Instructor(s): Hal Whitehead  hwhitehe@Dal.ca  LSC3076
Lectures: Tues Thurs 13:00-14:30 CHEM223
Laboratories: -
Tutorials: -

Course Description
We explore evolution in the context of the marine environment. The marine mammals form a particularly clear and interesting group for this objective, as mammals evolved on land and then the marine mammals adapted to a highly distinct marine environment. Students will learn generally of these adaptations to the marine environment, and explore particular areas of biology as their assignments. The lectures/discussions will be in three groups: introduction and background by instructor and other experts, exploration of adaptations with discussions introduced and led by the instructor, graduate students and other experts, evolution of species introduced with presentations by students.

Course Prerequisites/Restrictions
Prerequisites: One of: BIOL4060, MARI4060, MARI3090, BIOL3625

Course Objectives/Learning Outcomes
Knowledge of the evolution of marine mammals

Course Materials
Course Assessment

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (% of final grade)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tests/quizzes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midterm</td>
<td>20%</td>
<td>1 Nov</td>
</tr>
<tr>
<td>Final exam</td>
<td>25%</td>
<td>Scheduled by Registrar</td>
</tr>
<tr>
<td><strong>Assignments</strong></td>
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<td></td>
</tr>
<tr>
<td>Species presentation</td>
<td>20%</td>
<td>22 Nov-6 Dec</td>
</tr>
<tr>
<td>Species paper</td>
<td>25%</td>
<td>22 Nov</td>
</tr>
<tr>
<td><strong>Other course requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contribution to discussions of attributes</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Contribution to discussions of species</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Numerical Range</th>
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<tbody>
<tr>
<td>A+</td>
<td>(90-100)</td>
</tr>
<tr>
<td>B+</td>
<td>(77-79)</td>
</tr>
<tr>
<td>C+</td>
<td>(65-69)</td>
</tr>
<tr>
<td>D</td>
<td>(50-54)</td>
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<tr>
<td>A</td>
<td>(85-89)</td>
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<tr>
<td>B</td>
<td>(73-76)</td>
</tr>
<tr>
<td>C</td>
<td>(60-64)</td>
</tr>
<tr>
<td>F</td>
<td>(&lt;50)</td>
</tr>
<tr>
<td>A-</td>
<td>(80-84)</td>
</tr>
<tr>
<td>B-</td>
<td>(70-72)</td>
</tr>
<tr>
<td>C-</td>
<td>(55-59)</td>
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</tbody>
</table>

Course Policies

Papers must be sent in through Brightspace by 16:30 on due date

10% off for each weekday late, without medical excuse

Just put your B00.... number on paper

Single-spaced, 12pt or more font

Follow standard scientific format e.g. Marine Mammal Science

Page limits do not include reference lists, figures, tables, etc.

Course Content

Introduction to class

The ocean as habitat

The evolution of mammals

Origin of marine mammals

Diversity and characteristics of pinnipeds and sirenians
Diversity and characteristics of cetaceans

Reproduction

Mating strategies

Sensing

Communication

Diving physiology

Brains

Anatomy/Physiology

Pathology

Life histories

Social structure

Culture

Grad student presentation

Grad student presentation

Species presentations X3

Species presentations X3

Species presentations X3

Species presentations X3

Species presentations X3

Species presentations X3

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

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.
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

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:
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.

<table>
<thead>
<tr>
<th>Service</th>
<th>Support Provided</th>
<th>Location</th>
<th>Contact</th>
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</thead>
</table>
| General Academic Advising      | Help with - understanding degree requirements and academic regulations - choosing your major - achieving your educational or career goals - dealing with academic or other difficulties | Killam Library Ground floor Rm G28 Bissett Centre for Academic Success | In person: Killam Library Rm G28  
By appointment:  
- e-mail: advising@dal.ca  
- Phone: (902) 494-3077  
- Book online through MyDal |
| Dalhousie Libraries            | Help to find books and articles for assignments  
Help with citing sources in the text of your paper and preparation of bibliography | Killam Library Ground floor Librarian offices | In person: Service Point (Ground floor)  
By appointment:  
Identify your subject librarian (URL below) and contact by email or phone to arrange a time: http://dal.beta.libguides.com/sb.php?subject_id=34328 |
| Studying for Success (SFS)     | Help to develop essential study skills through small group workshops or one-on-one coaching sessions  
Match to a tutor for help in course-specific content (for a reasonable fee) | Killam Library 3rd floor Coordinator Rm 3104 Study Coaches Rm 3103 | To make an appointment:  
- Visit main office (Killam Library main floor, Rm G28)  
- Call (902) 494-3077  
- email Coordinator at: sfs@dal.ca or  
- Simply drop in to see us during posted office hours  
All information can be found on our website: www.dal.ca/sfs |
| Writing Centre                 | Meet with coach/tutor to discuss writing assignments (e.g., lab report, research paper, thesis, poster)  
- Learn to integrate source material into your own work appropriately  
- Learn about disciplinary writing from a peer or staff member in your field | Killam Library Ground floor Learning Commons & Rm G25 | To make an appointment:  
- Visit the Centre (Rm G25) and book an appointment  
- Call (902) 494-1963  
- email writingcentre@dal.ca  
- Book online through MyDal  
We are open six days a week  
See our website: writingcentre.dal.ca |