COLLEGE OF THE REDWOODS

Syllabus for Marine Biology

Course Information

Semester & Year:	Spring 2022
Course ID & Section #:	BIOL-15-E2847 (052847)
Instructor's name:	Julie Kelly
Lecture:	Asynchronous
Field/Lab:	Day/Time: Mondays 1:15pm – 4:25pm Location: SC 102
Course units:	4

Instructor Contact Information

Office Online:	Zoom meeting
Office hours:	One-on-one meeting by arrangement
Email address:	julie-kelly@redwoods.edu

Online Study Sessions (optional) – Where: Online via TechConnectZoom
Online Study Sessions (optional) - When: Thursday evenings at 7:30 pm - 8:30 pm

Catalog Description

An introduction to ocean habitats and marine life. Topics covered include physical properties that define marine habitats, the diversity and ecology marine organisms, and marine resource use and conservation. Labs and field trips focus on local habitats and the identification of local species. Note: This course includes required field trips to local marine habitats. The College does not provide transportation.

Course Student Learning Outcomes *(from course outline of record)*

1. Recognize major marine habitats and analyze the physical, oceanographic and ecological characteristics that define them.
2. Describe the defining cellular characteristics and life history patterns of prokaryotic and eukaryotic organisms commonly encountered in marine habitats
3. Hypothesize ecological and evolutionary mechanisms that are responsible for specific examples of marine organism adaptation.
4. Identify marine organisms to major taxon on sight, and be able to utilize resources such as dichotomous keys and field guides to identify organisms more specifically.
5. Keep an organized field/ lab notebook that includes meaningful and accurate notes and data.

Prerequisites/co-requisites/ recommended preparation

None

Accessibility

College of the Redwoods is committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-

related services and accommodations, please contact your instructor or Disability Services and Programs for Students (DSPS). Students may make requests for alternative media by contacting DSPS based on their campus location:

- Eureka: 707-476-4280, student services building, 1st floor
- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

If you are taking online classes DSPS will email approved accommodations for distance education classes to your instructor. In the case of face-to-face instruction, please present your written accommodation request to your instructor at least one week before the needed accommodation so that necessary arrangements can be made. Last minute arrangements or post-test adjustments usually cannot be accommodated.

Student Support

Good information and clear communication about your needs will help you be successful. Please let your instructor know about any specific challenges or technology limitations that might affect your participation in class. College of the Redwoods wants every student to be successful.

Evaluation & Grading Policy

This is a grade only course. Your final grade in this course will be based on tests and assignments in lecture and lab.

Admissions deadlines & enrollment policies

Spring 2022 Dates

- *Classes begin: 01/15/22*
- *Last day to add a class: 01/21/22*
- *Martin Luther King, Jr's Birthday (all campuses closed: 01/17/22*
- *Last day to drop without a W and receive a refund: 01/28/22*
- *Census date (or 20% into class duration): 01/31/22*
- *Last Day to file P/NP (only courses where this is an option) 02/11/22*
- *Lincoln's Birthday (all campuses closed): 02/18/22*
- *Presidents Day (all campuses closed): 02/21/22*
- *Last day to petition to graduate or apply for certificate: 03/03/22*
- *Spring Break (no classes): 03/14/22-03/19/22*
- *Last day for student-initiated W (no refund): 04/01/22*
- *Last day for faculty-initiated W (no refund): 04/01/22*
- *Final examinations: 05/07/22-05/13/22*
- *Semester ends: 05/13/22*
- *Grades available for transcript release: approximately 05/30/22*

Academic dishonesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In

such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the College Catalog and on the College of the Redwoods website.

Disruptive behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process, a disruptive student may be temporarily removed from class. In addition, the student may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the College Catalog and on the College of the Redwoods website.

Inclusive Language in the Classroom

College of the Redwoods aspires to create a learning environment in which all people feel comfortable in contributing their perspectives to classroom discussions. It therefore encourages instructors and students to use language that is inclusive and respectful.

Setting Your Preferred Name in Canvas

Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact Admissions & Records to request a change to your preferred first name and pronoun. Your Preferred Name will only be listed in Canvas. This does not change your legal name in our records. See the Student Information Update form.

Canvas Information

If using Canvas, include navigation instructions, tech support information, what Canvas is used for, and your expectation for how regularly students should check Canvas for your class.
Log into Canvas at https://redwoods.instructure.com
Password is your 8 digit birth date
For tech help, email its@redwoods.edu or call 707-476-4160
Canvas Help for students: https://webapps.redwoods.edu/tutorial/
Canvas online orientation workshop: Canvas Student Orientation Course (instructure.com)

Community College Student Health and Wellness

Resources, tools, and trainings regarding health, mental health, wellness, basic needs and more designed for California community college students, faculty and staff are available on the California Community Colleges Health & Wellness website.

