

Faculty of Science Course Syllabus¹
Department of Biology
BIOL 2605
Marine Life of Nova Scotia
Summer 2021
August 16th to 31st

Instructor(s): C. Isabelle Aubé; isabelle.aube@dal.ca; LSC B2123; (778) 835-5775 (call/text)

Lectures & Laboratories: 9:00 am - 3:30 pm; LSC Room TBD; times vary according to the day, see schedule.

Field trips:

1. Tuesday August 17th departing at 6:30 am. Full day trip to Conrad's Beach.
2. Thursday August 19th departing at 7:30 am. Full day trip to Cranberry Cove.
3. Monday August 23rd to Wednesday August 25th departing at 8 am. Two-night trip to Harrison Lewis Centre.
4. Saturday August 28th departing at 6:30 am. Full day trip to Five Islands Provincial Park.
5. Tuesday August 31st meet at 1751 Water st (Murphy's), boat departs at 3 pm. Afternoon Coastal Nature tour of Halifax Harbour.

Course Description

Introduction to the variety of marine life found in Nova Scotia. The diversity and zonation of invertebrates and macroalgae is explored on field trips to different shore environments, including a salt marsh, rocky shore and sandy beach. Lectures and laboratory-based investigations on live marine organisms complement the field trips.

Course Prerequisites

One year of university courses.

Overview

In this course you will discover the diversity of Marine Life in Nova Scotia along with the beauty and importance of the ecosystems in which they inhabit. This is a field-intensive class and is very hands on. During in-class lectures we will explore the main coastal and marine ecosystems of Nova Scotia and the species that inhabit them. We will then explore these ecosystems on four day-trips and one multi-night trip. During the field trips we will collect samples and/or photos that will be brought back to the lab to examine more closely.

Course Objectives/Learning Outcomes

By the end of the course you will be able to identify numerous species found along the coasts of Nova Scotia, recognize the various types of marine ecosystems present in Nova Scotia and understand their importance, and have gained an appreciation of how marine life/ecosystems fit into the broader context of life on Earth.

Course Materials

1. No field books are required for students to purchase. A variety of field books will be available for students to share throughout the course. Please contact the instructor if you would like recommendations for field guides if you are interested in purchasing one for yourself.
2. Students **will be provided** with a waterproof “Rite in the Rain” field notebook

Course Assessment

A total of 7 assessments will evaluate your performance in the course. Further details of assessments will be discussed in class. Due dates are provided in detailed schedule.

1. Sandy shore assignment: **15%**
2. Rocky shore assignment: **15%**
3. Bay of Fundy presentation: **15%**
4. Keji Seaside experiment proposal (group work): **5%**
5. Keji Seaside experiment assignment (group work): **25%**
6. Field notebook: **10%**
7. Bioblitz Photo Journal: **10%**
8. Participation: **5%**

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)	

¹ Our ability to offer this course in-person for Summer 2021 will depend on the health and safety regulations in place at the time. If in-person field courses are not permitted, this course will be cancelled. Content and schedule may change at instructor’s discretion.

Course Policies

- All field trips will happen **rain or shine** (exception: field trip #5 at coastal nature tour operator's discretion), so come prepared for varied weather.
- In-lab and in-field collaboration is encouraged. However, you must submit individual assignments and presentations for all assessments **except** the Keji Seaside experiment proposal and assignment (group submissions).
- We will be using Urkund in Brightspace to analyze assignment dropbox submissions for plagiarism.
- Please contact the instructor (isabelle.aube@dal.ca; 778-835-5775) as soon as possible if you are absent or are unable to submit an assessment on time.
- Due to the succinct nature of the course, we will **not** be using Student Declaration of Absence (SDA) forms. Please contact the instructor directly instead.
- There will be **no make-up assessments**. Students absent from an assessment will receive a zero unless they can provide a legitimate excuse (determined on a case-by-case basis by the instructor).
- A late penalty of 10% per day will be levied to all late assessments. Submissions will not be accepted after September 5th without a legitimate excuse.

