

Faculty of Science Course Syllabus
Department of Oceanography
OCEA 2002
The Blue Planet II
Winter 2018

Instructor(s): Paul Hill paul.hill@dal.ca Office location 3633

Lectures: 0835-0955 LSC C242

Laboratories: none

Tutorials: none

Course Description

This course provides a general survey of biological oceanography. Students learn about the major groups of organisms in the ocean and about marine ecosystems. Students also learn about human uses of marine resources and the associated impacts.

Course Prerequisites

None.

Course Objectives/Learning Outcomes

At the end of the course, students should be able to do the following:

- Summarize the diversity of the structure and function of the phytoplankton.
- Recall the structure and function of important macroalgae.
- Review the diversity of structure and function of the zooplankton.
- Memorize the major phyla of benthic and nektonic invertebrates.
- Describe the major classes and important adaptations of marine fish.
- Recall the general types and important adaptations of marine reptiles and birds.
- Recall the general types and important adaptations of marine mammals.
- Describe important aspects of the ecology of the rocky intertidal zone.
- Describe important aspects of the ecology of the sandy intertidal zone.
- Describe important aspects of the ecology of the muddy intertidal zone.
- Describe the major types of estuaries based on mode of formation and mixing, and summarize some unique ecological challenges faced by organisms that inhabit estuaries.
- Describe important aspects of the ecology of salt marshes.
- Describe important aspects of the ecology of mangroves.
- Describe important aspects of the ecology of coral reefs.
- Describe important aspects of the ecology of the open ocean.
- Describe important aspects of the ecology of the deep sea.
- Review past, present and future approaches to marine fisheries.
- Summarize the potential and problems associated with aquaculture.
- Describe some sources of and solutions for marine pollution.
- List options for pursuing sustainable coastal development.
- Explain the causes and consequences of anthropogenic climate change.
- Describe some key non-living marine resources and the legal framework governing their ownership.

Course Materials

- **Oceanography and Marine Biology, by David W. Townsend.**
- Course materials are delivered through Brightspace.

Course Assessment

Component	Weight	Date
Tests/quizzes Midterm 1, 2	40%	Feb. 1, Mar. 15
Final exam Winter Final	30%	(Scheduled by Registrar)
Assignments Weekly Assessments (WHOAs)	30%	due by 5 PM Friday weekly

Other course requirements

None

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

Credit will be made available for missed examinations under a limited set of circumstances:

- **Illness:** If you are ill on the day of the examination, then contact the Professor via phone or email on that day;
- **Extracurricular Activities:** If you have an athletic event or other school-related activity that conflicts with a scheduled examination, then contact the Professor via phone or email at least 2 weeks in advance of the event;
- **Emergencies:** If you have an emergency or crisis that forces you to miss an exam, then contact the Professor as soon as possible.

If a student excuse is acceptable, then that student will be presented with a range of options to make up for the missed exam.

Online assessments (WHOAs) cannot be completed after the due date. Alternative assignments to make up for missed WHOAs are not available. Please note, however, that the WHOA average is calculated after dropping the lowest mark. With this system, a student can miss one WHOA per semester and still achieve a mark of 100% for the WHOAs.

Course Content

Date	Topic	Reading
Jan. 09	Phytoplankton	Townsend, pp. 260-286
Jan. 11	Other Primary Producers	Townsend, pp. 286-292
Jan. 16	Zooplankton	Townsend, pp. 296-321
Jan. 18	Invertebrates	Townsend, pp. 324-356
Jan. 23	Fish	Townsend, pp. 360-388
Jan. 25	Marine Reptiles and Birds	Townsend, pp. 420-433
Jan. 30	Marine Mammals	Townsend, pp. 433-454
Feb. 1	Examination 1	covers material from 09/01-30/01
Feb. 6	Rocky Intertidal	Townsend, pp. 390-398
Feb. 8	Sandy Intertidal	Townsend, pp. 398-401
Feb. 13	Muddy Intertidal	Townsend, pp. 398-401
Feb. 15	Estuaries	Townsend, pp. 401-405
Feb. 27	Salt Marshes	Townsend, pp. 405-406
Mar. 1	Mangroves	Townsend, pp. 407-408
Mar. 6	Coral Reefs	Townsend, pp. 408-413
Mar. 8	Open Ocean	none
Mar. 13	Deep Sea	Townsend, pp. 413-416
Mar. 15	Examination 2	covers material from 06/02-13/03
Mar. 20	Fisheries	Townsend, pp. 458-479
Mar. 22	Aquaculture	Townsend, pp. 479-481
Mar. 27	Pollution	Townsend, pp. 484-496
Mar. 29	Coastal Development	none
Apr. 3	Climate Change	Townsend, pp. 496-510
Apr. 5	Non-living Marine Resources	none
TBD	Final Examination	covers material from the entire term

Faculty of Science Course Syllabus (Section B)
Department of Oceanography
OCEA 2001
The Blue Planet I
Fall 2017

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

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 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

Research Lab Safety https://www.dal.ca/content/dam/dalhousie/pdf/dept/safety/lab_policy_manual_2007.pdf

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>