Wellness Central is a free online health and wellness resource that is available 24/7 in your space at your pace.

Students seeking to request a counseling appointment for academic advising or general counseling can email counseling@redwoods.edu.

Emergency procedures / Everbridge

College of the Redwoods has implemented an emergency alert system called Everbridge. In the event of an emergency on campus you will receive an alert through your personal email and/or phones. Registration is not necessary in order to receive emergency alerts. Check to make sure your contact information is up-to-date by logging into WebAdvisor https://webadvisor.redwoods.edu and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'

Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions. For more information see the Redwoods Public Safety Page.

In an emergency that requires an evacuation of the building anywhere in the District:

- Be aware of all marked exits from your area and building
- Once outside, move to the nearest evacuation point outside your building
- Keep streets and walkways clear for emergency vehicles and personnel

Do not leave campus, unless it has been deemed safe by the campus authorities.

Eureka Campus Emergency Procedures

Please review the campus emergency map for evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information on Public Safety go to the Redwoods Public Safety Page It is the responsibility of College of the Redwoods to protect life and property from the effects of emergencies within its own jurisdiction.

In the event of an emergency:

1. Evaluate the impact the emergency has on your activity/operation and take appropriate action.
2. Dial 911, to notify local agency support such as law enforcement or fire services.
3. Notify Public Safety 707-476-4111 and inform them of the situation, with as much relevant information as possible.
4. Public Safety shall relay threat information, warnings, and alerts through the Everbridge emergency alert system, Public address system, and when possible, updates on the college website, to ensure the school community is notified.
5. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet, (evacuation to a safe zone, shelter in place, lockdown, assist others if possible, cooperate with First Responders, etc.).
6. If safe to do so, notify key administrators, departments, and personnel.
7. Do not leave campus, unless it is necessary to preserve life and/or has been deemed safe by the person in command.

Student Support Services

The following online resources are available to support your success as a student:

- CR-Online (Comprehensive information for online students)
- Library Articles & Databases
- Canvas help and tutorials

- Online Student Handbook

Counseling offers assistance to students in need of professional counseling services such as crisis counseling.

Learning Resource Center includes the following resources for students

- Academic Support Center for instructional support, tutoring, learning resources, and proctored exams. Includes the Math Lab & Drop-in Writing Center
- Library Services to promote information literacy and provide organized information resources.
- Multicultural & Diversity Center

Special programs are also available for eligible students include

- Extended Opportunity Programs & Services (EOPS) provides services to eligible income disadvantaged students including: textbook award, career academic and personal counseling, school supplies, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!
- The TRiO Student Success Program provides eligible students with a variety of services including trips to 4-year universities, career assessments, and peer mentoring. Students can apply for the program in Eureka or in Del Norte
- The Veteran's Resource Center supports and facilitates academic success for Active Duty Military, Veterans and Dependents attending CR through relational advising, mentorship, transitional assistance, and coordination of military and Veteran-specific resources.

BIOLOGY 15 – MARINE BIOLOGY COURSE INFORMATION

INSTRUCTOR

Julie Kelly
email julie-kelly@redwoods.edu

RESOURCES

Castro and Huber, Marine Biology, 11th Ed.
Handouts and other resources from CANVAS site

OTHER MATERIALS

Field/ lab notebook

An unlined black "Composition" notebook, available for very little money at the campus store. You will use this only for field observations and lab work…your lecture notes need to go somewhere else.

Black and colored pencils and the appropriate erasers.

Do NOT use ink unless you invest in waterproof ink pens!

Appropriate clothing

Field trips are typically at the beach, rain or shine, warm or cold. You should be prepared to get wet, muddy, sandy, etc. Warm windproof layers, waterproof boots, and a warm hat are ideal.

TECHNOLOGY

1. Learning Management System: CANVAS by Instructure

This course makes heavy use of the online resource **C*anvas***. You will need to have reliable access to the internet at least twice a week for the duration of this class. If you are having technological difficulties, get help EARLY!

How to log in to CANVAS:

- Access at CR web page Student Logins or https://redwoods.instructure.com
- Login: Your WebAdvisor ID (example: mine would be jkelly245)
- Password: 6 digit birthday (example: January 19, 2015 would be 011915)
- Once you have logged in you should change your password.

