Animal Biology (Biology 1110)

Professor: Dr. Janice M. Hughes
Email: janice.hughes@lakeheadu.ca

Zoom office hours: Wednesday 2:30-3:30 (most weeks)
Also Zoom office hours by appointment are available.
Contact me by email to arrange this.

Lab Technician: Ms. Nicole Turner
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Required Books:

Lecture Notes: *Animal Biology Lecture Manual* (download available on the D2L course webpage)

Textbook/Lab Manual: *Exploring Zoology, 2nd edition*. DG Smith and MP Schenk. Morton Publishing. (custom edition ebook available though the LU bookstore online)

Learner Outcomes

Upon satisfactory completion of this course, the student will be able to:

1. Describe the origins and evolution of animal phyla, and identify their relationships to their closest living and nonliving relatives.
2. Articulate current views of animal systematics, conservation, and biodiversity.
3. Describe how novel innovations evolved in animals, and how this contributed to the diversity of extant vertebrate life.
4. Discuss how different phyla of animals are adapted to feed, reproduce, and move from place to place.
5. Describe aspects of functional anatomy and behavior in animals, and explain how it is adaptive in different phyla.
6. Distinguish different phyla of animals based on attributes of their morphology, internal anatomy, and behaviour.
7. Predict aspects of the natural history of animals from observations of their morphology and internal anatomy.

Marking Scheme: Lectures

Lectures will offered remotely though Zoom. Lectures will be given on Monday and Wednesday at 10 am as scheduled, and will be recorded so that students in other time zones will be able to access the lectures on D2L. There are two midterm tests on February 10 and March 10. These tests will be run online through the D2L course webpage. Additional instructions are posted on the course webpage. The final exam is also online, and will occur during the April exam period. The tests and final exam are not cumulative.

Midterm Test 1	Origins (Unit 1) through Flatworms (Unit 8)	15%
Midterm Test 2	Roundworms (Unit 9) through Arthropods (Unit 13)	15%
Final Exam	Echinoderms (Unit 14) through Mammals (Unit 20)	30%

Marking Scheme: Labs

Labs will be offered remotely though Zoom in your scheduled lab time slot. There are two online lab exams that will occur in your regularly scheduled lab time during the weeks of February 9 and March 30. The lab exams are not cumulative. Lab exams begin promptly at the start of your scheduled lab section. You will not be able to write the lab exams at other times, and any questions answered after the exams close will not be marked. More information regarding these exams will be provided in class.

There are eight lab assignments held during the term. The assignment sheets can be downloaded from D2L (see Content -> Lab Assignments). The assignments are due before Tuesday 8:30 am on the week that lab will be given (see schedule below on page 7).. For example, the Week 3 assignment is due on Tuesday February 2 at 8:30 (Week 3 labs run on February 2 and 4). Assignments must be handed in though the D2L dropbox, and will not be accepted after the dropbox closes. Also, any assignments submitted by email will not be marked.

There are also nine weekly online lab quizzes. The lab quiz for each lab will be available from Thursday at 5:30 pm (on the week of the lab) until the following Tuesday at 8:30 am (see schedule below on page 7). The lab quizzes will not be available to complete at any other time. More information about lab quizzes and exams will be provided during the labs and on the course webpage.

Lab Exam 1	Based on Labs 1 to 4	12%
Lab Exam 2	Based on Labs 5 to 9	15%
Lab Quizzes	See schedule on D2L and below	5%
Lab Assignments	See schedule below	8%

Important Dates:

Labs start on the week of January 19/21.
Study week occurs from Monday, February 15 to Friday, February 19.
The final exam will be held during the exam period from April 16 to 25.

Other Important Information:

Course delivery: All aspects of this course, including labs and meetings, will be delivered remotely through Zoom. There will not be any opportunities to meet in-person with the professor or teaching staff. If you wish to meet to discuss your exams or other progress in the course, or for help with any aspects of the course material, please email us to book a Zoom appointment.

Accessibility: I am fully committed to providing all recommended accommodations for students with disabilities who are registered with Student Accessibility Services. Please make an appointment with me to discuss these options.

Final exams: I cannot reschedule a final exam so please wait until the final exam schedule comes out in February before you plan any activities during the final exam period.

Absence due to Illness: If you miss a midterm test due to illness, you must inform me by email within 24 hours of the scheduled test time; otherwise, you may not be able to write a make-up test. Athletes who will miss a midterm test due to competitions must provide a letter or email from their coach in advance that clearly shows the dates of their competitions. No other excuses (e.g., vacations, sleeping in, or non-university related activities) for missing tests will be accepted.

If you miss the final exam, you must follow the procedures outlined by Enrolment Services before a make-up exam can be rescheduled. More information can be found at https://www.lakeheadu.ca/studentcentral/exams-grades/exam-central.

Academic Dishonesty: Lakehead University takes academic dishonesty very seriously; this includes (but is not restricted to) cheating, plagiarism, impersonation, and collaboration on tests and exams. There is a zero-tolerance policy for any form of academic dishonesty in my courses, and penalties will be strictly enforced. Also if you are caught participating in academic dishonesty in this course, a formal report will be sent to the Dean of Sciences and Environmental Studies and the Office of Student Affairs, and documentation of the offense may be added to the Student Conduct Database and your permanent academic record.

