Marine Ecology and Evolution
BIOL 301, Spring 2018

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Meeting Time: Lecture: Tuesdays and Thursdays 9:00-10:15 am, BIOMD B103
Office hours: Wednesdays and Thursdays 10:30-11:30 am, EDM 317 or by appointment

Course Website: http://markolabhawaii.org/Marko_Lab_at_UH_Manoa/Marine_Ecology_and_Evolution.html

Website Username and Password: _____, _____

What is Marine Ecology and Evolution?

Marine Ecology and Evolution will introduce you to the dominant biotic and abiotic factors responsible for creating and maintaining patterns of organismal diversity in the sea.

Student Learning Outcomes

At the end of BIOL 301, students will be able to:

1. Describe overall patterns of marine biodiversity, both in space and time, and the geological, climatological, ecological, and evolutionary mechanisms responsible for generating those patterns.

2. Explain how both observational studies and experimental manipulation have been used to critically evaluate hypotheses in marine ecological and evolutionary research.

3. Express how two-phase life histories influence the distribution, abundance, dispersal, population genetic structure, and diversity of marine organisms.

4. Identify the major ecological players and characterize their roles in the structure and function of different marine ecosystems, including those in Hawaii.

5. Integrate knowledge of the function, ecology, and evolution of marine organisms to be able to predict potential ecological and evolutionary responses to environmental change.

Course Content

There is no required textbook for this class. Some of the content that I will use will come from the text *Marine Biology* (2009, Third Edition), by J.S. Levinton. Any texts from two pre-requisites (OCN 201 and BIOL 265) will also come in handy for brushing up on the basics.

Exams and Grades

Quizzes (**top 5 of 6**)	70%
Final Exam	25%
Participation and Engagement	5%
Total	100%

Quiz Dates:

1) **January 25**, 2) **February 13**, 3) **February 27**, 4) **March 13**, 5) **April 3**, 6) **April 17**

Each quiz will be ~25 minutes long and will cover ~4 lectures. The format of the quizzes will be multiple choice plus some very short response questions. **Only your top 5 quiz scores will count** towards your final grade. The Final Exam will consist of multiple choice questions plus 2-3 short (<1 page) essays. I will distribute several questions one week before the final and then choose one of them for the test.

No make-up tests will be allowed unless you obtain approval from the instructor **before** the scheduled test date. If you have a legitimate and documented reason for missing a test, you can take one worth the same number of points. That test will not be the same as the one everyone else took on the scheduled exam date.

Class participation will be based on your level of engagement in class activities, in-class polls, and contributing towards a positive learning environment.

Letter grades will be based on these cutoffs:

A = 90.0% and higher
B = 80.0% - 90.0%
C = 70.0% - 80.0%
D = 60.0% - 70.0%
F = less than 60.0%

Course Website

The course website is at

http://markolabhawaii.org/Marko_Lab_at_UH_Manoa/Marine_Ecology_and_Evolution.html.

At the site, you can access the syllabus, course schedule, lecture handouts, practice problems, and your exam scores. Please note that there will be no lecture class material posted on Laulima except for exam scores and grades. **To gain access to the course handouts, you will be prompted for a username and password** that I will distribute on the first day of class.

In-class Participation and Engagement

I will be using the **Poll Everywhere** application to conduct in class-surveys. Poll Everywhere works just like clickers, but instead of a clicker you use a cell phone or any other web-enabled device to respond to polls. Students can respond to polls in several ways: Poll Everywhere's App, a web browser, or a text message.

Very important: you must register with my Poll Everywhere account so that I can identify students and give them credit for in-class participation points. Go to this website to register:

www.polleverywhere.com/register?p=499dk-nmqp&u=jKwrS1SE

Once you do that, you will be asked how you want me to identify you: either your email address or your cell phone number (or both). **If you do not provide one or the other, you will not receive in-class participation points**.

Attendance

If you want to do well in BIOL 301 you must come to the lecture. Attendance is particularly important in this class because the PowerPoint handouts do not contain all the notes: **you must fill them in during class**. PowerPoint handouts will be posted to the Blackboard site for downloading ~20 minutes before each class. I will provide paper copies for each lecture for those that prefer to write on paper rather than type on a laptop in class. I am also monitoring attendance via class participation activities.

KOKUA Program

Any student who feels she or he needs an accommodation based on the impact of a disability should contact me directly. I will work with you and the Office for Students with Disabilities to ensure reasonable accommodations in this course. KOKUA can be reached at (808) 956-7511 or (808) 956-7612 (voice/text) in room 013 of the Queen Lili'uokalani Center for Student Services.

Academic Integrity

Failure to comply with University of Hawaii guidelines of academic integrity will typically result in a zero score for an assignment and may result in referral to the Student Conduct Administrator and a failing grade in the class. If you have not before, I strongly urge you to review the student conduct code:

http://studentaffairs.manoa.hawaii.edu/policies/conduct_code/table_of_contents.php

and UH definitions of cheating and plagiarism:

http://studentaffairs.manoa.hawaii.edu/policies/conduct_code/proscribed_conduct.php.

Some Ideas on How To Do Well in This Class:

1. Did I mention to come to each class and take *good* notes? A consistent comment I receive from students is that attendance in my class is essential. The handouts are designed so that students must write notes: I do this because writing notes (in your own words) has been shown to be an effective first step in the learning process. Many slides will contain little text anyway, so you must **make notes about what I say and not just what is on the screen**.

2. Facts are important for tests, but understanding complex concepts requires more than just memorization. There will be exam questions that require you to recall facts presented in lecture, but you can also expect questions that will require you to apply concepts that you have learned in class. Make sure that you thoroughly understand interpretations of diagrams and graphs as well as lines of reasoning that I present in class.

3. Complete and understand the practice problems. Expect to see test questions very like the ones I put on the webpage for practice.

4. Take advantage of my office hours. If you cannot make them, send me an email message to set up an appointment.

5. Test yourself. Some students can just read their notes over several times and do well on tests. Most cannot. Try to avoid only passively reading or transcribing your notes. It is very easy to convince yourself that you understand the material just because you read it over and over and it starts to sound very familiar. Get in the habit of trying to recall the information from memory.

6. Review your notes with classmates. Going over notes with other students is particularly helpful for any class, especially if you try to explain important concepts to each another.

Frequently Asked Questions:

1. If I miss a class, can Dr. Marko give me the lecture notes? No. You must get notes from a classmate. I do not have any notes and what things I put on the screen for you to write down are mostly talking points, not sufficient to fully understand what is going on in most slides.

2. An 89.9 is rounded up to an A, right? No. You must score 90.0 or higher to receive an A, 80.0 or higher for a B, and so on.

3. If I clear the memory from my programmable calculator, can I use it on a test? No. Programmable calculators may not be used during the tests. Buy a cheap four-function calculator for any test that requires one.

4. I was sick on a day when there was an in-class poll. Can I make it up? No, any activity done in class cannot be made up outside of class.