

BIOLOGY 13.01 and 13.02 – MARINE BIOLOGY – SPRING 2015

4 hours lecture/3 hours lab (5 units)

- Lecture in SC1102 Mon AND Wed: 5:30 – 7:20 pm
- Lab in S52 Mon OR Wed: 2:30 – 5:20 pm

Instructor: Jason Bram Office: Bldg. S5, Room S51a

Office Hours: Mon & Wed 1:30-2:30. Tues & Thurs 2:30-3:30 pm, and always by appt.

E-mail Address: bramjason@deanza.edu

Phone #: 408-864-8654

Instructor webpage: <http://www.deanza.edu/faculty/bramjason> (not important!)

Catalyst webpage: <https://catalyst.deanza.edu/> (VERY important!)

We will be using the Catalyst webspace to:

1. keep up on course announcements and deadlines (as a student you are responsible for any info/announcements made in class and/or put on Catalyst)
2. track your grade in the course
3. access course files like greensheets, lectures, labs, videos, and study guides.
4. Complete and turn in your homework assignments

Please let me know as soon as possible if you have any questions/problems with accessing Catalyst.

Textbook webpage (resources for you, but not mandatory!):

http://highered.mcgraw-hill.com/sites/0073524204/student_view0/

INTRODUCTION: Welcome to Biology 13 (Marine Biology) and the study of the wondrous array of life and adaptation in our oceans! For most students this is an astounding, interesting, sometimes awe-inspiring and hopefully quite fun view of marine biology as we know it. This 5-unit course is an introduction to the wonderful diversity of marine life on earth. The course is intended for **non-biology majors**, and my goal as your instructor is to help you achieve a good understanding of the basic principles of marine life on earth! I also hope that you will develop a lifelong appreciation of marine biology - you will see for yourself that understanding marine biology makes the world a much more interesting place!

COURSE DESCRIPTION: An introduction to marine biology as a branch of the biological sciences and to its basic unifying principles, with selected application to the scientific method, physical and chemical oceanography, marine animals, marine plants, and marine ecology with major emphasis on the natural history of marine life. Additionally, various oceanic habitats, such as bays estuaries, and open oceans are described. This course satisfies the De Anza General Education Requirement

in Natural Sciences and is transferable to both UC and CSU as a general education science course. This course does **NOT** apply towards a major in biology.

ADVISORY: English Writing 100B, and Reading 100 (or Language Arts 100) or English as a Second Language 24 and 72 (or ESL 4)

TEXT: A textbook is required, but you have some choices!!!

BEST CHOICE: Buy my customized version of Marine Biology by Peter Castro and Michael Huber 9th Edition 2013 McGraw Hill (ISBN 9781308466248). \$92.95 at the bookstore.

The best way to use the text is as a reference. My tests come from my lectures, **AND MY LECTURES MAINLY COME FROM THIS BOOK**, so if there's a concept that I go over in lecture that you need further information on, the textbook is a **GREAT** resource!

SECOND BEST CHOICE: Have an older edition of this book or get the current edition from some other source, but there are no guarantees that it will have the same material.

My suggestions are simply that: suggestions. You need to buy the book that's best for your particular situation.

I try to keep costs as low as possible so your labs will be available on Catalyst for no charge. You can print them out or view them electronically via your tablet or laptop. I **HIGHLY SUGGEST** not using your smart phone to view them unless you want to squint a lot. Phone screens are too small!!!

I am well aware that finances may be very tough for some of you. This is why I do a custom version of the textbook which is cheaper than the full textbook. This is also why I am providing the labs for you for no cost. All the field trips are no charge, and I actually use some of my own money as well as department money to pay for the camping fees. If there are ever financial concerns, please do not hesitate to talk to me, as I was a "starving student" myself once! I will come up with alternatives for you!

COURSE REQUIREMENTS AND EXPECTATIONS: You are expected to attend every class meeting. If you miss a class, it is your responsibility to obtain information and materials dispensed in that class period. Attendance and participation will be the first criteria considered when determining "borderline" grades. In my experience, those students who do not attend class are the

students who do not fulfill their potential regardless of their level of understanding. I'm telling you, if you don't come to class, you are really only hurting you and I hate to see people in pain, so come to class!!!

