capability (microphone), ability to stream online synchronous meetings/content, ability to stream asynchronous lectures, ability to support video conferencing software.



These lectures will be delivered as a Meeting mode. Your camera and microphone will be automatically off as you join, but you may turn them on/off to communicate with me (and the whole class). Note that we are a large class of nearly 300. You can also ask questions during this time by "Raising your hand" or in the chat. We will go over this in the first class.

Camera use is optional.

If your camera is off, consider loading a profile picture as it is always nice to see some faces.

*Break-out room discussions require a microphone BUT attendance is not mandatory.



Online classroom philosophy and etiquette

I strongly believe that you learn by doing. Using online platforms, such as Zoom, I will try to incorporate this philosophy as often as possible. This means that synchronous lectures may involve:

- Break-out rooms
- Interactive polls
- Reflecting on previous lectures/assignments/case studies at home in preparation for in-class discussion.



To do this you should be prepared to:

- Arrive on time to synchronous lectures.
- Do your homework and come prepared! (If you do not know the content, how can you ask questions or solve problems?)
- Have a microphone and (ideally) camera to communicate with me and your classmates.
- Understand the controls of your microphone and/or camera for your privacy and the courtesy of your classmates.
- Show respect to your classmates and instructor/TAs in any online chat (Netiquette).



Important Dates

First class Jan 11th

"In-class" Exam 1: Feb 5th Content: Topics 1-9; 40 min. 12:30 pm.

"In-class" Exam 2: March 12th Content: Topics 11-18; 50 min. 12:30 pm.

Exam 3: TBD; April 14-28th Content: Topics 20-25 50 min.

Term Assignment: April 1st 12:30 pm

Term Assignment Bonus Presentations (Optional): April 7th and 9th

Reading Week: February 15th-19th

No class: April 2nd (Good Friday)

Drop deadline (Last date to drop a course without receiving a grade): March 12

Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript: March 13-April 12

Course Content

This course introduces unicellular eukaryote and animal diversity. Lifestyles/cycles, anatomy (from a structure and function viewpoint), and the evolutionary history of unicellular eukaryotes and animals are discussed. Both living and extinct forms are considered (although primarily living). General topics for consideration include (but are not limited to) classification, architecture and development, lifestyles/cycles as well as systems involved in locomotion, feeding/digestion, circulation, osmoregulation, gas exchange, and sensory operations.

Resources

Recommended text: *Optional*

Animal Diversity – McGraw-Hill By Cleveland Hickman and Larry Roberts and Susan Keen and Allan Larson and David Eisenhour, 9th edition (earlier editions also acceptable). eBook or hard copy.

Why optional? Only in-class material is tested, however, the images from this text will be used in lectures and I am covering the content as sequentially outlined in this textbook. I will also provide recommended readings that complement the lecture material. These readings will cover the same material as delivered in lecture. There will never be standalone reading. Some students may find reading from the textbook enhances their overall understanding of the course material, so it is listed as optional. 8th and 7th editions available for curbside pickup on campus.



Accessibility: This course has been designed to be accessible (e.g. closed captioning on lecture videos). *Disclaimer: the software may not capture all words (especially scientific words) correctly.* Contact the course director if you have additional needs.

Learning Outcomes

The purpose of this course is to introduce animal diversity through discussion of lifestyles/cycles, relationships between anatomy/structure and function (internal and external anatomy), and the evolutionary history of unicellular and multicellular eukaryotic organisms. In this course, both living and extinct forms are considered (although an emphasis is placed on extant organisms), by surveying across a range of phyla. General topics for consideration include classification, lifestyle/cycles, habitats, architecture (structure and function), development, as well as systems involved in locomotion, feeding, digestion, circulation, communication, osmoregulation, gas exchange, reproduction and sensory operations.