2. Access to student response system

- Cloud-based student response system
  - Socrative http://www.socrative.com
    - Log in as student

3. Method of copying Field/Lab notebook to submit notebook electronically.

- Scan notebook pages and submit as PDF electronically
- Photograph and convert JPG file to PDF to submit electronically

COURSE ORGANIZATION

Lectures

Lectures will be asynchronous.

- **Lecture videos** are aimed at introducing you to important principles of physical oceanography and marine organism ecology and evolution. We follow the text closely, though not in the same chapter order. Be sure to note the specific assigned reading details on the course schedule *and* on the Week at a Glance Module on Canvas.
- **Lecture videos** will deliver the content that you are responsible for in this class and will be crucial in maintaining a high grade in this class because this class moves rather quickly and covers a lot of material.
- **Lecture videos** are posted in the weekly MODULES in Canvas. You can also find a link in the weekly modules to download all videos to your electronic device so that you can watch these videos without internet.
- You can also use online sources to review the material covered in lecture and lab. However, you are responsible for the detail covered in the lecture videos. Online sources could provide less detail or way too much detail than is required for this class.
- Students will not get credit for answers to exam questions that were cut and pasted from online sources.

Labs and Field Trips

On Mondays, we will alternate between in-class Labs and out-in-the-world Field Trips.

- **Labs** are held in the SC 102 classroom at 1:15PM, and usually involve close-up study of marine organisms.
- Field trips require that we meet off-campus at the designated location and time, usually 1:45PM. See your schedule for details.
    - You need to arrange your own transportation for these field trips.
    - Come dressed for the outdoors…*plan* on rain, wind, cold, and wet feet!!!
    - On Mondays, you'll *always* need your field/ lab notebook and usually a handout from CANVAS that *must* be printed out ahead of time.

Personal weekly beach visits

Personal weekly beach visits are required. You should visit a location with a view of the marine environment 13 times during the 16-week Spring 2022 semester.

You should:

- Research the conditions before going to the beach. Determine the tidal level and the predicted weather at your location and log this information in your field notebook.
- Spend at least 30 minutes exploring the marine environment.
- Write entries in your field notebook about conditions that you find at your beach. Document the types of marine life that you find there either by drawing pictures or describing with words.

Exceptions

In field biology, we are at the mercy of the natural world. Some events, like tides, are relatively predictable; others, like storms and beached whales, are not. Because of this, there will be exceptions and alterations to the neat and tidy schedule you've been given. For example:

- Some of the best low tides of the semester are during the weekends. We will have one *required weekend* field trip. You will have a choice of a Saturday or Sunday at a location about 60 minutes north of campus.
- In nature, the unexpected happens. I might suddenly inform you that a whale has washed up and we're going to go check out the stinky decomposing beauty, or we might have to cancel a field trip due to weather (this happens *way* less frequently than you might think!).

Please check CANVAS Announcements and your CR email regularly. Make sure I have good contact info for you. **Pronto** on Canvas will be a good method for communication of last-minute details and directions in case somebody will be late to the field trip or gets lost on the way to the field trip.

Exams

- There are two mid-term Lecture Exams and a Final that covers both lecture and lab material.

    - Lecture exams are open notes and will be taken on the computer through Canvas.
    - Students will get 2 attempts to take each exam and the highest exam score will be kept.
    - The questions are randomized so that each attempt will have different questions.
    - The lab portion of the Final Exam will be face-to-face in the lab classroom (SC 102) during the Monday of finals week from 1:15 pm to 4:25 pm.
- You will have Study Guides to help you review lecture material and prepare for these exams.
- You will be allowed to use your Field/ Lab Notebook on the lab portion of the Final Exam.

Field/ Lab Notebook

You will be graded on the thoroughness of your Field/ Lab notebook. "Thorough" means conscientious entries for all *scheduled labs and field trips*, including relevant illustrations, maps, climate data, species lists, and miscellaneous notes, conscientious entries.

Entries will be made for:

(1) all field trips,

(2) all labs,

(3) your *required weekly beach visits.* Entries from your *required weekly beach visits* should contain all the same sorts of information as for class field trips, and, complete *Species Accounts* for all required species.

Details on how to record these activities will be found in a separate handout and discussed further in class.

Copepod Experiment Report

We will be carrying out a week-long experiment on copepods (shrimp relatives).

You will write up your experiment, its results, and your interpretation of those results, in a standardized scientific format. Details on this format will be found in a separate handout and discussed further in class.

Research papers

Each student will research 3 marine organisms: marine invertebrate, marine fish, and marine mammal. Then write a research paper for each of these marine organisms.