Disruptive behavior will not be permitted in lecture. **Basically, be nice to everyone respectful to everyone!** Here are some general rules that will help you be successful in the course and limit distractions to other students and me:

- **Arrive to class on time, and do not leave early.**
- **No use of cell phones, MP3 players, text messaging, or pagers during lecture.**
- **Do not converse with your classmates (or yourself!) while the instructor or other presenter is addressing the class. If you have a question or discussion item, please raise your hand.**

I WELCOME AND ENCOURAGE YOU TO ASK ME QUESTIONS DURING LECTURE!!! IF I DON'T KNOW THE ANSWER, I WILL FIND YOU THE ANSWER!

ASSIGNMENTS	DATE	POINTS
Three Lecture Exams:	April 29, May 27, June 24	100 pts. each
(non-cumulative, high score is counted twice) 400 points total for lecture exams!!!		
Two Lab Exams:	May 4/6, June 15/17	75 pts. each
Chapter Quizzes (on Catalyst) various dates		up to 50 pts. (up to 5 pts. each quiz)
Lab Attendance/Participation:		35 pts. (5 pts. for each lab)
Two Mandatory Field Trips (4 offered in quarter)		30 pts. (15 pts. for each trip)
Project Presentations (group grade) June 8/10		30 pts.

695 TOTAL POINTS POSSIBLE!!!

EXTRA CREDIT POINTS

Participation	up to 20 pts.
Paper (to be turned in as a Microsoft Word Attachment via e-mail)	up to 20 pts.

Note: Students who exceed 4 absences (LECTURE & LAB) are not eligible for the Participation extra credit.

GRADING: Final letter grades shall be assigned in accordance with the following percentages:

A+	=	95% or higher	660 points or higher
A	=	91-94%	632-659
A-	=	88-90.9%	612-631
B+	=	85-87.9%	591-611
B	=	80-84.9%	556-590
B-	=	76-79.9%	528-555
C+	=	71-75.9%	493-527
C	=	63-70.9%	438-492
D	=	53-62.9%	368-437
F	=	52.9% and below	367 points or lower

I do not curve the grades for the course. IT IS IN YOUR BEST INTEREST NOT TO SETTLE ON A GRADE!!! EACH OF YOU DESERVES THE BEST GRADE THAT YOU CAN ACHIEVE!!! DO NOT HESITATE TO TALK TO ME IF YOU ARE FINDING YOURSELF LOST, CONFUSED, OVERWHELMED, BORED OR SCARED ABOUT YOUR GRADE OR ANY OF THE INFORMATION PRESENTED AT THE EARLIEST POSSIBLE SIGN THAT YOU ARE HAVING DIFFICULTY.

EXAMS: Each of the exams will consist of a combination of multiple choice, short answer, matching, and fill-in-the-blank questions.

1. The lecture exams will only cover the material within that time period (i.e. the 2nd lecture exam will only cover the material presented AFTER the 1st exam).
2. I will be providing reviews for the lecture exams for you to study from, but in no way are they substitutes for coming to class!!!
3. You CANNOT make up an exam!!! This is not fair to the other students.
 - a. It is my experience that certain students always seem to have emergencies come up on exam days. I have found that when I'm "nice" to students, they abuse the privilege. Please be a responsible individual!
 - b. In saying all this, if an uncontrollable emergency or personal crisis arises, I occasionally will allow make-ups for **responsible** individuals, but they are few and far between. If something does happen, let me know the situation as soon as you can, and I will be more flexible.
 - i. IF THIS HAPPENS, IT CAN ONLY HAPPEN ONCE! IF IT HAPPENS MORE THAN ONCE, YOU HAVE MORE IMPORTANT THINGS TO WORRY ABOUT THAN THIS COURSE!!!
4. For the lab exams, seating will be assigned.

IMPORTANT NOTES REGARDING THE PROJECT PRESENTATION: This will be a group project, and you will receive a group grade. You are required to orally present (as a group) a 4-6 minute seminar based on a topic in marine biology. A video/other creative activity may be done in lieu of the presentation. This project will be gone over in class around the middle of the quarter. As this is a group presentation, anyone who doesn't participate in their group will get a minimum of 5 points taken off of their grade. It is the group's responsibility to let me know if this occurs.

