

Diversity of Life I: Invertebrate and Vertebrates

CONTACT INFORMATION FOR INSTRUCTORS:

Invertebrates Lectures: Dr. Tamara Romanuk, LSC (BIOL) Room 5089, tel. 494-4515, Office Hours: Monday 1pm-2pm or by appointment, romanuk@dal.ca (email is the best way to contact me)

Vertebrates Lectures: (2010) Dr. Alan Pinder, LSB (BIOL) Room 4130, tel. 494-3822, Office Hours: MWF 1pm-2pm or by appointment, alan.pinder@dal.ca

(2011) Ms. Shauna Baillie, LSC (Biol) 2123, tel. 494-3570, Office Hours: TBA, Shauna.Baillie@dal.ca

Lab Instructor: Lara Gibson, LSC (BIOL) Room 5014, tel. 494-8817, ldgibson@dal.ca, Office Hours: Whenever my door is open, or by appointment.

TEXTBOOKS:

Required: Hickman, C. P. Jr; Roberts, L. S.; Keen, S. L.; Larson, A. & Eisenhour, D. J. (2009): Animal Diversity, 5th ed., McGraw Hill, Boston. Previous editions are fine.

iClicker Response Pad. (Available through the Dalhousie bookstore)

WEB SITES: The course maintains an Online Web Learning (OWL) space at:

<https://ilo.owl.dal.ca/webct/entryPageIns.dowebct>, once you log in you should be able to see pages for all of your classes that have BLS pages.

In addition, biology 2003 has its own blog! <http://biol2003.blogspot.com/>

The Dalhousie University Science Librarian, Michelle Paon, has put together a subject guide for biology. On this page you will find links to the key databases, relevant books, writing guides, and other useful research tools. You can find the subject guide here: <http://dal.ca.libguides.com/content.php?pid=453&hs=a>

LECTURES: Lectures are held in the ROWE Management Building 1028 on Mondays, Wednesdays and Fridays, 11:35 am -12:25 pm.

LABORATORIES: The labs are held in Room 2102, next to the McCulloch Museum. The day and time of each lab are as follows:

Section	Day	Times
B01	Tuesday	11:35 am – 2:25 pm
B02	Tuesday	2:35 – 5:25 pm
B03	Wednesday	2:35 – 5:25 pm
B04	Wednesday	5:35– 8:25 pm
B05	Thursday	8:35– 11:25 am
B08	Thursday	11:35- 2:25
B06	Thursday	2:35 – 5:25 pm
B07	Friday	1:35– 4:25 pm

LAB MANUAL: The lab manual contains information concerning laboratory procedures, lab lessons, text readings, the term schedule and projects.

You will be expected to attend each lab in your own lab period. For your benefit, you should arrive at each lab having read the lab material and reviewed the relevant lecture material beforehand. Lab quizzes will occur in the first 10 minutes of lab, if you are late to lab, you will not be given extra time.

Schedule:

Date	Lecture Topic & Readings	Laboratory Topic	Lab Assessments
1	Introduction		
2	Fossil Record, pp.1-34	1. Introduction to Laboratory	
3	Animal Ecology, pp.35-54		
4	Animal Architecture, pp.55-71		
5	5 Classification and Phylogeny, pp.72-88	2. Sponges, Cnidarians & Ctenophores	
6	6 Placozoans and Sponges, pp.112-122		
7	7 Cnidarians and Ctenophores, pp.123-146		
8	8 Acoelomates, pp.147-163	3. Worms Ethogram	Lab Quiz 1
9	9 Pseudocoelomates, pp.164-177, 222-229 TEST 1		
10	10 Annelids, pp.204-221	4. Molluscs	Lab Quiz 2 Ethnogram Due
11	11 Molluscs, pp.178-203		
12	12 Arthropods I: Crustaceans, pp.230-255		
13	13 Arthropods II: Insects, pp.255-278	No official lab this week.	Work Ahead!
14	14 Echinoderms I, pp.279-295		
15	15 Echinoderms II	5. Arthropods- Insect Diversity Analysis	Lab Quiz 3
16	16 Hemichordates, pp.295-299 TEST 2		

Schedule (Con't):

Date	Lecture Topic & Readings	Laboratory Topic	Lab Assessments
17 18 19	Feeding and moving in water Urochordates, Cephalochordates (Ch. 15) Hagfish, Lampreys, Chondrichthyes (Ch. 16)	6. Echinoderms	Lab Quiz 4
20 21 22	Osteichthyes I (Ch. 16) Osteichthyes II Lissamphibia (Ch. 17)	7. Fish and Amphibians	Lab Quiz 5 Insect Diversity Analysis Due
23 24	What is a "reptile"? (Ch. 18) Squamata: lizards and snakes	NO LABS THIS WEEK- work ahead, Animal Diversity projects due in 2 weeks, summary quiz in 3!	Work Ahead!
25 26	Test 3 (Vertebrate Test 1) How to fly I (Ch. 19) How to fly II	8. Reptiles, Birds and Mammals	Lab Quiz 6
27 28 29	Ratites et al. Dickey birds, AKA Passeriformes Prototheria and Metatheria (Ch. 20)	9. Species at Risk Discussion 10. Introduction to Rare Animals and migration case study	Lab Quiz 7 Specie at Risk papers due
30 31 32	Average mammals: rodents Carnivores and Ungulates Primates	10. Conclusion to rare animals and migration case study. Summary Quiz and Evaluations	Summary Quiz
33	Questions and Review		

ASSESSMENT & EVALUATION

Final Letter Grades: Conversion of your numeric mark to a letter grade will follow the default scheme for the Faculty of Science.