What to bring in the field? Below is a checklist that may help you:

- ☐ a well-stocked First-Aid kit in a waterproof bag that follows the [Canadian Red Cross guidelines](#)
- ☐ cell phone, camera, and backup charger
- ☐ **bagged lunch**, energy-rich food, snacks, and **LOTS of water!** (you will get hungrier/thirstier than you think for day trips).
- ☐ appropriate footwear for walking and getting wet... rubber boots, water sandals, rain pants, or hip waders if you have them
- ☐ jacket, layers of clothes, in case it starts off cool and gets really warm (and vice versa!)
- ☐ HAT!... -extra pair of socks if you are wearing them
- ☐ sunscreen, bug spray, if desired, hair tie for long hair
- ☐ plastic bag for garbage and wet clothes... kleenex or baby wipes
- ☐ recommended: soapy facecloth in a Ziploc bag to wash your hands for day trips
- ☐ digital camera, a [waterproof field book](#), pencils (pen ink can wash off; pro-tip: tie your pencil to your field book with a long piece of string), clipboard with data sheets (or pre-set your data sheets in your field book).
- ☐ bank card AND cash for pit-stops
- ☐ an ergonomic backpack to carry your personal items in. You can drop our stuff when you work, but you may have a lot of hiking to get to where you need to go.

Date	Morning	Lunch Break	Afternoon	Deadlines and Progress
Mon Aug 16 th	9:00-11:30 • Introductions • Course overview • Science and Biology 101	11:30-12:30	12:30-3:30 • Intro to sandy shore ecosystems • Intro to salt marsh ecosystems	
Tues Aug 17 th	<i>Field Trip #1 – Conrad’s Beach (sandy shore)</i> <i>**Bus leaves at 6:30 am, returns to Dalhousie ~3:30 pm. (low tide 9:15 am)**</i>			
Wed Aug 18 th	9:00-11:30 • Marine taxonomy • Intro to rocky shore ecosystems	11:30-12:30	12:30-3:30 • Marine taxonomy in lab • Work on sandy shore assignment	Sandy shore assignment due by 11:59 pm today
Thurs Aug 19 th	<i>Field Trip #2 – Cranberry Cove (rocky shore)</i> <i>**Bus leaves at 7:30 am, returns to Dalhousie ~3:30 pm. (low tide 11:30 am)**</i>			
	9:00-11:30 • Bay of Fundy (lecture) • Marine mammals and seabirds (lecture)	11:30-12:30	12:30-3:30 • Rock pool samples/photos lab • Working on rocky shore field project	Rocky shore assignment due by 11:59 pm today
Fri Aug 20 th	DAY OFF			
Sat Aug 21 st	<i>Field Trip #3 – Five Islands Provincial Park (Bay of Fundy)</i> <i>**Bus leaves at 1:30 pm, returns to Dalhousie ~11:30 pm. (low tide 6 pm)**</i>			
Sun Aug 22 nd	9:00 am - 3:30 pm Online office hours via Teams if you need help with your Bay of Fundy presentation			

Date	Morning	Lunch Break	Afternoon	Deadlines and Progress
Mon Aug 23 rd	9:00 am - 3:30 pm Bay of Fundy class presentations			
Tues Aug 24 th	<i>Field Trip #4 – Coastal Nature Tour of Halifax Harbour</i> <i>**Boat departs from 1751 Lower Water st (Murphy's) at 3 pm, offloads ~5:30 pm. **</i> (Possible marine mammal sightings)			
Wed Aug 25 th	<i>Field Trip #5—Multi-night field trip – Harrison Lewis Centre (Experiment/Survey)</i> <i>**Vans leave at 9:30 am, arrive ~ 11:30 am (low tide 4:30 pm). **</i>			Keji Seaside experiment proposal by 8 pm today (group work)
Thurs Aug 26 th	<i>Harrison Lewis Centre (low tide 5:20 pm)</i>			Work on Keji Seaside assignment
Fri Aug 27 th	<i>Harrison Lewis Centre (low tides 5:30 am & 6 pm)</i> <i>**Depart ~ 8:30 pm, return to Dalhousie ~10:30 pm. **</i>			Work on Keji Seaside assignment
Sat Aug 28 th	DAY OFF			Work on Keji Seaside assignment
Sun Aug 29 th	DAY OFF			Work on Keji Seaside assignment
Mon Aug 30 th	9:00 am - 3:30 pm Online office hours via Teams if you need help with your Keji Seaside assignment			
Tues Aug 31 st	Last day of course			Keji Seaside experiment assignment (group work) Hand in field notebook Submit Bioblitz Photo Journal (All by 11:59 pm today)

² Schedule and field trip details subject to change based on COVID-19 health and safety recommendations in place at the time.

Faculty of Science Course Syllabus (Section B)

BIOL 2605

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

Missed or Late Academic Requirements due to Student Absence (policy)

https://www.dal.ca/dept/university_secretariat/policies/academic/missed-or-late-academic-requirements-due-to-student-absence.html

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>