

BIOLOGY 319 MARINE ECOLOGY

Spring Term 2022

We acknowledge with respect the ləkʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and WSÁNEĆ peoples whose historical relationships with the land continue to this day.

Instructors

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Learning objectives:

1. To develop an understanding of the science of ecology as it applies to marine ecosystems.
2. To develop an understanding of community ecology in a diverse array of marine ecosystems ranging from the tropics to the polar regions
3. To explore major patterns of biodiversity (causes and effects) in the ocean.
4. To develop applied skills for studying marine ecology (intertidal field sampling, image analysis, statistical skills, etc.)

Text: *There is no textbook for this class. Lab outlines will be available on Brightspace a few days before the lab.*

Lecture schedule is M, T, F 12:30 PST – 1:20 PST MAC D110 (except when virtual).

There are two *lab* sections (M or T 2:30 to 5:20). The labs will be in either Petch 109, or in one of the computer labs on campus. The first lab (Jan 17th and 18th will be offered virtually)

Lectures and labs will be delivered virtually between Jan 10th and 23rd, and in person starting on 24th unless guidelines change. Virtual lectures will be delivered synchronously via Zoom. Links will be provided on the Brightspace page.

Please be aware that in-person lectures will be livestreamed and recorded using Echo360 to allow students who are not able to attend to watch later. The recording will be posted in Brightspace. If you have other questions or concerns regarding class recording and privacy please contact privacyinfo@uvic.ca.

Brightspace: All course information including lectures PDFs, lab materials, guidelines for assignments, etc will be communicated and delivered via Brightspace. Lab assignments will be delivered and graded using crowdmark or Brightspace software.

Core principles:

1. We will keep ourselves and each other safe by following public health orders on virtual learning, masking, physical distancing, and staying home when sick.
2. We are committed to equity, diversity and inclusion. Our goal is to create an inclusive environment where all are welcome. We ask students to be respectful of each other and mindful of bias. Additional resources on equity, diversity and inclusion will be available on Brightspace. If you are registered with the center for accessible learning (CAL, <https://www.uvic.ca/services/cal/>), or have any concerns about barriers to success, please discuss them with us as soon as you can.
3. We will maintain a high standard of academic integrity. Please review the UVic Calendar (links below) to refresh yourselves on the UVic guidelines for integrity and plagiarism.

Evaluation:

Lab 40%

Midterm 20% (March 01st during class time. The midterm will be delivered via Brightspace. More information to come)

Final (cumulative, including the lab and lecture) 40%

Academic regulation:

1. **VERY IMPORTANT:** UVic's policy on academic integrity (<https://tinyurl.com/ycjeyumu>)
2. Know your responsibilities as outlined in the calendar (<https://tinyurl.com/y3o8q586>)
3. The Center for Accessible Learning is here to help (<https://www.uvic.ca/services/cal/>)
4. Grades are assigned on a percentage scale in accordance with UVic policy as outlined in the calendar (<https://tinyurl.com/y7qydfyy>)
5. Please read UVic's policy on copyright (<https://www.uvic.ca/library/featured/copyright/>)
6. Important UVic dates including dates for adding and dropping course, holidays, etc. (<https://www.uvic.ca/calendar/dates/>)
7. Please read UVic's policy on plagiarism (<https://www.uvic.ca/library/research/citation/plagiarism/index.php>)

Lecture topic outline:

In this course we will survey the following marine ecosystems, and discuss the physical and biological features. Our focus will be on community interactions, food webs, and human impacts:

- Shore ecosystems (rocky and sandy beaches)
- Kelp forests

- Eelgrass Meadows
- Saltmarsh ecosystems
- Mangrove forests
- Coral reefs
- The Deep-sea and its communities (abyssal planes, hydrothermal vents, whale falls, seamounts, etc.)
- Polar ecosystems

Lab Schedule (tentative and might change due to changes in public health orders):

Week	Lab	Due	Notes
10-Jan	No lab		
17-Jan	1 stats		
24-Jan	trawling effects	Assignment 1 (stats)	Field trip on Jan 29 th (See below)
31-Jan	Sediment/macrofauna analysis 1		
7-Feb	Sediment/macrofauna analysis 2		
14-Feb	TBA	Trawling report	
21-Feb	No lab		
28-Feb	Meiofauna		
7-Mar	Meiofauna	Field report 1	
14-Mar	TBA		
21-Mar	Coral reefs	Field report 2	
28-Mar	Coral reefs		
4-Apr	Data analysis help lab	Coral reef report	

Lab mark break down (40%):

Lab assignment 1 stats 1%

Trawling lab report 4%

Field report 1 10%

Field report 2 10%

Coral reefs report 10%

General lab conduct and quality of data 5%

Field trip:

There will be one field trip in the course to a local beach ecosystem in order to collect samples to be used in the lab analysis. More information will be available soon. For now:

- **Field trip date: Sat Jan 29th (meeting there at 7:00 PM) (LOCATION TBA)**
- HOLD Sunday Jan 30th (7 PM), FEB 10th (at 6 PM) and 11th (at 6:00 PM) as bad weather alternates