

## Department of Biology Course Outline

SC/BIOL 2030 4.00 Animals Section M  
WINTER 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

<b>Course Director:</b>	Dr. Andrew Donini 205 Lumbers Building	adonini@yorku.ca
<b>Lab Coordinator:</b>	Andrea Durant, PhD Candidate	wb2030@yorku.ca
<b>Technical Staff:</b>	Krystina Strickler	

### Schedule

**Lecture Times:** Monday, Wednesday, Friday: 8:30 to 9:30AM in Curtis Lecture Hall F

**Lab Times:** Tues, Weds, Thurs, Fri: 2:30-5:30pm in Lumbers 124  
Tues, Weds, Thurs: 6:30 – 9:30pm in Lumbers 124  
Tues, Thurs: 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

<b>Laboratory Work</b> (quizzes, lab performance, graded dissections):	30%
<b>Laboratory Exam:</b>	10%
<b>Term Test 1:</b>	10%
<b>Term Test 2:</b>	10%
<b>Final Exam (In April Formal Exam Period)</b>	40%

## Important Dates

**Term Test 1:** Monday, February 3<sup>th</sup>, 2020

**Term Test 2:** Friday, March 6<sup>th</sup>, 2020

**Lab Exam:** Week of March 30<sup>th</sup> to April 3<sup>rd</sup> – lab sections will be assigned exam date

**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:** March 13<sup>th</sup>, 2020 (last day to drop without course on transcript)

**Course Withdrawal** March 14<sup>th</sup> to April 5<sup>th</sup> (course still appears on transcript with “W”)

**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, 8<sup>th</sup> (2018) or 7<sup>th</sup> (2015) Editions. McGraw Hill, Toronto.

**Laboratory Manual:** YORK SC/BIOL 2030 4.0 Animals Winter 2020 Laboratory Manual

Course Director: Dr. Andrew Donini

Lab Coordinator: Andrea Durant

**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. Describe what is an animal using specific characteristics that unify the group.
2. Describe the diversity of animals in terms of structure and habitats.
3. Define the 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. Explain physiological mechanisms that specific animals have evolved for ion and water balance.
8. Explain the reproductive strategies that specific animals possess.
9. Describe the different developmental and life strategies that animals possess.
10. 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 cell and tissue types
  - Procedures related to macroscopic observation of animal size, morphology and architecture, including the isolation, identification and arrangement of internal organs and organ-systems

## 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, 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, gaseous exchange, reproduction and sensory operations.

<b>Week:</b>	<b>Class</b>	<b>Topic</b>	<b>Lab</b>
<b>1</b>	Jan. 6	Introduction	None
	Jan. 8	Animal Classification and Architecture I	
	Jan. 10	Animal Architecture II	
<b>2</b>	Jan. 13	Unicellular Eukaryotes I	None
	Jan. 15	Unicellular Eukaryotes II	
	Jan. 17	Porifera	
<b>3</b>	Jan. 20	Cnidaria I	Lab 1 Unicellular Eukaryotes
	Jan. 22	Cnidaria II	
	Jan. 24	Acoelomate Bilateria I	
<b>4</b>	Jan. 27	Acoelomate Bilateria II	Lab 2 Porifera, Cnidaria
	Jan. 29	Pseudocoelomates	
	Jan. 31	Review Session	
<b>5</b>	Feb. 3	<b>TERM TEST 1</b>	Lab 3 Nematodes, Platyhelminthes
	Feb. 5	Mollusca	
	Feb. 7	Mollusca/Annelida	
<b>6</b>	Feb. 10	Annelida	Lab 4 Mollusca
	Feb. 12	Arthropoda I	
	Feb. 14	Arthropoda II	
<b>7</b>	Feb. 24	Arthropoda III	Lab 5 Annelida Marked Dissection 1
	Feb. 26	Echinodermata	
	Feb. 28	Echinodermata/Vertebrate Beginnings	
<b>8</b>	Mar. 2	Vertebrate Beginnings	Lab 6 Arthropoda
	Mar. 4	Review Session	
	Mar. 6	<b>TERM TEST 2</b>	
<b>9</b>	Mar. 9	Fishes I	Lab 7 Echinodermata & Chordata I
	Mar. 11	Fishes II	
	Mar. 13	Fishes III	
<b>10</b>	Mar. 16	Amphibians	Lab 8 Chordata II Marked Dissection 2
	Mar. 18	Amphibians/Reptiles	
	Mar. 20	Reptiles	
<b>11</b>	Mar. 23	Birds	Lab 9 Chordata III
	Mar. 25	Birds/Mammals	
	Mar. 27	Mammals	
<b>12</b>	Mar. 30	Review	<b>LAB EXAM</b>
	Apr. 1	Spare	
	Apr. 3	Spare	

## 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. Andrew Donini) will be teaching the course and is the person to ask any questions pertaining to the lectures. Dr. Donini can also help with lab material related questions BUT students are encouraged to first ask your TA about lab related material.

The **Lab Coordinator** (Andrea Durant) 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 lab material related questions to.

## Course Policies

### Term Test Policy: READ CAREFULLY and ENTIRELY

- There are 2 term tests, Term Tests 1 & 2. Term Test 1 is on February 3<sup>rd</sup> 2020 and Term Test 2 is on March 6<sup>th</sup> 2020. Both Term Tests will be held during regularly scheduled class time and will examine students on lecture material only (i.e. no lab material)
- **There are NO make-up tests for Term Tests 1 and 2**
- The combined weight of Term Tests 1 & 2 is 20% of the final course grade. You are strongly encouraged to write both tests.
- If you write both tests, the test in which you earn the higher grade will be worth 15% of the final course grade and the test in which you earn the lower grade will be worth 5%.
- **If you miss either Test 1 (on Feb. 3<sup>rd</sup>) or Test 2 (on Mar. 6<sup>th</sup>) (but not both)**, the test you wrote will continue to be worth 10% and the weight of the missed test will be transferred to the final exam (Final exam worth 50%).
- **If you miss both tests** you will earn a **ZERO** for 10% of the final course grade and your final exam will be worth 50%.

***Note: No documentation or reason is requested or required if you miss either (or both) Term Tests 1 and/or 2 and there are no make-up tests. If you choose to enter the test room and then leave before completing the test, your test will be graded and you will receive the determined grade for the test. The Final Exam will have lecture material evenly sourced from the entire term.***

### 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>
- **You Must hand the deferred standing form to the course director within 7 days of missing the exam along with appropriate documentation explaining the reason why you missed the exam (e.g. attending physician statement).**
- The format for a deferred final exam may be different from the original format of the exam.

### Policy for Laboratories: 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 Monday (at 9:15 am in Lumbers 124). This is the only time the make-up 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 (Monday, 9:15AM Lumbers 124). If you miss the make-up quiz you will earn a grade of 0/10 for the missed lab. Missed Labs cannot be dropped from your grade calculation.***

#### **Policy on Missed Laboratory Exam:**

- You must email your lab coordinator at [wb2030@yorku.ca](mailto:wb2030@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’ Statement can be downloaded from the registrar petitions package. 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 ([wb2030@yorku.ca](mailto:wb2030@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.

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](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/>