Upon course completion, student **learning outcomes** will include being able to:

1. Discuss/define what unicellular eukaryotes and animals are, using specific characteristics that unify different groups of organisms (e.g., unifying features of a Phylum).
2. Discuss the diversity of unicellular eukaryotes and animals in terms of lifestyles/cycles, development, structure, and habitats.
3. Describe, with specific examples, how body form and structure of unicellular eukaryotes and animals relate to function.
4. Describe, using examples, how unicellular eukaryotes and animals can impact human health.
5. Describe the evolution of vertebrate animals from aquatic ancestors to terrestrial forms.
6. Outline structures and mechanisms that specific (select) unicellular eukaryotes and animals have evolved for locomotion, osmoregulation, feeding and digestion, development/reproduction, and sensing the world around them.

See *tentative* course schedule on the next page:

Course Week	Calendar Week(s)	Topic(s) *Subject to change
1	Jan 11th-15th	1. Introduction to Class
		2. Classification
		3. Architecture
2	Jan 18th-22nd	4. Unicellular Eukaryotes
		5. Phylum Porifera
		6. Phylum Cnidaria
3	Jan 25th-29th	7. Phylum Platyhelminthes
4	Feb 1st-5th	8. Flex Day; Term Assignment Outlined
		9. Exam 1 Guidelines, Expectations, Review
		10. Exam 1 Friday Feb 5th (Topics 1-9)
5	Feb 8th-12th	11. Psuedo/blastocoelomates
		- Phylum Rotifera
		- Phylum Nematoda
		12. Mollusca
6	Feb 13th-19th	READING WEEK
7	Feb 22nd-26th	13. Phylum Annelida
		14. Phylum Arthropoda – I
8	March 1st-5th	15. Phylum Arthropoda – II
		16. Phylum Echinodermata
9	March 8th-12th	17. Vertebrate Beginnings
		- Invertebrate Chordates
		18. Exam 2 Review
		19. Exam 2 Friday March 12th (Topics 11-18)
10	March 15th-19th	20. Fishes I & II
11	March 22nd-26th	21. Amphibians
		22. Reptiles
12	March 29th-April 2 nd *Term Reports Due April 1st	23. Aves
		24. Mammals
		April 2nd: Good Friday - no class
13	April 5th-9th	25. Mammals II
		26. Student presentations (Optional)
14	April 12th	27. Flex Day; Exam 3 material review
15	April 14-28th	28. Exam 3 TBD

Course Policies

Policy for a missed Exam:

- Exams 1+2 will be held during regularly scheduled class times on Feb 5th, 2020 (Exam 1) and March 12th (Exam 2)
- Exam 3 for BIOL 2030 will be scheduled during the Winter Examination period
- Exams will consider evenly sourced lecture material as detailed in the Course Content section of the Course Outline as well as in the Introduction Lecture.

If a student misses an Exam, there will be **NO** opportunity to take a make-up test:

- A student who misses an Exam must notify the course director within (no later than) 24 hours of/following the missed test start time.
- A student who misses an Exam will have an opportunity to complete a **Make Up Assignment** (Essay), to be submitted no later than one week following the missed test date. The topic of the Make Up Assignment (Essay) will be provided within 24 hours of the student notifying the course director of the missed Exam.
- A Make Up Assignment (Essay) *in lieu* of a missed Exam will be an approximately eight (8) page essay on a topic assigned by the course director. The essay will be in the form of a scientific literature review on the assigned topic and will require the use of primary literature (i.e., research articles).
- If a student misses an Exam and does not notify the course director within 24 hours **OR** does not complete the Make Up Assignment in accordance with the details provided in the course outline, a mark of **ZERO (0%)** will be assigned for this graded component of the course.
- If a student misses both Exam 1+2, the student will be assigned a makeup Exam in lieu of Exam 2 in the format of bell-ringer questions, delivered as a 30-minute PowerPoint presentation administered by a marker/grader over Zoom during a designated lecture time. Alternatively, the student may opt to write a second 8-page essay in the same format as described above.
- If a student misses all Exams, the student must complete a makeup exam in the bell-ringer style format described above, in lieu of Exam 3.