Project Presentation rubric

	Great	Okay	Doesn't do it
Does the group structure their presentation effectively?	6	4	1
Does the group seem to understand what they are presenting?	6	4	1
Does the group effectively use visual aids? (i.e. Powerpoint)	6	4	1
Does the group have good content?	6	4	1
Does the group provide three usable questions for lab exam? (must be multiple choice with at least 3 choices)	6	4	1

IMPORTANT NOTES REGARDING THE FIELD TRIPS: We will be embarking on **FOUR FIELD TRIPS IN THE QUARTER!!!** **YOU ARE REQUIRED TO ATTEND TWO OF THEM**, and each one is worth 15 points for a total of 30 points!!! You can go on as many as you'd like, but you can only receive a maximum of 30 points. Here are the different ways you can get these points:

1. Go on the weekend camping trip (2 field activities will occur over the weekend – dates will be posted to Catalyst).
2. If you can't go on the camping trip, I will be providing 4 day trip opportunities (dates will be posted to Catalyst), of which you need to attend 2 of them (Sandy Beach, Intertidal, Monterey Bay, Don Edwards).
3. If you can't make at least 2 of the field trips, I will give you a much less fun alternative assignment to make up those points. **IT IS YOUR RESPONSIBILITY TO TALK TO ME TO GET THIS ALTERNATIVE ASSIGNMENT!!!** For every field trip and/or alternative assignment you don't complete, you will be giving up 15 easy points!!!

Believe me, the trips will be a lot of darn fun, so I highly encourage you to attend!!!! Why would you be taking marine biology if you're not able to go into the marine environment anyway???

There is **NO COST** associated with **ANY** of the trips. Yes, I'm getting you all in the Monterey Bay Aquarium **FOR FREE!!!** However, **YOU** are responsible for your own transportation and any incidental costs (i.e. gas/food). **MAKE**

FRIENDS/TRAVEL BUDDIES in this class. We're in this together. Splitting fuel costs is a great idea!!! Don't be shy!!!

IMPORTANT NOTES REGARDING THE LABORATORY ASSIGNMENTS AND THE LAB ITSELF:

1. No eating, drinking, smoking, or sewing (especially no sewing!) allowed in the laboratory!
2. You are expected to attend all labs. If more than two labs are missed without a reasonable excuse, you may be dropped from the course!
3. If you miss a lab, you are responsible for finding out what you missed. If you don't, your lab test grade will most likely suffer tremendously! You **MUST** attend the lab that you are signed up for unless you clear it with me beforehand. If you miss the Monday lab for example, you cannot make up the lab by attending the Wednesday lab **UNLESS** you have cleared it with me in advance. If you do show up for the wrong lab, you **WILL NOT** get credit for attending **UNLESS** you have cleared it with me in advance. I've had too many Monday lab students "magically" start coming to the Wednesday lab on exam weeks.
4. Grading: You are responsible for attending lab and completing all the work required in lab. Your attendance in the lab won't be recorded until the end of class and you show me that you have completed your work.
5. The lab tests will be based solely on the labs/field trips that we do during class time, so it's definitely in your best interest to be there!!!
6. Like the lecture exams, the lab exams are non-cumulative. Woo hoo!

SCHEDULE: The following schedule may be modified during the course at my discretion. Check Catalyst for field trip date updates!!!

DATE	LECTURE TOPIC	LAB
4/6	Intro/The Science of Marine Bio. (Chapt. 1)	Lab #1 -The Scientific Method/Metrics
4/8	The Science of Marine Bio. (Chapt. 1)	Lab #1 -The Scientific Method/Metrics
4/13	The Sea Floor (Chapt. 2)	Lab #2 - Microscopes/Plankton
4/15	Ocean Chemistry (Chapt. 3)	Lab #2 - Microscopes/Plankton
4/20	Ocean Chemistry (Chapt. 3)	NO LAB! Field trip on Friday!
4/22	The Microbial World (Chapt. 5)	NO LAB! Field trip on Friday!
Friday, April 24th - Linda Mar State Beach Field Trip - Be at site at 12:00 pm.		
4/27	Seaweeds (Chapt. 6)	Lab #3 - Seaweeds/Lab Exam Review
4/29	LECTURE EXAM #1 (includes material covered 4/6 - 4/27)	Lab #3 - Seaweeds/Lab Exam Review
5/4	Marine Invertebrates (Chapt. 7)	Lab Exam #1 (Labs 1-3)
		Lab #4- The Invertebrates + Kelp Beads
5/6	Marine Fishes (Chapt. 8)	Lab Exam #1 (Labs 1-3)
		Lab #4- The Invertebrates + Kelp Beads
Saturday, May 9th - Pigeon Point Intertidal Trip - Be at site by 9:30 am!!!		

