

**Faculty of Science Course Syllabus  
Department of Biology  
BIOL 2605  
Marine Life of Nova Scotia  
Summer 2017  
July 26<sup>th</sup> – August 11<sup>th</sup>**

**Instructor(s):** Grace Murphy      grace.murphy@dal.ca      LSC 5086

**Lectures:** 9:00am – 11:30am LSC C234 \*Lecture times will vary according to day, see detailed schedule.

**Laboratories:** 12:30pm – 3:30pm LSC B2102 \*Lab times will vary according to day, see detailed schedule.

**Field trips:**

1. Thursday July 27<sup>th</sup> departing at 11:30am. Full day trip to Conrad's Beach.
2. Saturday July 29<sup>th</sup> departing at 6:30am. Full day trip to Cranberry Cove.
3. Tuesday August 1<sup>st</sup> – Thursday August 3<sup>rd</sup> Two-night trip to Harrison Lewis Centre.
4. Saturday August 5<sup>th</sup> departing at 10:30am. Full day trip to Five Islands Provincial Park.
5. Tuesday August 8<sup>th</sup> departing at 7:30am. Full day whale watching trip.

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**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 during four day-trips and one multi-night trip. During the field trips we will collect samples 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 8 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. Participation: **10%**
2. Field notebook: **10%**
3. Conrad’s Beach day-trip assignment: **8%**
4. Five Islands day-trip assignment: **12%**
5. Marine mammals day-trip assignment: **8%**
6. Keji Seaside assignment: **12%**
7. Human impacts presentation: **15%**
8. Rocky Shore field project and final report: **25%**

### 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

There will be no make-up assessments; students absent from an assessment will receive a 0 unless a signed note explaining the absence is obtained from your doctor. The field project reports are due by 11:59pm on Friday August 11<sup>th</sup>. A late penalty of 20% per day will be assessed to all late papers, and papers will not be accepted after August 16<sup>th</sup> without a signed doctors note.

**What to bring on field trips:**

- Field notebook
- Field guide
- Appropriate handouts from class
- Clipboard
- Pens and pencils (you will need to write in pencil in your field notebook)
- Plastic bags to keep things dry
- Small backpack to carry your supplies
- Appropriate footwear for walking and getting wet
- Layers of clothes
- Raingear (jacket and pants) \*\*We will be going on the trips rain or shine so be prepared!
- Hat to protect from sun
- Sunscreen and insect repellent
- Warm hat and gloves
- Hair tie for long hair
- Re-usable water bottle filled with water
- Lunch and snacks \*\*We will be eating lunch in the field on each of the daytrips and you will need to provide your own bagged lunch.
- Camera/phone

| Date                         | Morning  | Lunch Break        | Afternoon   | What is due?                               |
|------------------------------|--|--------------------|---|--|
| Wed. July 26 <sup>th</sup>   | <b>9:00-11:30</b> <ul style="list-style-type: none"> <li>• Introductions</li> <li>• Course overview</li> <li>• Science and Biology 101</li> </ul>                | <b>11:30-12:30</b> | <b>12:30-3:30</b> <ul style="list-style-type: none"> <li>• Intro to sandy shore ecosystems</li> <li>• Intro to salt marsh ecosystems</li> </ul> |  |
| Thurs. July 27 <sup>th</sup> | <i>Field Trip #1 – Conrad's Beach **Bus leaves at 11:30am**</i><br>We will return to Dalhousie at approx. 7:30pm   |                    |   |  |
| Fri. July 28 <sup>th</sup>   | <b>9:00-11:30</b> <ul style="list-style-type: none"> <li>• Marine taxonomy</li> <li>• Intro to rocky shore ecosystems</li> </ul>                                 | <b>11:30-12:30</b> | <b>12:30-3:30</b> <ul style="list-style-type: none"> <li>• Marine taxonomy in lab</li> <li>• Work on sandy shore assignment</li> </ul>          |  |
| Sat. July 29 <sup>th</sup>   | <i>Field Trip #2 – Cranberry Cove **Bus leaves at 6:30am**</i> <ul style="list-style-type: none"> <li>• We will return to Dalhousie at approx. 3:00pm</li> </ul> |                    |   | ** Sandy shore assignment due by 7am today |
| Sun. July 30 <sup>th</sup>   | <b>9:00am - 3:30pm</b><br>Spend day in lab analyzing rock pool samples and working on rocky shore field project  |                    |   | **Sign up for human impacts topic          |
| Mon. July 31 <sup>st</sup>   | DAY OFF  |                    |   |  |
| Tues. August 1 <sup>st</sup> | <i>Multi-Night Field Trip – Harrison Lewis Centre **Bus leaves at 7am**</i>  |                    |   |  |
| Wed. August 2 <sup>nd</sup>  | <i>Multi-Night Field Trip – Harrison Lewis Centre</i>  |                    |   |  |

