

**Mt. San Antonio College**  
**Marine Biology: BIOL 21 Fall 2019**

**Lab:** Wed 9:45am - 12:55pm, Bldg.7, Rm.1115

**Instructor:** Tyler Flisik

**Contact info**

Email: tflisik@mtsac.edu

**Office and office hours**

Tue -Thurs 11:00am - 12:30pm

Wed 3:00 - 4:00pm

Building 60, Rm 2407

Office phone # 909 274-4554

**Texts**

*Laboratory Manual for Marine Biology* Schmidt and Kido (Required)

*Marine Biology* 10<sup>th</sup> Ed. Castro and Huber (Recommended)

**Required Supplies**

Scantrons: (10)-Form #815-E

**Website**

www.Tylerdiscoverslife.com



**Course Requirements:** Students must have already taken Marine Biology lecture (Bio 20) or must be taking Marine Biology lecture (BIO 20) concurrently

**Course Description:** A non-majors course that explores the organisms and ecology of marine ecosystems, with an emphasis on local habitats and species. Laboratory activities will focus on the identifying marine organisms and also understanding their adaptations for success in the marine environment, while the field trips will expose students to these organisms in the ecosystem in which they live.

**Keys to Success:** The study of marine biology, even at a general level, can be very complex. Your success in this class is dependent on the effort that you put into this class. I teach this class at a college level and I expect that you will study and prepare at a college level. I believe if you show up for every class, spend time studying at home, and come to my office hours if you need help, that you will pass this class without much of a problem.

Don't hesitate to ask for help, that's why I'm here!

**Points Possible**

There is a total of 660 points possible

Lecture			Grading Scale	
Lab Practicums	3 x 80 pts	240	≥90%	≥594 pts = <b>A</b>
Lab Quizzes	8 x 10 pts	80	≥80%	≥528 pts = <b>B</b>
Lab Assignments	10 x 10 pts	100	≥70%	≥462 pts = <b>C</b>
Estuary/ Salt Marsh Community Report		50	≥60%	≥396 pts = <b>D</b>
Intertidal Community Report		60	<60%	<396 pts = <b>F</b>
Floating Lab Report		60		
Bolsa Chica Report		25		
Lab Participation	3 x 15 labs	45		
Total points		660 pts		

- Assignments will be accepted up to a week after the due date with 20% of the total points deducted from the assignment. Assignments will not be accepted more than one week after the due date.