5/11	Reptiles, Birds, Mammals (Chapt. 9)	Lab #5 - Invert dissections/The Vertebrates/Project Groups
5/13	Marine Ecology (Chapt. 10)	Lab #5 - Invert dissections/The Vertebrates/Project Groups
5/18	Marine Ecology (Chapt. 10)	Lab #6 - Vertebrate Dissections/Selection
5/20	Between the Tides (Chapt. 11)	Lab #6 - Vertebrate Dissections/Selection
5/25	NO CLASS - MEMORIAL DAY HOLIDAY!!! NO LAB!!!	
5/27	LECTURE EXAM #2 (includes material covered 5/4 - 5/20) NO LAB!!!	
Sunday May 31st - Don Edwards Wildlife Refuge Trip - Be at site by 10:00 am		
6/1	Estuaries (Chapt. 12)	Lab #7 - Beach Hoppers/Presentation Time
6/3	The Shelf (Chapt. 13)	Lab #7 - Beach Hoppers/Presentation Time
Friday June 5th - Sunday June 7th Camping Trip (Intertidal, Sandy Beach, Elephant Seals)		
Be at site 3:00 pm or later		
Sunday, June 7th Monterey Bay Aquarium Trip - Be at Aquarium by 12:00 pm		
6/8	Coral Reefs (Chapt. 14)	Project Presentations/Lab Exam Review
6/10	The Surface (Chapt. 15)	Project Presentations/Lab Exam Review
6/15	The Ocean Depths (Chapt. 16)	Lab Exam #2 (Labs 4-7,Presentations)
6/17	Make up Lecture	Lab Exam #2 (Labs 4-7,Presentations)
6/22	FINAL EXAM REVIEW	
Wednesday June 24th FINAL EXAM (6:15 pm - 8:15 pm) IN THE LECTURE HALL!!! (includes material covered 6/1 - 6/17)		

ALL ASSIGNMENTS/EXTRA CREDIT/EVERYTHING MUST BE SUBMITTED VIA E-MAIL BY 11:59 PM ON June 24th!!!

EXTRA CREDIT: THIS IS NOT REQUIRED!!! However, I highly suggest doing all of the extra credit or you really only have yourself to blame for not receiving the grade that you want to get in this course!

You can earn up to 40 points by doing the following:

1. Participation (20 points maximum): These are my subjective points and are based on attitude, completed assignments, effort, and all around being a positive addition to the class. If you do this, you can safely assume that you will receive all of these points. These points are designed to bump deserving students up to the next highest grade as well as to eliminate "begging" at the end of the quarter. These points WILL NOT be posted to Catalyst, as many students will not need "bumping" up or that "bump" won't push the student to the next highest grade. Please note that these points can be adversely affected by anything that doesn't show responsibility as a student.
2. Scientific paper summary & opinion paper (20 points maximum):
 - a. Write a 2-3 pg. double-spaced summary of a provided scientific paper (papers will be posted to Catalyst) (up to 10 points)
 - b. Write a 1-2 pg. double-spaced opinion of the paper or the issue that the paper brings up. (up to 10 points).

IF YOU DO NOT FOLLOW THE INSTRUCTIONS ABOVE, POINTS WILL BE DEDUCTED FROM YOUR PAPER.

ALSO REMEMBER THAT STUDENTS WHO EXCEED 4 UNEXCUSED ABSENCES (LECTURE & LAB) ARE NOT ELIGIBLE FOR THE PARTICIPATION EXTRA CREDIT.

CHEATING: Absolutely no form of academic dishonesty or plagiarism will be tolerated. It is unethical, unfair, and a violation of your own intelligence as well as being lame, slimy, vile, and pathetic. **Anyone caught cheating will be subjected to the most severe academic penalties. And you'll really feel guilty, so don't do it!**

ESSENTIAL STUDENT MATERIALS: Scantrons, #2 pencils, e-mail, textbook, and the labs (either printed out or on your tablet/laptop).

