



**DALHOUSIE
UNIVERSITY**

Faculty of Science Course Syllabus (Section A) (revised June 2021)

Department of *Biology*

BIOL3639

Herpetology

Summer 2023

***Dalhousie University is located in Mi'kma'ki, the ancestral unceded territory of the Mi'kmaq.
We are all Treaty people.***

Instructor(s): *Andrea Gigeroff andrea.gigeroff@uottawa.ca No official office hours – if
you need to contact me outside of classtime, send me an email and we can arrange a meeting*

Lectures: *Monday-Saturday, 9-5*

Laboratories: *In Class*

Tutorials: *In Class*

Course delivery: *In-person*

Course Description

This course is an introduction to herpetology, the study of reptiles and amphibians. Through lectures, activities, and field trips, this course will give an overview of the diversity, ecology, physiology, and conservation of reptiles and amphibians. There will be a focus on diversity of reptiles and amphibians in Nova Scotia.

Course Prerequisites

BIOL 2003 and BIOL 2060, or permission of the instructor

Course Exclusion

N/a

Learning Objectives

By the end of this course, you will:

- Be familiar with the major taxonomic groups of reptiles and amphibians, their ecology, and their biology, and how they differ from other vertebrate taxa
- Be able to identify Nova Scotian reptiles and amphibians to species
- Be familiar with the pros and cons of different sampling methodology used in herpetology, and what methods are appropriate for what taxa
- Be able to compare anatomical, physiological, and ecological features between different major taxonomic groups of reptiles and amphibians
- Be familiar with the major global and local threats to reptiles and amphibians, and the ecological consequences of herpetological biodiversity loss



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- Have practiced the following skills:
 - Developing and testing hypothesis to address a particular research question in herpetology
 - Collaborate with a group to present and describe ecological data for a scientific audience
 - Present natural history information to a general audience

Course Materials

All course materials will be provided on Brightspace. There is no textbook for this class. Most materials needed for field trips will be provided. However, the following equipment is either required or strongly recommended:

- Close-toed shoes (**required**)
- Bedding (pillows, blankets or sleeping bag) for overnight trip (**required**)
- Long-sleeved shirt, long pants (recommended)
- Bug spray, hat, sunscreen, sunglasses, water bottle (recommended)
- Flashlight (recommended)
- Snacks (recommended)

Helpful Websites

The following websites may be helpful for your studying:

<http://www.canadianherpetology.ca/>

<https://novascotia.ca/museum/amphibians/defaulten.asp>

Helpful Texts

There is no textbook for this class, and I will have one or two field guides on hand during field trips. This is the field guide that I use and a good resource for herping in the future:

Peterson Field Guide to Reptiles and Amphibians of Eastern and Central America by Roger Powell, Roger Conant, and Joseph Collins. Houghton Mifflin Harcourt, 4th edition, 2016.

Course Assessment

Assessment	Weight (% of final grade)	Date
Assignments		
In-class worksheets	3 @ 2% each (=6%)	17, 24, 26 May
Reflections & field trip reports	8 @ 4% each (= 32%)	16, 17, 23, 24, 25, 26, 30 May
Individual assignments	2 @ 4% each (=8%)	16, 25 May
Term Presentation	10%	30 May
Term Paper	Outline 4%, Final Paper 12% =16% total	23, 30 May
Data assignments	2 @ 9% each (30%)	23, 27 May
Final exam	10%	27 May



Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

A+ (90-100)	B+ (77-79)	C+ (65-69)	D (50-54)
A (85-89)	B (73-76)	C (60-64)	F (<50)
A- (80-84)	B- (70-72)	C- (55-59)	

Course Policies on Missed or Late Academic Requirements

Late assignments will be penalized 10% per day for the first two days, and then will receive a mark of 0. If you are unable to complete an assignment, use the Student Declaration of Absence form. The weight of the missed assignment will be transferred to the final exam.

We will have several in-class exercises throughout the course. The exercises will be able to be completed and submitted on brightspace for 24 hours, so no absence form is required if you are unable to attend class on the day of the exercise.

If you are unable to write the animal ID quiz on May 27th, or give your term presentation on May 29th, please notify me within 24 hours and we will arrange an alternative

Course Policies related to Academic Integrity

The data assignments will be conducted in small groups. All other work is to be completed individually. Suspected plagiarism or other breaches of academic integrity will be addressed following university policy outlined in section B.

