BIOL/MARI 3221 DIVERSITY OF ALGAE, SEASIDE Summer

Time: Monday- Saturday *9-5pm.* There will be breaks throughout the day and schedule may vary due to field trips and guest lectures.

Instructors: Beverly Hymes and Dr. Herbert Vandermeulen

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Assistants: TBA

Course description: This class is a taxonomic introduction to the major algal groups (macrophytic and microscopic) with an emphasis on the marine seaweeds. Basic taxonomic differences will be covered, along with an introduction to macrophyte ecology, human uses and symbioses. Laboratory sessions will focus on morphology and reproduction. You will learn to identify and create your own herbarium collection.

Field Trips: There will be three field trips throughout the course. Rain or shine!! We will depart from the King's/Biology parking lot area at the scheduled time. See below for more information on field trips (i.e. what to bring etc.).

Lectures: The BbLearn (BlackBoard) system will be used to post lectures and lab outlines for the course – there is a gallery and links section as well. It is a good idea to print out all the labs before the first lecture.

Attendance: Attendance is mandatory unless a VALID REASON is given.

Evaluation: Lectures- There will be two exams worth 25% each. These exams will not be cumulative. **Labs**- There will be one final lab exam on all the labs and field trips worth 25% and your own herbarium collection worth 25%.

Grading scheme:

This course follows the grading scheme of core Biology classes:

90-100 A+	62-64 C+
85-89 A	58-61 C
80-84 A-	55-57 C-
75-79 B+	50-54 D
70-74 B	<50 F
65-69 B-	

What you will need for field trips:

WHAT YOU NEED TO BRING:

Rain boots (the area is wet and swampy in parts)

Rain gear (if weather is wet)

If you have a life jacket that fits you, please bring it - this is a safety issue for working in the low intertidal on an exposed shore

A snack and something to drink (lunch will not be provided, and we won't have time for a sit down meal)

Clipboard, paper and pencils to make notes OR (better) bring a small engineering style notebook (the type with waterproof paper) and pencils

WHAT THE COURSE WILL BRING:

Collecting bags and labels, waterproof markers

Paint scrapers (to scrape algae off rocks at holdfast point)

Coolers (to transport collected algae back to lab for sorting)

WHAT YOU WILL DO:

Write down your observations (there will be some questions on a lab exam related to this trip)

Collect several plants for later sectioning and herbarium sheet preparation back in the lab.

Tentative Schedule- Subject to changed on lectures and guest lecture availability

Activity
-Lecture: Introduction to class; Classification and phylogeny; Morphology and Ecological categories; Cyanobacteria and Glaucophyta Lab: Visit pond next to LSC; Intro to lab techniques; Cyanobacteria and Glaucophyta
Lecture: Rhodophyta; Chlorophyta Field trip: Peggy's Cove
Lecture: Chlorophyta Lab: Rhodophyta; sort and begin to make herbarium sheets and permanent slides
Lecture: Introduction to Stramenopiles and Phaeophyta Lab: Chlorophyta; herbarium sheets
Lecture: Stramenopiles (con't) diatoms, chrysophytes, tribophytes etc. Lab: Phaeophyta; herbarium sheets
Lecture: guest lecture? Cryptophyta, Dinophyta, Euglenophyta, Haptophyta Lab: Stramenopiles; diatoms etc; herbarium sheets
Lab: Cryptophyta, Dinophyta, Euglenophyta, Haptophyta; herbarium sheets
Field trip: Conrad's Beach Lab; sort; herbarium sheets
Field Trip: Belcher's Marsh Lab: sort; herbarium sheets
Review; work on herbarium sheets
Lecture: Guest ? Course Lectures: Symbiosis;

Propagule Dispersal ; Biogeography Lab: work on herbarium sheets and labels
Lecture: Introduced Species Lab: review; work on herbarium sheets
Lab exam
Lab: Food lab and Food Lecture
Finish herbarium sheets and slides and hand in by 5 pm