Lakehead UNIVERSITY

COURSE OUTLINE: WINTER 2022

COURSE TITLE: ANIMAL BIOLOGY

COURSE CODE: BIOL 1110

CREDITS: 0.5

WEEKLY HOURS: 3.0 (2 lectures per week: **Tues** & **Thurs** 08h30-10h00)

ROOM: N/A – course delivered via Zoom

REQUIRED TEXT: Hickman Jr, C.P., Roberts, L.S., Keen, S.L., Larson, A., l'Anson, H., and D.J. Eisenhour. (2008). Integrated Principles of Zoology 14th edition, McGraw-Hill, New York, NY, 930 pp.
ISBN: 978-0-07-297004-3

https://www.academia.edu/36439722/Hickman_Zoology_14th_ed_pdf
https://openstax.org/details/books/biology-2e

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1. COURSE DESCRIPTION

An introduction to the study of the structure, function, and organization of animal life. Discussion of the evolution and classification of major invertebrate and vertebrate animal phyla, animal body plans, and reproductive strategies.

2. COURSE GOALS

BIOL 1110 introduces students to the array of animal lifeforms inhabiting our planet, how they developed and radiated over geological time, and ultimately, helps to deepen one's appreciation of the functions and benefits that a rich and healthy biodiversity provides. Case-studies of current and emerging issues associated with the exploitation and conservation of biodiversity are examined through group research and discussion.

Knowledge gained

You will be introduced to key theoretical & conceptual foundations associated with the diversity of life;

Particular attention will be given to:

(a) understanding of how animal species developed & evolved; and
(b) providing evidence for the unity of life & how higher levels of structural organisation are constructed, & continuously updated.

Analytical, technical, & applied skills

You will:

a) improve identification skills; i.e., recognise & organise species into groups according to key characteristics
b) improve critical reading skills through evaluation & review of assigned materials
c) improve written communication skills by writing short-answer responses to questions related to assigned course readings
d) improve oral communication skills through class discussion
e) improve group environment & project management skills

3. MODES OF INSTRUCTION

Assigned readings, lectures, and group assignments are employed.

The material presented in all modes of instruction is introductory in nature but will be sufficient to allow continuation to higher level courses required for completion of your respective BA or BSc degree programs. Students are expected to be prepared in advance prior to each lecture by completing assigned readings. Class time will build upon this base, focusing on important and/or more difficult concepts during lectures. Lectures will generally start with an introduction to the material by me, followed by a discussion and question period. Students should also take advantage of the lecture material accessed through the *MyCourseLink* site.

Notice for Recording Lectures & Class Activities

In BIOL 1110, in the context of remote instruction and participation, video and audio recordings of class activities will be made to ensure students' and instructors' easy and comprehensive access to those activities. The recordings are confidential and are intended only for the use of the course students and instructors. They may otherwise not be used or disclosed. During recording, to protect others' privacy, each student should ensure that no one else is present in the location where they are being recorded without that non-student's consent. The recordings are made under the authority of Sections 3 and 14 of The Lakehead University Act, 1965. Questions about the collection of the images and sounds in the recordings may be directed to Dr Azim Mallik, Chair of Biology, 955 Oliver Road, Thunder Bay, ON, Canada, P7B 5E1, (807) 343-8927.

https://www.lakeheadu.ca/sites/default/files/policies_procedures/Student%20Code%20of%20Conduct%20-%20Academic%20Integrity.pdf

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4. COURSE OUTLINE

Again, all lectures will be interactive (lecture, discussion, question & answer), thus requiring students to read the assigned material prior to class. The course is designed to encourage active participation; thus, its success (& fun!) will depend on coming to class prepared and engaging one another in friendly discussion. Further, group discussion will provide you an opportunity to (i) actively participate in the learning process and (ii) apply knowledge gained through previous lectures and reading materials.

The tentative schedule is as follows:

Week 1	Jan 11	Welcome back! Introduction to animal biology
	13	Tracing evolutionary history & how animal populations evolved / Taxonomy & classification / Introduction to the 6 Kingdoms Readings (R): 1, 10
Week 2	Jan 18	Mechanisms of evolution (from natural selection, mutation, gene flow, & genetic drift to speciation & radiation) / Population genetics
	20	How to be an animal R: 5, 6, 7, 8, 9, 11
Week 3	Jan 25	Sponges (Porifera) / Radiata (Cnidaria, Ctenophora)
	27	Flatworms (Platyhelminthes, Nemertea) R: 12, 13, 14
Week 4	Feb 1	Roundworms (Nematodes) & Molluscs (Mollusca)
	3	**QUIZ A** (up to material including Platyhelminthes & Nemertea) R: 16, 18
Week 5	Feb 8	Segmented worms (Annelida)
	10	**P1** Arthropods I – Chelicerata, Crustacea, & Myriapoda **you need to be present today to participate in P1 R: 17, 19, 20