|                                |   |   |
|--------------------------------|---|---|
| Thurs. August 3 <sup>rd</sup>  | <i>Multi-Night Field Trip – Harrison Lewis Centre</i><br>Depart HLC after lunch and return to Dalhousie at approx. 5pm                    |   |
| Fri. August 4 <sup>th</sup>    | <b>9:00am</b> <ul style="list-style-type: none"> <li>• Bay of Fundy (lecture)</li> <li>• Marine mammals and seabirds (lecture)</li> </ul> |   |
| Sat. August 5 <sup>th</sup>    | <i>Field Trip #3 – Five Islands Provincial Park **Bus leaves at 10:30am**</i><br>We will return to Dalhousie at approx. 8:00pm            | <b>** Keji Seaside assignment due by 7:00am today</b>   |
| Sun. August 6 <sup>th</sup>    | <b>9:00am - 3:30pm</b><br>Spend day in lab analyzing Bay of Fundy samples and working on Five Islands assignment                          |   |
| Mon. August 7 <sup>th</sup>    | DAY OFF<br><b>**Holiday**</b>   |   |
| Tues. August 8 <sup>th</sup>   | <i>Field Trip #4 – Whale Watching **Bus leaves at 7:30am</i><br><b>**We will return to Dalhousie at approx. 10:00-11:00pm</b>             | <b>**Bay of Fundy assignment due by 7:00am today</b>  |
| Wed. August 9 <sup>th</sup>    | DAY OFF<br><b>**Work on marine mammals assignment, presentation, and final report**</b>   |   |
| Thurs. August 10 <sup>th</sup> | <b>9:00am-12:00pm</b><br>Human Impact Presentations   | <b>**Marine mammal assignment due by 7:00am today</b><br><b>**Hand in field notebook at 9am today</b> |
| Fri. August 11 <sup>th</sup>   | Final Reports Due Today at 11:59pm  | <b>**Final report due by 11:59pm today</b>  |

## ACCOMMODATION POLICY FOR STUDENTS

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic protected under Canadian Human Rights legislation. The full text of Dalhousie's Student Accommodation Policy can be accessed here:

[http://www.dal.ca/dept/university\\_secretariat/policies/academic/student-accommodation-policy-wef-sep--1--2014.html](http://www.dal.ca/dept/university_secretariat/policies/academic/student-accommodation-policy-wef-sep--1--2014.html)

Students who require accommodation for classroom participation or the writing of tests and exams should make their request to the **Advising and Access Services Centre (AASC)** prior to or at the outset of the regular academic year. More information and the ***Request for Accommodation*** form are available at [www.dal.ca/access](http://www.dal.ca/access).

## ACADEMIC INTEGRITY

Academic integrity, with its embodied values, is seen as a foundation of Dalhousie University. It is the responsibility of all students to be familiar with behaviours and practices associated with academic integrity. Instructors are required to forward any suspected cases of plagiarism or other forms of academic cheating to the Academic Integrity Officer for their Faculty.

