

Faculty of Science Course Syllabus
Department of Biology
MAR3221/BIOL3221 Diversity of the Algae
Fall 2016

Instructor(s): Bev Hymes beverly.hymes@dal.ca Office: inside lab 2128 Phone: 902-494-6625

Lectures: Lecture and Lab B2102 (Mon. 1:35pm- 5:25pm)

Lecture LSC C208 (Wed. 12:35pm- 1:25pm)

Tutorial LSC C220 (Fri. 12:35pm- 1:25pm)

* **NOTE:** lecture time and location is different on Mon. & Wed.

Course Instructor:

My name is **Bev Hymes**. I studied algal ultrastructure under Professors K. Cole (University of British Columbia) and T. Sawa (University of Toronto). Dr. **Herb Vandermeulen** (a macrophyte ecologist at the Bedford Institute of Oceanography) co-wrote many of the lectures with me. Some of our material was adapted from lectures developed by Drs. Ellen Kenchington and Bob DeWreede; we thank them for allowing us to incorporate some of their material. We may have guest lecturers as well. If you need to see me, email me to make an appointment.

Course Teaching Assistant/Demonstrator:

My name is **Kaitlin Burek** and I am a 5th year Marine Biology coop and honours student who has a passion for all things aquatic. I have worked with cetaceans, cuttlefish, and corals but what I truly love working with is algae. I have been lucky enough to be involved with microalgae studies at Environment Canada and am currently working with macroalgae in the Scheibling lab. I am looking forward to being your TA in this hands-on, applicable, and interesting Diversity of Algae course.

I can be contacted throughout the day for questions or to arrange a meeting at kaitlin.burek@dal.ca.

Course Description

BIOL/MARI 3221 Diversity of Algae

CREDIT HOURS: 3

This is a taxonomic introduction to the major algal groups (macrophytic and microscopic) with an emphasis on the marine seaweeds. Basic taxonomic differences are covered, along with an introduction to macrophyte ecology, human uses and symbioses. Laboratory sessions focus on morphology and reproduction.

FORMAT: Lecture / Lab and occasional tutorial

LECTURE HOURS PER WEEK: 2

LAB HOURS PER WEEK: 3

PREREQUISITES: BIOL 2004.03 or equivalent CROSS-LISTING: MARI 3221.03

EXCLUSIONS: BIOL 3212.03, MARI 3212.03

Course Objectives/Learning Outcomes

After completing the course, students will have skills in the use of taxonomic keys and algal identification, and knowledge of the general biology of the main algal groups plus some aquatic macrophytes.

Course Materials

The Brightspace system will be used to post lectures and lab outlines for the course – there is a links section as well. There is a text for this course, it is very useful but optional:

Graham, James, Wilcox, Lee W. and Graham, Linda E. 2009. ALGAE. 3rd ED. Prentice Hall, NJ. ISBN:0321559657. 720pp. Online only

In order to access to the **new 3rd edition** online go to:

<http://www.ljImpress.com/algae.html>

Either a PayPal account or a credit card can be used (\$40 USD). Please note that Prof Wilcox has requested that “We realize that not all students will buy a book, as often seems be the case these days, and we’re not asking instructors to act as cops, of course, but if you’d be willing to suggest to students that they not share files, that would be much appreciated.”

There are two other books available in the bookstore that are very useful field guides:

Sept, Duane J. 2008. A Photographic Guide to Seashore Life in the North Atlantic: Canada to Cape Cod. Princeton University Press, NJ. ISBN: 978-0-691-13319-5. 224 pp. Softcover.

Villalard -Bohnsack, Martine. 2003. Illustrated Key to the Seaweeds of New England. The Rhode Island Natural History Survey, Kingston, Rhode Island. ISBN: 1-887771-07-7. 149 pp. Softcover.

Course Assessment

Mid-term exam 20% (Friday October 14, 2016)

Final exam 30% (TBA- exam period)

Lab mid-term exam 10% (Mon. October 17, 2016)

Lab final exam 20% (Mon. November 21, 2016)

Lab Report 20% (due Monday Dec. 5, 2016) mandatory- you must hand this in to pass the course. Lab attendance and field trip mandatory- you will lose 1 mark each time without a Dr. note

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

The lab assignment must be handed in to pass the course. All exams must be written and handed in order to pass the course.

Course Content

- Classification and Phylogeny
- Morphological and Ecological Categories
- Cyanobacteria
- Rhodophyta
- Stramenopiles (9 groups)
- Cryptophyta
- Dinophyta
- Euglenophyta
- Haptophyta
- Chlorophyta
- Algal Symbiosis
- Dispersal and Propagules
- Introduced Species
- Biogeography
- Macrophytes- vascular aquatic plants
- Harvest and Aquaculture
- Human Uses of Algae

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:

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.

Service	Support Provided	Location	Contact
General Academic Advising	Help with <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - 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) <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - 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