Note: No documentation or reason is requested or required if you miss an Exam/exam. The Make Up Assignment is a final opportunity to acquire a mark for a missed Exam and no documentation will provide an additional opportunity.

Policies for Missed or Late Make Up Assignments: **READ CAREFULLY** and **ENTIRELY**

- A student who does not notify the course director of a missed Exam and their intent to take on a Make Up Assignment **within (no later than) 24 hours** of/following the missed Exam start time will not be provided the opportunity to conduct a Make Up Assignment. A missed Make Up Assignment will receive a grade of **ZERO (0) %**.

Make Up Assignment submission deadlines are one week following the missed Exam date:

Make Up Assignment 1 submission deadline – 12:30 PM, Feb 12th, 2021

Make Up Assignment 2 submission deadline – 12:30 PM, March 19th, 2021

Make Up Assignment 3 submission deadline – TBD.

If a Make Up Assignment is not submitted by the deadline, **ZERO (0%)** will be assigned for this graded component of the course. As this assignment is in lieu of a missed, timed Exam, there is one deadline and no extensions

Policies for Late Term Assignments:

- If Term Assignments are not submitted by the deadline, a deduction of 10% will be allotted for each 24-hour period the assignment is late (up to a maximum of 3 days). If the assignment is more than 3 days late, **ZERO (0%)** will be assigned for this graded component of the course.

Policy for re-grading of evaluations:

Contact your assigned marker/grader about marks **ONLY** if there is a clear error in your grade (calculation, clerical, etc.) or you have a genuine question/concern that requires clarification within **ONE** week of the test score being made available to you. If no resolution is achieved, the student may contact the course director with their query with the marker/grader cc'd in the email. To be fair and consistent with regards to the entire class, we cannot provide “extra credit” assignments.

Other information

- All exams should be completed by the student registered in the class without the use of **any** study aid (e.g., course notes, internet search etc.) or **discussion/consultation** with other individuals. A student is expected to complete evaluations as they would if the evaluation were being administered in person and in accordance with all University policies on *Academic Honesty and Integrity* (see section below).
- Group chat/discussions: I encourage you to use community groups created for the purpose of discussing the content of this course as long as the discussions are within the university's policy on *Academic Honesty and Integrity* (see below). The goal of any community group associated with this class should be to maintain academic integrity. If a group discussion begins to deviate from upholding the university's policy on *Academic Honesty and Integrity*, the members as well as organizers of the group should flag this discussion and remove that member, or be considered complicit in academic misconduct. Groups should be disabled during exam time.
- Once a student opens an exam on eClass, this exam will be marked and used as part of the overall grade whether the student completes it or not.
- No opportunity to conduct a Make Up Assignment will be provided to a student who has opened an exam on eClass and not completed it.
- **Any indication** that a student has completed an evaluation (i.e., exam or quiz) using a non-approved aid and/or through discussion/consultation with another individual will result in **ZERO (0%)** being assigned for that graded component of the course.
- Please make the course director aware of any accommodations so that adjustments to the evaluations can be made *ahead of time*.

Make Up Assignment (Essay) format and rubric (marking scheme) for missed Exams:

Further described under Course Policies

A Make Up Assignment (Essay) *in lieu* of a missed Exam will be an approximately eight (8) page essay. The 8 pages should include diagrams/figures and reference citation, but it does not include the title page. Format will be 1.5 line spacing and 12-point font. The topic will be assigned by the course director and will relate to Animal Diversity and one or more of the animal groups covered on the missed exam. The essay will articulate a topic **in the student's own words** and will be in the style of a scientific literature review. The assignment will require the use of primary literature (e.g., research articles from peer reviewed scientific journals), which can be sourced online via the York University library.

Make Up Assignment Rubric (marking scheme):

Abstract – 5%

Introduction – 15%

Discussion (with subheadings) – 40%

Conclusion – 15%

References – 10%

Overall (e.g., presentation, figure use, figure quality etc.) – 15%

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 <https://secure.students.yorku.ca/pdf/religious-accommodation-agreement-final-examinations.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/>