Course Content

Monday May 15 th	
	<ul style="list-style-type: none"> - Lecture: Introduction - Lecture: Taxonomy - Lecture: Local Diversity I - Assignment Topic Workshop - Individual Assignment 1
Tuesday May 16 th	
	<ul style="list-style-type: none"> - Lecture: Local Diversity II - Lecture: Evolution - Lecture: Research Methods - Lecture: Anatomy & Physiology I - In-Class Worksheet 1
Wednesday May 17 th	
	<ul style="list-style-type: none"> - Lecture: Anatomy & Physiology II - Lecture: Ecology I - Lab 1 Tutorial
20:00-22:00	- Field Trip: Frog Pond (Evening Trip)
Thursday May 18 th	
11:00	- Leave Dal for Keji Seaside



14:00-18:00	- Hiking & Observational Surveys
20:00-22:00	- Frog Call Surveys
Friday May 19 th	
10:00:00	- Leave Keji Seaside for MTRI
14:00-18:00	- Hiking & Observational Surveys
20:00-22:00	- Frog Call Surveys
Saturday May 20 st	
10:00	- Pack up and head back to Halifax
Sunday May 21 nd SUNDAY, DAY OFF	
Monday May 22 rd HOLIDAY, DAY OFF	
Tuesday May 23 th	
	- Lecture: Ecology II - Lecture: Behaviour - Lecture: Reproduction - In Class Worksheet 2
	- Maddie Empey Guest Lecture
20:00-22:00	- Field Trip: Frog Pond (Rain Check)
Wednesday May 24 th	
	- Lecture: Conservation - Individual Assignment 2
20:00-22:00	- Field Trip: Point Pleasant Park (evening trip)
Thursday May 25 th	
	- Lecture: Overflow Day - Guest Lecture: TBD - In-Class Worksheet 3
13:00-17:00	- Field Trip: Museum of Natural History
20:00-22:00	- Field Trip: Point Pleasant Park (Rain Check)
Friday May 26 th	
	- Open time to work on assignments - Lab 2 Tutorial - Guest Lecture TBD
	-
Saturday May 27 th	
	- Open time to work on assignments - Animal ID quiz
Sunday May 28 th SUNDAY DAY OFF	
Monday May 29 th	
	- Student Presentations
Tuesday May 30 th	
	- Extra help with term paper - Paper submission

Note: this is a tentative schedule dependent on weather, and general pace of the lectures. Major deviations from this schedule will be posted on brightspace and announced via email

Brief Description of Assessments

In Class Worksheets: Three worksheets each containing 4-5 short or single-word answer questions that can be filled out in-class about the day's lectures. Each worksheet is worth 2% of the final mark

Individual Assignments: Two assignments each containing 2-3 short or medium answer questions about a topic in herpetology that will be covered in class. These assignments are slightly more in-depth than the worksheets and each will require synthesis of at least two topics covered. Each assignment is worth 4% of the final mark.

Group Data Assignments: Two group assignments analyzing and presenting provided data. Working in groups of 3 or 4, analyze a dataset that will be provided, present the data, and provide a brief interpretation of the results. Each assignment is worth 9% of the final mark

Reflections and Field Trip Reports: short pieces of reflective writing about what was learned during guest lectures, and reports on species observed and climatic conditions during field trips. Each assignment is worth 4% of the final mark.

Animal ID Quiz: identification of Nova Scotian reptiles and amphibians from photographs and audio recordings. The quiz will be conducted in class and will take 2 hours. The quiz is worth 10% of the final mark.

Presentation: ~15 minute oral presentation about a topic concerning herpetology to be selected by the student. The presentation may be a powerpoint or a poster. Students will choose the topic for presentation during the first day of class, and present their findings to the class. The presentation is worth 10% of the final mark

Term Paper: term papers will follow the same topic as the presentation and provide a more in-depth look at the selected topic. The term paper includes submission of an outline for feedback from the instructor, as well as submission of the final paper. The paper is worth 16% of the final mark.

Field Trips

All Field Trips

All field trips will involve a certain degree of hiking. Most will not have public washrooms, or water fountains available. Wear comfortable closed-toed shoes, and dress in layers for all field trips (especially evening trips) – it may be very hot in the day and very chilly at night, so prepare for anything! Bring lots of water and snacks. Bringing toilet paper and hand wipes is advised in case you need to fertilize a bush. Sunscreen, bug spray, and hats are also highly recommended.