Letter Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Numeric Grade	90-100	85-89.9	80-84.9	75-79.9	70-74.9	65-69.9	62-64.9	58-61.9	55-57.9	50-54.9	<50

50% of your grade is from Lectures, 50% from Labs, as follows:

Evaluation Component	Percent Value
Invertebrate Midterm	12.5
Invertebrate Final	12.5
Vertebrate Midterm	12.5
Vertebrate Final	12.5
Lab Quizzes (7* 2 marks each)	14
Impacts on Animal Diversity Project	12
Ethogram	5
Insect Diversity Analysis	5
Lab Drawings	5
Summary Quiz	5
Rare animals and migration case study	2
Naturalist Page	2

LECTURE TESTS: 3 tests will be held during your regular lecture period in the ROWE Management Building 1028 (See schedule). Test 4 will occur during the scheduled exam period. The four tests are worth 50% total and divided up equally between Invertebrates and Vertebrates.

LAB EVALUATION: The biology curriculum suggests that each course contains an oral presentation, written work, and math/ analytical work. All these components will be covered in the lab assessments.

Lab Quizzes: Each lab and the taxa covered in it will be reviewed through a short answer or clicker quiz at the beginning of the following lab.

Ethogram: During the worm lab you will complete a behavioural ethogram. This is a short observational exercise on a live animal.

Insect Diversity Analysis: During the Arthropod lab, you will conduct an analytical assessment of insect diversity. You will have two weeks to complete the assignment.

Impacts on Animal Diversity Project: This is a term long project on species at risk, nuisance species and invasive species. The project includes a presentation, paper and group discussion.

Summary Quiz: In the last lab, the week of November 29th, there will be a short answer summary quiz. This quiz will use material from any of the taxa examined during the lab and will ask you to relate this material to lecture material and novel situations.

TAXA: In all quizzes, & assignments, students are expected to know and be able to spell the names of taxa discussed in the class. Please refer to the relevant textbooks and Appendix C of the lab manual.

COURSE POLICIES

Student Accommodation

All students are entitled to be evaluated on a fair basis. If you know or suspect that you are eligible for accommodation, contact the office of student accessibility and accommodation at 494-2836, by e-mail at access@dal.ca, or through <http://studentaccessibility.dal.ca>

Intellectual Honesty

Throughout the term you will work both individually or in small groups. In all cases it is expected that the work you turn in is your own and that it complies with Dalhousie's academic integrity policy, which can be found at <http://ug.cal.dal.ca/UREG.htm#12>

Fran Nowakowski has written the following plain language guide to academic integrity that is easy and useful to read.

Academic integrity means being honest in the fulfillment of your academic responsibilities, thus establishing mutual trust. Fairness is essential to the interactions of the academic community and is achieved through respect for the opinions and ideas of others. "Violations of intellectual honesty are offensive to the entire academic community, not just to the individual faculty member and students in whose class an offence occurs."

How can you achieve academic integrity?

- Make sure you understand Dalhousie's policies on academic integrity (<http://academicintegrity.dal.ca/Policies/>).
- Give appropriate credit to the sources used in your assignment such as written or oral work, scientific projects, graphical representations, diagrams, videos, and images.
- Do not download the work from the internet and submit it as your own.
- Do not submit work that has been completed through collaboration or previously submitted for another assignment without permission from your instructor.
- Do not write an examination or test for someone else.
- Do not falsify data or lab results.

What will happen if an allegation of an academic offence is made against you?

The class instructor is required to report a suspected offence. The full process is outlined in the Discipline flow chart found at (<http://academicintegrity.dal.ca/Files/AcademicDisciplineProcess.pdf>).

Cell phones, and Electronic Devices

Use of any electronic equipment in class is prohibited except for the following: 1) recording AUDIO of lectures with a personal recording device (please ask permission from each lecture before you do this), 2) laptops (must not use any chat function or check email while in class).

You are encouraged to bring cameras to lab and to share your photos through the BLS discussion board. Having photos of the examined specimens, especially if you review them immediately after lab and add notes, will be beneficial when studying for the lab exam.

Absences

In the event of illness or other exceptional circumstances, special arrangements for examinations, tests and assignments will be considered.

The lab rooms are at capacity, so if you are absent for a lab, you will not be able to attend a later session. Instead, assignments associated with that lab will be waived provided that:

- The student who misses class work because of illness notifies his or her physician at the time of the illness, notifies the instructor on the day in question, and provides a medical certificate signed by a physician.
- A student who for medical reasons, e.g. scheduled surgery, physiotherapy, etc. anticipates missing class work, notifies the instructor at least one week in advance.
- A student who is absent due to other exceptional circumstances, notifies the Instructor on or before the day in question, and is willing to provide appropriate documentation on request.