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Week 6	Feb 15	**P1 group presentations**
	17	Arthropods II – Insects (Hexapoda)
		R: 21
Week 7	Feb 22	**READING WEEK**
	24	**READING WEEK**
Week 8	Mar 1	***MIDTERM***
	3	**P2** Echinoderms / Intro to Chordates
		**you need to be present today to participate in P2
		R: 21, 22, 23
Week 9	Mar 8	**P2 group presentations**
	10	Cartilaginous fishes (Chondricthyes)
		R: 24
Week 10	Mar 15	Bony fishes (Osteichthyes) / Transition to land
	17	**QUIZ B** (Insects to Cartilaginous fishes)
		R: 24, 25
Week 11	Mar 22	Amphibians (Lissamphibia)
	24	**P3** Reptiles
		**you need to be present today to participate in P3
		R: 25, 26
Week 12	Mar 29	**P3 group presentations**
	31	Birds
		R: 27
Week 13	Apr 5	Mammals
	7	tbd
		R: 28
Exam period		**Final Exam**

5. EVALUATION OF ACHIEVEMENT

Quizzes, exams, & group participation** will reinforce student understanding of the topics covered in BIOL 1110. The quizzes, mid-term, & final exam will consist of multiple choice, T/F, fill-in-the-blanks, matching terms, &/or short answer questions. The exams are **not** cumulative.

QUIZZES:	**10 %**
MIDTERM:	**15 %**
FINAL:	**23 %**
PARTICIPATION:**	**12 %**
LAB:	**40 %**

For your reference:

Table 1. Due dates for all graded components of our course

	Assignment	Due date	Proportion of grade
1	QUIZ A	Feb 3	5
2	Participation I (group .ppt)	Feb 14 (night before class)	4
3	MIDTERM	Mar 1	15
4	Participation II (group .ppt)	Mar 7 (night before class)	4
5	QUIZ B	Mar 17	5
6	Participation III (group .ppt)	Mar 28 (night before class)	4
7	FINAL EXAM	tba	23
	LABS	See lab schedule	40
	TOTAL		**100**

GRADING SCHEME:

A+ A	90 to 100% 80 to 89%	Outstanding understanding of the course concepts including integration of materials and ideas, ability to apply knowledge to situations
B	70 to 79%	Above average to excellent knowledge, ability to apply knowledge to situations
C	60 to 69%	Satisfactory knowledge including ability to recognise and apply major course concepts, and to progress to next level of course
D	50 to 59%	Some grasp of course concepts; will likely encounter difficulty with higher levels
E	40 to 49%	Failed to meet minimum requirements of the course
F	1 to 39%	Failure
F	0	Failure resulting from academic dishonesty

6. NETIQUETTE

Much like in a regular classroom, it is important that a positive, safe, dynamic, and constructive online learning environment is maintained. Thus, a set of guidelines for maintaining Netiquette are listed below. While you may not always agree with your instructor's or one of your peer's posts on the discussion board, please remember that everyone's opinions, thoughts, and responses must be respected. So while you are strongly encouraged to comment, question, or critique a post, personal attacks on an individual are not permitted. Essentially, we wish to build and maintain an engaging and respectful online learning environment.

Our online classroom Netiquette guidelines are as follows:

- Do not dominate any discussion. Give other students the opportunity to join in the discussion.
- Do not use offensive language. Present ideas appropriately.
- Be cautious in using Internet language. For example, do not capitalize all letters since this suggests shouting.
- Popular emoticons such as ☺ or ☹ can be helpful to convey your tone but do not overdo or overuse them.
- Avoid using vernacular and/or slang language. This could possibly lead to misinterpretation. Essentially, take some time to formulate your ideas. Be clear, concise, and complete.
- Never make fun of someone's ability to read or write.
- Share tips with other students.
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- Keep an open-mind and be willing to express even your minority opinion. Minority opinions must be respected.
- Think and edit before you push the *send* button.
- Do not hesitate to ask for feedback.
- Using humor is acceptable but be careful that it is not misinterpreted. For example, are you being humorous or sarcastic?