You can find the university regulations regarding academic dishonesty here:
https://www.lakeheadu.ca/faculty-and-staff/departments/services/provost-vice-president-academic/academic-integrity-plans-policies/academic-dishonesty-regulations

According to these regulations, any collaboration on online exams and quizzes is considered cheating. You must do the online tests alone with no help from friends, family, or classmates! The minimum penalty for collaboration or cheating is a mark of zero on the test. Not reading these instructions is not an excuse for not knowing them!

Special exam: If you fail the course with a final grade between 40 and 49 (or you qualify based on other circumstances, see link below), you may be eligible to write the special exam in June. The mark on the special exam will replace the mark that you received on the final exam in April. It is your responsibility to sign up for the special exam through Student Central before the deadline in May. It is advisable that you take the special exam very seriously because if you do poorly on it, your final grade may go down. We do not pick the highest of the two exam grades.

You can find information regarding the special exam here:
https://www.lakeheadu.ca/studentcentral/exams-grades/special-exam-criteria
https://www.lakeheadu.ca/studentcentral/exams-grades/special-exam-deadline-dates

SCHEDULE OF LECTURE TOPICS

Week of	Jan 11	Introduction to the Course Origins of Life Evolution
Week of	Jan 18	Classification Animal Body Plans Reproduction
Week of	Jan 25	Sponges (Porifera) Radiate Animals (Cnidaria) Flatworms (Platyhelminthes)
Week of	Feb 1	Roundworms (Nematodes) Molluscs (Mollusca)
Week of	Feb 8	Segmented Worms (Annelida) **Feb 10: Midterm Test 1 (No Lecture)**
Week of	Feb 15	**Study week**
Week of	Feb 22	Arthropods – Chelicerata Arthropods – Crustacea Arthropods – Myriapoda
Week of	Mar 1	Arthropods – Insects (Hexapoda) Echinoderms Introduction to Chordates
Week of	Mar 8	Cartilaginous Fishes (Chondrichthyes) **Mar 10: Midterm Test 2 (No Lecture)**
Week of	Mar 15	Bony Fishes (Osteichthyes) Amphibians (Lissamphibia)
Week of	Mar 22	Reptiles (Reptilia)
Week of	Mar 29	Birds (Aves)
Week of	April 5	**Apr 5: Easter Monday (No Lecture)** Mammals (Mammalia)
Week of	April 12	Mammals (Mammalia) **(Monday class only)**

SCHEDULE OF LAB TOPICS

Jan	12/14	**No lab**
Jan	19/21	Introduction to the Labs/Taxonomy Chapters 1 and 5
Jan	26/28	Sponges, Cnidarians, Flatworms, Roundworms Chapters 7, 8, 9, and 10
Feb	2/4	Mollusca and Annelida Chapters 11 and 12
Feb	9/11	Arthropoda 1: Chelicerata and Crustacea Chapter 13 (pages 249-266)
Feb	16/18	**Study Week**
Feb	23/25	**Lab Exam 1** – Labs 1 to 4
Mar	2/4	Arthropoda 2: Myriapoda and Insects Chapter 13 (pages 267-288)
Mar	9/11	Echinodermata and Protochordates Chapters 14 and 15
Mar	16/18	Fishes Chapters 16, 17, and 18
Mar	23/25	Amphibians, Reptiles, and Birds Chapter 19, 20, and 21
Mar/Apr	30/1	Mammals Chapter 22
Apr	6/8	**Lab Exam 2** – Labs 5 to 9

SCHEDULE OF LAB QUIZZES

	Topic	Opens at 5:30 pm on:	Closes at 8:30 am on:
Lab Quiz 1	Introduction, Taxonomy	January 21	January 26
Lab Quiz 2	Sponges, Cnidarian, Flatworms, Roundworms	January 28	February 2
Lab Quiz 3	Molluscs and Annelids	February 4	February 9
Lab Quiz 4	Chelicerata and Crustacea	February 11	February 23
Lab Quiz 5	Myriapoda and Insects	March 4	March 9
Lab Quiz 6	Echinoderms and Protochordates	March 11	March 16
Lab Quiz 7	Fishes	March 18	March 23
Lab Quiz 8	Amphibians, Reptiles, Birds	March 25	March 30
Lab Quiz 9	Mammals	April 1	April 6

SCHEDULE OF LAB ASSIGNMENT DUE DATES

Lab 1 Assignment	January 19 at 8:30 am
Lab 2 Assignment	January 26 at 8:30 am
Lab 3 Assignment	February 2 at 8:30 am
Lab 4 Assignment	February 9 at 8:30 am
Lab 6 Assignment	March 9 at 8:30 am
Lab 7 Assignment	March 16 at 8:30 am
Lab 8 Assignment	March 23 at 8:30 am
Lab 9 Assignment	March 30 at 8:30 am