## Bio 21 Fall 2019 Schedule

The following is a **TENTATIVE** schedule and is subject to change

Week	Date	Topic	Assignment
1	Aug 28th	The Microscope, The Cell, Plankton	Complete Ch. 1 in lab manual. Read Ch. 4 The Diversity of Sea Life, Ch. 5 The Microbial World, and Ch. 6 Seaweeds & Plants in text for next lab.
2	Sep. 4th	Primary Producers (Algae and Marine Plants) Introduction to Estuaries and Newport Back Bay. <b>Quiz #1</b>	Complete Ch. 2 in lab manual using Beachcomber's Guide. Ch. 12 Estuaries in text for field trip. Read Ch. 7 Sponges in text for next lab.
3	Sep. 11th	<b>No in class meeting</b>	
	<b>Sep. 14th</b>	<b>Field Trip: Newport Back Bay Estuary</b> (Meet at Performing arts center at 7:00 AM-Returning approx. 1:30 PM)	Bring camera, report instructions, bird list, and clip board
4	Sep. 18th	Taxonomy and Dichotomous Keys Phylum Porifera (Sponges). <b>Quiz #2</b>	Complete Ch. 3 in lab manual. Estuary/Salt Marsh Community report due next week.
5	Sep. 25th	<b>Practicum 1 (Ch. 1-3 and Estuary/Salt Marsh Community)</b> Visit Museum and Wildlife Sanctuary	<b>Estuary/Salt Marsh Community report due.</b> Read Ch. 7 Cnidarians, Comb Jellies, Bilateral Worms in text for next lab.
6	Oct. 2nd	Phyla Cnidaria (Sea Jellies and Corals), Ctenophora (Comb Jellies), and Annelids (Segmented Worms)	Complete Ch. 4 in lab manual. Read Ch. 7 Molluscs in text for next lab
7	Oct. 9th	Phylum Mollusca (Clams, Mussels, and Squid) Introduction to Intertidal Communities. <b>Quiz #3</b>	Complete Ch. 5 in lab manual. Read Ch. 6 Arthropods in text for next lab. Read Ch. 13 Life on the Continental Shelf & Ch. 15 Life Near the Surface in text for upcoming field trip.
	<b>Oct. 12th &amp; Oct.13th</b>	<b>Field Trip: Dana Point Ocean Institute Floating Lab Boat Trip (\$45)</b> - (Meet at the Performing Arts Center at 11:15 AM - Returning at 6:30 PM) <b>Field Trip: Intertidal Community</b>	Bring clipboard, camera, report instructions, and species list to field trip.
8	Oct. 16th	Phylum Arthropoda (Shrimp, Crabs, Lobsters, Horseshoe Crabs, and Sea Spiders). <b>Quiz #4</b>	Complete Ch. 6 in lab manual. Read Ch. 7 Echinoderms in text for next lab. Floating Lab report due next week.
9	Oct. 23rd	<b>Practicum 2 (Ch. 4-6 and Floating Lab Trip)</b> Phylum Echinodermata (Sea Stars, Sea Urchins, Brittle Stars, and Sea Cucumbers)	<b>Floating Lab Report Due.</b> Complete Ch. 7 in lab manual. Read Ch. 7 Chordates & Ch. 8 Marine Fishes in text for next lab. Read Ch. 11 Between the Tides in text for upcoming field trip.
	<b>Oct. 26<sup>th</sup> &amp; 27<sup>th</sup></b>	<b>Intertidal Field Trip: Corona Del Mar</b> - (Meet at the Performing Arts Center at 11:00 AM - Returning at 6:30 PM)	Bring clip board, camera, report instructions, and data collection worksheet to field trip.
10	Oct. 30th	Subphyla Urochordata (Tunicates) and Cephalochordata (Lancelets), Class Agnatha (Jawless fishes) and Chondrichthyes (Sharks, Skates and Rays). <b>Quiz #5</b>	Complete Ch. 8 in lab manual. Read Ch. 8 Marine Fishes in text for next lab.
11	Nov. 6th	Class Osteichthyes (Bony Fishes) and Aves (Marine Birds). <b>Quiz #6</b>	<b>Intertidal field trip report due.</b> Complete Ch. 9 in lab manual.
12	Nov. 13th	Vertebrate Homologies. <b>Quiz #7</b>	Complete Ch. 11 in the lab manual.
13	Nov. 20th	<b>Field Trip: Bolsa Chica Ecological Reserve</b> (Meet at the Performing Arts Center at 9:30 AM)	Bring clipboard, camera, and report instructions to field trip.
14	Nov. 27th	Review for Final Practicum. <b>Quiz #8</b>	<b>Bolsa Chica report due.</b>
15	Dec. 4th	<b>Practicum 3 (Ch. 7-11, and Intertidal Field Trip)</b>	
16	Dec. 11th	No Formal Class Meeting. Comprehensive written final exam for those who need to make-up a missed practicum or a low practicum score will be given at 10:30 AM.	

"Education is when you read the fine print. Experience is what you get if you don't."

- Pete Seeger

## The Fine Print

**Lab activities, assignments and quizzes** – Laboratory activities provide students with the opportunity to explore concepts discussed in lecture in a hands-on manner using scientific methods and equipment. The laboratory activities are designed to coincide with concepts introduced in lecture, while providing an opportunity to reinforce those concepts in a different learning environment. Each week you will complete the lab assignment from the Biology 21 lab manual DURING lab. The lab assignment will be turned in the following week at the start of the lab period at the front desk. Quizzes will be given at the start of each lab on information from the previous lab (the one you just turned in). You need to be on time to lab because if you are late you will miss the quiz! There are no makeup labs, quizzes or practicums. After the quiz, I will give a 30 to 45-minute introductory lecture on the concepts addressed by the laboratory activities and will also demonstrate how to use the laboratory equipment that you will be using that day. For labs that require the use of microscopes, I will be checking your microscopes to make sure you are viewing what you are expected to see. For labs that require you do a dissection, I will perform a demo dissection then move from group to group to guide you through your dissections. The last half hour of lab we will go over your results and we will discuss the review questions as a class. You will be expected to be in the lab the entire lab period except for taking short breaks to use the restroom or make a phone call. I also expect you to get all your laboratory work done during the lab period, which you should have plenty of time to do so. Please use your lab time wisely and don't hesitate to ask for help understanding the material or the activity. That's what I'm there for!

**Lab Practicums:** Practicums are exams that require students identify organisms and their characteristics when shown an example of the organism. You will have three lab practicums over the semester with each practicum focusing on the organisms learned during the lab periods, as well as the organisms observed during our field trips.

**Field trips:** We have four mandatory field trips, including three weekend field trips. The floating lab boat trip costs approximately \$45 per student. Please contact me early in the semester if you need assistance with the cost of the boat trip. Students are required to complete photographic reports following each field trip. A field trip report will not be accepted from students who did not attend the field trip.

**Academic Integrity** - Any act of cheating will not be tolerated, and will result in a zero on that quiz, exam or assignment. You are fully capable of completing all assignments on your own and are expected to do so. If you have questions, ask your instructor!! I want to help you achieve a complete understanding of the material and will help you accomplish that. All students are to abide by the expectations outlined in the department cheating policy form and will be held accountable for any violations of those policies.