Guidelines adapted from:

Mintu-Wimsatt, A., Kernek, C., & Lozada, H. R. (2010). Netiquette: Make it part of your syllabus. *Journal of Online Learning and Teaching* 6(1). Retrieved from http://jolt.merlot.org/vol6no1/mintu-wimsatt_0310.htm

7. STUDENT RESPONSIBILITIES

Students are expected to participate in all course activities and complete all assignments on time. Late assignments carry a 25% reduction in value per day, no exceptions. This may seem rather severe, but it's just not fair to those who hand assignments in on time.

General regulations

It is the responsibility of each student registered at Lakehead University to be familiar with, and comply with all the terms, requirements, regulations, policies and conditions in the Lakehead University Academic Calendar. This includes, but is not limited to, Academic Program Requirements, Academic Schedule of Dates, University and Faculty/School Policies and Regulations and the Fees and Refund Policies and Schedules

Student Support

There are many resources available to support our students. These include but are not limited to:

- Health and Wellness
- Student Success Centre
- Student Accessibility Centre
- Library
- Academic Support Zone (Writing and Math Tutoring Centre)

Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for

students with disabilities and/or medical conditions to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please contact Student Accessibility Services http://studentaccessibility.lakeheadu.ca (SC0003, 343-8047 or sas@lakeheadu.ca)

Student Accessibility Services (SAS) (Thunder Bay) and Student Affairs (Orillia) coordinate services and facilitates reasonable academic accommodations for students with disabilities. Academic accommodations are provided on the basis of documentation of a disability. Additional information is available at the following campus websites:

Thunder Bay:	https://www.lakeheadu.ca/students/student-life/student-services/accessibility/
Orillia:	https://www.lakeheadu.ca/students/student-life/student-services/or

Academic dishonesty (plagiarism):

The most common offense under the Academic Code of Conduct is plagiarism.

This could be material copied word for word from books, journals, internet sites, professor's course notes, etc. It could be material that is paraphrased but closely resembles the original source. It could be the work of a fellow student, for example, an answer on a quiz, data for a lab report, a paper or assignment completed by another student. It might be a paper purchased through one of the many available sources. Plagiarism does not refer to words alone - it can also refer to copying images, graphs, tables, and ideas. "Presentation" is not limited to written work. It also includes oral presentations, computer assignments and artistic works. Finally, if you translate the work of another person into French or English and do not cite the source, this is also plagiarism.

I.E., DO NOT COPY, PARAPHRASE OR TRANSLATE ANYTHING FROM ANYWHERE WITHOUT CITING WHERE YOU OBTAINED IT!

University guidelines on the matter:

The University takes a most serious view of offences against academic honesty such as plagiarism, cheating and impersonation. Penalties for dealing with such offences will be strictly enforced.

A copy of the "Code of Student Behaviour and Disciplinary Procedures" including sections on plagiarism and other forms of misconduct may be obtained from the Office of the Registrar.

The following rules shall govern the treatment of candidates who have been found guilty of attempting to obtain academic credit dishonestly.
(a) The minimum penalty for a candidate found guilty of plagiarism, or of cheating on any part of a course will be a zero for the work concerned.
(b) A candidate found guilty of cheating on a formal examination or a test, or of serious or repeated plagiarism, or of unofficially obtaining a copy of an examination paper before the examination is scheduled to be written, will receive zero for the course and may be expelled from the University.

Students disciplined under the Code of Student Behaviour and Disciplinary Procedures may appeal their case through the Judicial Panel.

Note: "Plagiarism" shall be deemed to include:

1. Plagiarism of ideas as where an idea of an author or speaker is incorporated into the body of an assignment as though it were the writer's idea, i.e. no credit is given the person through referencing or footnoting or endnoting.
2. Plagiarism of words occurs when phrases, sentences, tables or illustrations of an author or speaker are incorporated into the body of a writer's own, i.e. no quotations or indentations (depending on the format followed) are present but referencing or footnoting or endnoting is given.
3. Plagiarism of ideas and words as where words and an idea(s) of an author or speaker are incorporated into the body of a written assignment as though they were the writer's own words and ideas, i.e. no quotations or indentations (depending on format followed) are present and no referencing or footnoting or endnoting is given.

A listing of University Regulations can be found at:
http://csdc.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=27&chapterid=8325&loaduseredits=False

The code of student behaviour and disciplinary procedures (effective May 1, 2019) can be found at:

https://www.lakeheadu.ca/sites/default/files/policies_procedures/Student%20Code%20of%20Conduct%20-%20Academic%20Integrity.pdf