The Academic Integrity website (<http://academicintegrity.dal.ca>) provides students and faculty with information on plagiarism and other forms of academic dishonesty, and has resources to help students succeed honestly. The full text of Dalhousie's ***Policy on Intellectual Honesty*** and ***Faculty Discipline Procedures*** is available here:

[http://www.dal.ca/dept/university\\_secretariat/academic-integrity/academic-policies.html](http://www.dal.ca/dept/university_secretariat/academic-integrity/academic-policies.html)

## STUDENT CODE OF CONDUCT

Dalhousie University has a student code of conduct, and it is expected that students will adhere to the code during their participation in lectures and other activities associated with this course. In general:

“The University treats students as adults free to organize their own personal lives, behaviour and associations subject only to the law, and to University regulations that are necessary to protect

- the integrity and proper functioning of the academic and non – academic programs and activities of the University or its faculties, schools or departments;
- the peaceful and safe enjoyment of University facilities by other members of the University and the public;
- the freedom of members of the University to participate reasonably in the programs of the University and in activities on the University's premises;
- the property of the University or its members.”

The full text of the code can be found here:

[http://www.dal.ca/dept/university\\_secretariat/policies/student-life/code-of-student-conduct.html](http://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html)

## SERVICES AVAILABLE TO STUDENTS

The following campus services are available to help students develop skills in library research, scientific writing, and effective study habits. The services are available to all Dalhousie students and, unless noted otherwise, are free.

| <b>Service</b>                    | <b>Support Provided</b>   | <b>Location</b>  | <b>Contact</b>  |
|-----------------------------------|---|--|---|
| <b>General Academic Advising</b>  | Help with <ul style="list-style-type: none"> <li>- understanding degree requirements and academic regulations</li> <li>- choosing your major</li> <li>- achieving your educational or career goals</li> <li>- dealing with academic or other difficulties</li> </ul>  | <b>Killam Library Ground floor</b><br>Rm G28<br><i>Bissett Centre for Academic Success</i> | In person: Killam Library Rm G28<br>By appointment: <ul style="list-style-type: none"> <li>- e-mail: <a href="mailto:advising@dal.ca">advising@dal.ca</a></li> <li>- Phone: (902) 494-3077</li> <li>- Book online through MyDal</li> </ul>  |
| <b>Dalhousie Libraries</b>        | Help to find books and articles for assignments<br>Help with citing sources in the text of your paper and preparation of bibliography   | <b>Killam Library Ground floor</b><br><br>Librarian offices                                | In person: Service Point (Ground floor)<br>By appointment:<br>Identify your subject librarian (URL below) and contact by email or phone to arrange a time:<br><a href="http://dal.beta.libguides.com/sb.php?subject_id=34328">http://dal.beta.libguides.com/sb.php?subject_id=34328</a>   |
| <b>Studying for Success (SFS)</b> | Help to develop essential study skills through small group workshops or one-on-one coaching sessions<br>Match to a tutor for help in course-specific content (for a reasonable fee)   | <b>Killam Library 3<sup>rd</sup> floor</b><br>Coordinator Rm 3104<br>Study Coaches Rm 3103 | To make an appointment: <ul style="list-style-type: none"> <li>- Visit main office (Killam Library main floor, Rm G28)</li> <li>- Call (902) 494-3077</li> <li>- email Coordinator at: <a href="mailto:sfs@dal.ca">sfs@dal.ca</a> or</li> <li>- Simply drop in to see us during posted office hours</li> </ul> <b>All information can be found on our website: <a href="http://www.dal.ca/sfs">www.dal.ca/sfs</a></b> |
| <b>Writing Centre</b>             | Meet with coach/tutor to discuss writing assignments (e.g., lab report, research paper, thesis, poster) <ul style="list-style-type: none"> <li>- Learn to integrate source material into your own work appropriately</li> <li>- Learn about disciplinary writing from a peer or staff member in your field</li> </ul> | <b>Killam Library Ground floor</b><br>Learning Commons & Rm G25                            | To make an appointment: <ul style="list-style-type: none"> <li>- Visit the Centre (Rm G25) and book an appointment</li> <li>- Call (902) 494-1963</li> <li>- email <a href="mailto:writingcentre@dal.ca">writingcentre@dal.ca</a></li> <li>- Book online through MyDal</li> </ul> We are open six days a week<br><b>See our website: <a href="http://writingcentre.dal.ca">writingcentre.dal.ca</a></b>               |