During our field trips, be respectful! Try to minimize damage to the natural areas by staying on the trails, and by picking up and packing out any litter you create (e.g., snack wrappers, toilet paper, etc).

- General Field Trip Rules: alcohol and recreational cannabis products are not permitted on Dal field trips, including our overnight trip

Local Field Trips

We will be doing several field trips to parks and trails around Halifax that are accessible by public transit. We will meet at the designated location posted to brightspace at the designated time. With the exception of our field trip to the Museum of Natural History, all local field trips are **weather dependent**. Reptiles and amphibians are generally not very active when it is raining hard, so we will not be doing fieldwork in heavy rain. Keep an eye on the weather forecast and your email – if our trip is cancelled, I will send out an email



at least 1 hour before the start of the trip. If you are unsure whether a field trip is cancelled or not, you can call or text me at (506) 238-3150. There is a raincheck date for the frog pond and point pleasant park field trips so hopefully we won't get rained out twice!

Overnight Trip

We will be going on an overnight trip to the Harrison Lewis Centre in Port Joli, and Kejimikujik National Park in Nova Scotia from Thursday May 18th to Saturday May 20th. The HLC has electricity, wifi, bathrooms, showers, and a full kitchen. As well, there are cabins with bunk beds – we may need to bunk up depending on how many of us there are. During our stay at HLC, will be conducting observational hikes, and frog call surveys in a less urbanized environment here. Our stay at Kejimikujik will not have electricity, wi-fi, or running water. Power banks to run phones are highly recommended. I will be bringing a small solar panel for emergency phone charging, so fingers crossed we have some good sun. During our trip to Keji, we will also be visiting the Mersey Tobeatic Research Institute to observe how their reptile and amphibian studies are conducted. During our outing with MTRI, we will be renting canoes/kayaks to visit sites accessible only by water. I cannot recommend enough bringing a small plastic sealable bag for your phone.

What to Bring: bedding (sleeping bag, or blankets, pillows); changes of clothes appropriate for different weather conditions; toiletries like soap, shampoo, toothpaste, etc; food will be provided but snacks are always good, there is a fire pit at HLC so campfire treats are welcome

- Travel: we will be traveling in rented vans. We will leave Dalhousie at 11AM on Thursday and travel to HLC for one night. We will then travel from HLC to MTRI and Kejimikujik for the second night. Dal's insurance does not allow students to drive other students on field trips, so if you would prefer to bring your own vehicle you may, but you cannot bring your classmates with you (another thing to consider: more vehicles = larger carbon footprint. Plus gas is expensive!)
- HLC Rules:
 - o No food in cabins or tents, keep ALL food in the main hall
 - o No pets
 - o No littering
 - o No smoking inside or near the cabins and hall
 - o Stay on the trails as much as possible
 - o Stay off the dunes

University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

Statement: <http://www.dal.ca/cultureofrespect.html>

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) (elders@dal.ca).

Information: https://www.dal.ca/campus_life/communities/indigenous.html

Important Dates in the Academic Year (including add/drop dates)

https://www.dal.ca/academics/important_dates.html

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html



Faculty of Science Course Syllabus (Section C) (revised June-2021)

Summer 2023

BIOL3639

Please ensure that the following information on Student Resources is available to all students in your course. This document should be made available to students on the course Brightspace page, or elements may be copied into your **Course Syllabus**.

Student Resources and Support

Advising

General Advising https://www.dal.ca/campus_life/academic-support/advising.html

Science Program Advisors: <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Black Students Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre/current-students.html

Academic supports

Library: <https://libraries.dal.ca/>

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Studying for Success: https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Copyright Office: <https://libraries.dal.ca/services/copyright-office.html>

Fair Dealing Guidelines <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

Other supports and services

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness/services-support/student-health-and-wellness.html

Student Advocacy: <https://dsu.ca/dsas>

Ombudsperson: https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Safety

Biosafety: <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

Chemical Safety: <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

Radiation Safety: <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

Scent-Free Program: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>

Dalhousie COVID-19 information and updates: <https://www.dal.ca/covid-19-information-and-updates.html>

