

PRINCIPLES OF MARINE BIOLOGY (BSC 3312)

SPRING 2023



Principles of Marine Biology is an introductory exploration of the marine environment that will provide students with an initial understanding of the different marine ecosystems and the organisms that occupy those ecosystems. This course can provide the foundation for more advanced classes in topics of marine science as well as giving students the knowledge and skills to understand the connections between the marine environment and human society.

Course Objectives

1. Analyze basic oceanography and the physical marine environment as it relates to the organisms that live in the ocean
2. Examine the different types of marine ecosystems and their specific characteristics that shape those environments and the organisms that live there
3. Explore the major classes of organisms that live in the marine environment with focus on their unique adaptations that allow them to live in their different habits
4. Investigate and question the impact of humans on the world's oceans
5. Become a member of a scientific community, working in teams to explore marine biology topics

Meeting Times: Tuesday/Thursday 1:30-2:50 pm

Classroom: HEC 118 Face-to-Face

Section: 0002

Course Prerequisites: C or better in Biology I and II (BSC 2010C and 2011C)

Instructor: Dr. Tiffany M. Doan (She/Her)

Email Address: tiffany.doan@ucf.edu

Office Hours: By appointment on Google Meet

Communication

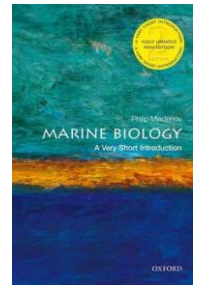
- E-mail is the fastest and preferred way to communicate with Dr. Doan.
- Attempts will be made to answer emails within a 24-hour period, M-F, longer on

weekends. Please plan accordingly and do not wait until the last minute to contact with questions or concerns.

- Include in your email subject: course title (i.e., Marine Biology). Sign off the email with your full name and UCF ID# in your email.
- All e-mail communications must be from your Knight's E-mail addresses or Webcourses email; any other emails will not receive a response per UCF policy. Students must set up a Knights account at www.knightsemail.ucf.edu and check it regularly.
- Emails should be written in a professional and respectful manner.
- Florida has a very broad open records law (F.S. 119) so all emails sent to UCF email may be subject to public disclosure.

Course Materials

- “Marine Biology, A Very Short Introduction, 2nd edition” by Philip V. Mladenov, ISBN 978-0-19-884171-5
- Note: The first edition of “Marine Biology, A Very Short Introduction” would be ok as well but keep in mind some content is different.
- Only the content on oceanography, marine ecosystems and human impact on oceans is covered in “Marine Biology, A Very Short Introduction”. Necessary information on additional topics will be provided in Webcourses modules.



- Access Webcourses: <https://webcourses.ucf.edu> and enter your NID and NID password.
- For technical support, please contact Online@UCF Support: <https://cdl.ucf.edu/support/> or call 407-823-0407 or email: webcourses@ucf.edu.
- **Important:** Please adjust your Webcourses settings to allow notification of Webcourses Announcements and/or check the Announcement section regularly.
- Students will need the ability to access the internet on a regular and reliable manner to access some course materials and assessments.
- It is highly recommended you access Webcourses through the Google Chrome browser for the best experience.

Biology Background Primers

- Biology 1 and Biology 2 are pre-requisites for this class and knowledge of the content covered in those courses is expected.
- If you wish to refresh your Bio 1 & 2 information, view the “Review of Biological Principles” PowerPoint and read Chapter 3 from the SeaMester Lecture Notes file, both available on Webcourses.

Attendance Policy & Class Structure

- While attendance is not strictly mandatory, students who regularly attend class generally have higher success rates in this course. Regardless if you are in attendance or not, you will be expected to be fully aware of any information given in lecture!
- The class will meet during our scheduled course days and time (T/TH 1:30-2:50 pm).

- Generally, course content will be discussed on most Tuesday lectures wherea the Thursday lectures will usually contain lecture and in-class group work and discussions.