**Cell phones** – Students are encouraged to take photos on field trips and of specimens in lab, however any cell phone use that is not associated with lab will be seen as a lack of participation. If you use our cell phone during an exam or quiz, I will assume you're cheating and will confiscate your test and give you a 0 on the assignment. If you **need** to use your phone then please step outside of the lecture or laboratory.

**Food or Drink** – Absolutely **NO** food or drink in the laboratory. **This will be strictly enforced.** You can leave your food or drink outside of the lab door and enjoy your refreshments on your break.

**Accessibility Resource Centers for Students (ACCESS):** 909-274-4290. Offers eligible students a variety of disability related services, such as priority registration, counseling, note takers, sign language interpreters, enlargement of materials, and other reasonable accommodations based on the student's educational limitations and needs. Please notify your instructor immediately if you require special health or disability accommodations.

### Student Learning Objectives and General Education Outcomes –

- Students will demonstrate an ability to recognize cordgrass, pickleweed, and salt grass and describe the elevational distribution of these plants in a salt marsh.
- Students will be able to identify 5 different organisms found in the intertidal zone of southern California.
- Students will be able to evaluate the impact of science on their daily lives
- Students will be able to differentiate between the major phyla of marine organisms based on anatomical differences discovered in laboratory dissections.
- Students will be able to identify dominant invertebrates and vertebrates of the intertidal regions in a field situation by observing differences in distribution at different elevations above sea level.
- Students will be able to summarize ecological principles associated with marine ecosystems.
- Students will be able to analyze external and internal anatomy of marine organisms and describe differences in structure between various classes of marine organisms within a particular phylum.
- Students will be able to relate anatomical structure to life style of various marine organisms and analyze the significance of the structure and functions of organ systems to the mode of life in the marine environment.
- Students will be able to compare and contrast the biological and physical aspects of the marine environment and explain adaptations of marine organisms to each aspect.

For clarity on the SLO's and GEO's for this course please visit [www.mtsac.edu/instruction/outcomes/sloinfo.html](http://www.mtsac.edu/instruction/outcomes/sloinfo.html)

"We learn . . . 10% of what we read, 20% of what we hear, 30% of what we see, 50% of what we see and hear, 70% of what we discuss, 80% of what we experience, 95% of what we teach others."

~ William Glass

**Mount San Antonio College**  
**Biological Sciences Department Policy on Student Cheating**

**POLICY**

1. No dictionaries, reference materials, notes, or programmable calculators may be used during any exam or quiz unless authorized by the professor.
2. No electronic devices, of any type, may be used during any exam or quiz unless authorized by the professor. a. Electronic devices include, but are not limited to: cell phones, PDAs (personal digital assistants, earphones, cameras, MP3 players, translation devices, and electronic dictionaries.
3. No talking, signaling, sharing of note cards, calculators or other materials is allowed during any exam or quiz, unless authorized by the professor.
4. Only the materials required or authorized for an exam or quiz should be taken out of your notebook, backpack, pocket, or purse. All other materials should be put away as instructed, including electronic devices.
5. Students may not leave the classroom during an exam or quiz unless authorized by the professor. If a student leaves the room without permission, the test or quiz will be forfeited at that time.
6. This policy will be strictly enforced by all professors in all classes taught in the Department.

**CONSEQUENCES:**

7. A single act of cheating or academic dishonesty in any form may result in as much as receiving an "F" in the course.
8. Action taken by the professor will be consistent with the college policy on cheating and academic dishonesty. In addition, a report regarding the violation will be submitted to the Director of Student Life for further action, which may also result in further disciplinary action, including, but not limited to suspension or expulsion from the college.

**WHAT IS CHEATING?**

Some examples of cheating include, but are not limited to:

- a. Plagiarism, which is the use of materials authored by another person or obtained from a commercial source or the use of passages without proper acknowledgment.
- b. Having or using unauthorized materials during any exam or quiz
- c. Notes concealed in or written on clothing, hats, or skin (as examples).
- d. Looking at another student's work during any exam or quiz.
- e. Changing answers on a returned exam in order to claim there had been a grading error.
- f. Sharing any content of exams or quizzes with individuals who have not yet taken it.
- g. Removing an exam or quiz from the classroom without the professor's approval.
- h. Taking photos of exams, quizzes, completed ScanTrons®, or exam keys.
- i. Turning in work that was generated by other individuals or by the same individual but in a prior semester, including but not limited to: lab report data, lab report or homework questions, homework assignments, and extra credit assignments.
- j. Working together on a lab experiment when told to work individually.
- k. Falsifying lab data.
- l. Allowing another student to look at your exam or quiz, or allowing another student to copy your homework, lab reports, or other assignments. (If that work is duplicated you may also receive the same penalties listed above for violation of the Biology Department Policy on Cheating, and the college policy on cheating and academic dishonesty.)
- m. Falsifying documents, including signatures. If you are unclear about what constitutes cheating in your class or for a particular assignment, please contact your instructor for clarification before the assignment is due