Other Assignments

These will include at least 2 homework assignments: Understanding the Scientific Method and Understanding Tides.

ASSESSMENT AND GRADING

I will use the following scale to determine the letter grade you earn in this class.

	100 – 93% = A	92.9 – 90% = A-
89.9 – 87% = B+	86.9 – 83% = B	82.9 – 80% = B-
79.9 – 77% = C+	76.9 – 70% = C	
	69.9 – 60% = D	
	< 59.9% = F	

Point Break-down for class

lecture exams	2 X 100 points	200
final exam	100 lecture + 100 lab points	200
Research papers	3 X 30 points	90
field/lab notebooks		260
field/labs	13 X 10 points	
Personal weekly beach visits	13 X 10 points	
Copepod Final Report		100
Lecture discussion	26 assignments x 5 points	130
Homework	2 assignments x 10 points	20
		1000 total points

Marine Biology Spring 2022 Tentative Lecture Schedule		
Week	**Lecture**	**Reading in *Marine Biology*; Castro and Huber**
1	Syllabus and Canvas	
	Marine Habitats; Chemistry	C&H Ch. 3.1
2	Habitat Between the Tides - Rocky Shore	C&H Ch.11.1
	Ocean Waves and Tides	C&H Ch. 3.3
3	Habitat Between the Tides - Sandy Shore	C&H Ch.11.2 C&H Ch. 3
	Habitat Estuaries; Challenges of the Sea	C&H 12; C&H 4.3
4	Biological Basics: Perpetuating life Diversity of Life in the Sea	C&H Ch. 4.4; C&H 4.5
	Habitat Life on the Continental Shelf	C&H Ch. 13 and Ch. 2
5	Habitat Coral Reef Communities	C&H Ch. 14
	Lincoln's Birthday Holiday	
6	Habitat Coral Reef Communities	C&H Ch. 14
	Review for Lecture Exam #1	
7	**Lecture Exam #1** Material through Coral Reefs	
	Habitat The Epipelagic Communities	C&H Ch. 15
8	Ocean Currents	C&H 3.2
	Habitats Mid- and Deep-Water Communities	C&H Ch. 16
	Spring Break	
9	Single-celled Marine Life	C&H Ch. 5
	Multicellular Algae and Plants	C&H Ch. 6
10	Marine Invertebrates - Porifera, Cnidaria, Worms	C&H Ch. 7
	Marine Invertebrates - Molluscs	C&H Ch. 7
11	Marine Invertebrates - Crustaceans and Echinoderms	C&H Ch. 7
	Marine Fish	C&H Ch. 8
12	Marine Fish	C&H Ch. 9
	Marine Reptiles and Birds	C&H Ch. 9
13	**Lecture Exam #2** Material through Marine Fish	
	Marine Mammals - Pinnipeds	C&H Ch. 9
14	Marine Mammals - Cetaceans	C&H Ch. 9
	Marine Ecology and Scientific Method	C&H Ch. 10 and Ch.1
15	Resources from the Sea	C&H Ch. 17
	Impact of Humans	C&H Ch. 18
16	**Final Exam**	

MARINE BIOLOGY Spring 2022 Tentative Lab and Field Schedule			
Week		**Date**	**Lab**
1	M	17-Jan	Martin Luther King Jr.'s Birthday Holiday
2	M	24-Jan	Lab: Dock and Piling Critters
3	M	31-Jan	Field Trip: Rocky Intertidal I - Palmer's Point Low tide 5:18pm (-1.6 feet))
4	M	7-Feb	Lab: Dichotomous Keys
5	M	14-Feb	Field Trip Manila Mudflats Low 4:55 PM -0.1ft; High 10:00am 7.5ft
6	M	21-Feb	President's Day (All Campuses Closed)
7	M	28-Feb	Field Trip: Rocky Intertidal II - Low Tide 4:15 pm -1.0 ft
8	M	7-Mar	Lab: Plankton
9	M	21-Mar	Field Trip - Telonicher Marine Lab
10	M	28-Mar	Lab: Start Copepod Experiment
11	M	4-Apr	Lab: Copepod Experiment
12	M	11-Apr	Field Trip Little River Beach Low Tide 3:04pm 0.5ft
13	M	18-Apr	Field Trip: Arcata Marsh; High Tide 03:07 PM 5.8 feet
14	M	25-Apr	Field Trip: Rocky Intertidal III - Low Tide 2:38 pm -0.1 ft
15	M	2-May	Field Trip - Patrick's Point State Park, Wedding Rock meet at 2:15pm