WITHDRAWAL AND YOUR CONCERNS ABOUT YOUR GRADE: **Sunday, April 19th** is the last day to drop the course and receive a refund. The last day to withdraw from the course (without a "W") is **Sunday, April 19th**. The last day to withdraw from the course (with a "W") is **Friday, May 29th**. **IF YOU ARE CONCERNED ABOUT YOUR GRADE, PLEASE COME TALK TO ME AT THE EARLIEST POSSIBLE TIME SO THAT WE CAN DISCUSS YOUR OPTIONS.** It is to your great advantage to discuss with me (I don't bite!) any problems you are having early in the quarter so that I can try and assist you as much as possible. **IT IS YOUR RESPONSIBILITY TO OFFICIALLY WITHDRAW SO THAT YOUR TRANSCRIPT RECORD WILL NOT BE ADVERSELY AFFECTED.**

Note to students with disabilities: If you have a disability-related need for reasonable academic accommodations or services in this course, provide (name of Instructor) with a **Test Accommodation Verification Form (also known as a TAV form)** from Disability Support Services (DSS) or the Educational Diagnostic Center (EDC). Students are expected to give five days notice of the need for accommodations. Students with disabilities can obtain a TAV form from their DSS counselor (864-8753 DSS main number) or EDC advisor (864-8839 EDC main number).

PLEASE NOTE: I keep exams for 1 year and other work for 1 quarter.

A NOTE FROM THE BHES DIVISION:

You are required to comply with all rules and regulations as outlined in the Biological, Health and Environmental Sciences Division Student Handbook as well as those of De Anza College (see the De Anza College Catalog) and the FHDA Community College District. The BHES Division Student Handbook is available on-line at: <http://www.deanza.edu/bhes/StudentHandbook.pdf> as well as in the Science Center and Kirsch Center for Environmental Studies Resource Centers in hard copy. All information in the Student Handbook applies in this course and students will be held accountable for this information. In addition to outlining expectations of classroom behavior, this handbook contains many helpful resources for students as well as ideas to help students succeed in the sciences!

STUDENT LEARNING OBJECTIVES:

1. Appraise the physical and chemical properties of the ocean and investigate their impact on marine life.
2. Compare and contrast the anatomy, behavior, reproduction, and ecology of selected marine invertebrates, vertebrates, plants, and protists.
3. Examine marine biology as a branch of the biological sciences and its relation to the scientific field and how the scientific method is used.

SOME EXTRA NOTES AND HINTS TO BE A SUCCESSFUL COLLEGE STUDENT (from my own experience)!

1. **SHOW ME THAT YOU CARE ABOUT YOUR GRADE MORE THAN I CARE ABOUT YOUR GRADE!**
2. **ATTEND CLASS!!!**
3. If you miss a class, get the notes from another student. If it's still unclear, then ask your professor!!!
4. Don't be afraid of a professor's office hours!
5. Don't be afraid of your professor! We are generally reasonable people! Talk to me! Ask me questions, no matter how stupid you may think they are!!!
6. Make your professor respect you! (see #1)
7. Don't procrastinate!
8. Remember that in the end, it is your responsibility to understand the assignment, not for your professor to explain it better!
9. Feel free to change your major!
10. Don't give your professor attitude. Remember that even if they're the biggest jerk ever, they have the power. Think of them as your boss. If you have a disagreement, bring it up after class/in office hours. (See #5)
11. Remember that there is some subjectivity in determining your grade.
12. Don't let up!
13. Being a student should be your #1 priority (if possible). **BEING A STUDENT IS YOUR EMPLOYMENT.** This of the college as the place that you work. Unfortunately, you don't get any wages except for the grades you receive, but in the end, those grades can lead to a much better future than a few bucks can!

14. Don't be in a hurry - what's another quarter/semester?
15. Study in a way that's best for you, whether that be in groups, at Starbucks, in a library, cramming, whatever!!!
16. Take advantage of extra credit!
17. Take advantage of opportunities presented (i.e. review sessions/study guides)!
18. A W is better than a D or F!!!
19. It's a competitive world. Be competitive in college! Don't settle!!!