Grading

- The final course grade will be awarded using the scale to the right by calculating the percentage of your total earned points during the semester. Note: No minus grades, e.g. "A-", or NC grades.
- Final grade percentages will be rounded up from 0.5 to the next highest whole number, e.g. An 89.6% would round to 90% and the letter grade would be an "A". An 89.4% would round to an 89%, and the letter grade will be a "B+". There are NO exceptions to this rounding scheme.
- **Withdrawal Date:** Friday, 24 March 2023
 - Please refer to the Undergraduate Catalog for detailed information about the implications of the withdrawal date.
 - Students must initiate withdrawal themselves.
 - Dr. Doan will NOT automatically withdraw any student from the course.
 - Late and Medical Withdrawals and Incompletes are granted for only very compelling and documented reasons.
- Grades will be posted in Webcourses as available but are NOT to be considered official grades until the semester is completed.
- No grades will be given over the phone or by email according to Federal law (FERPA regulations).
- Grades will NOT be curved unless warranted by Dr. Doan's discretion.
- Extra Credit: Extra credit is NOT routinely available although opportunities may arise throughout the semester that will be available to all students. Students may not request additional extra credit.
- Make-up work: Make-ups for missed exams or other due dates must be approved at the discretion of Dr. Doan and will require valid documentation.

A	90-100%
B+	87-99%
B	80-86%
C+	77-79%
C	70-76%
D+	67-69%
D	60-66%
F	<60%

Evaluation Criteria:

The evaluation for this course requires you to demonstrate basic proficiency in each of the course objectives articulated above. Your consistent and cumulative progress will be assessed using three main instruments (weighted as indicated):

1. **Exams:** 50%.
 - a. 2 semester exams on 7 February and 9 March: 15% each
 - b. Comprehensive final exam on 2 May: 20%

Exams will be given online on Webcourses during scheduled class time. Exams 1 and 2 will start on Webcourses promptly at 1:30 pm and you will have 75 minutes to complete them. The Final Exam will occur during the university-scheduled final exam time for this course on Tuesday, 2 May 2023, from 1:00-3:50 pm. Any students signing in late to the exam must complete the exam in the time remaining. Exams will not be given early and there are no re-dos of exams. Missed tests will not be allowed to be made up without a university-approved documented absence presented in advance or a documented medical excuse that is presented within 24 hours of missing the exam. All exams count towards final grade. Exams will consist of short answer, multiple choice, matching, and the like. Exam content is based on material covered in lectures,

modules, and assignments. The final exam will be cumulative. Exams are open notes but without studying in advance it will be very difficult to complete the exam in the allotted time. Failure to take the exam during the assigned date and time will result in a zero (0) grade for the exam.

2. **In-Class/Homework Activities:** 36%. There will be short active learning activities each week that can be found in the weekly modules on Webcourses. Some of the activities require reading additional material and activities will be worked on during the Thursday class each week. Some activities will be graded in groups whereas others will be graded individually. Students who do not attend class must complete the activity on their own. The lowest activity score will be dropped.
3. **Marine Organism Presentation:** 14%.
 - a. Due: 7 March at 1:30 pm (beginning of class). Students **MUST** be present in class to complete the assignment. **NO** late submissions will be accepted unless documentation is approved by Dr. Doan due to extreme circumstances.
 - b. Students will be randomly assigned a marine organism. Students will research their marine organism and create a single Powerpoint slide summarizing the information. This slide will be submitted in Webcourses.
 - c. Students will present the organism to other students in small groups in class on 7 March. Students should be prepared to either print their slide for presentation or display it on a laptop or tablet. Color printing is encouraged.

Study Suggestions

- This is a fast-paced class covering multiple topics each week. To succeed it is essential that you stay caught up by reading the book, modules, attending lectures, and studying the material.
- Students who prepare for the exams by simply attending lectures and reading their notes several times are unlikely to succeed on the exams.
- Course concepts build on each other and understanding early material is essential to understanding later material in this course.
- To succeed it is best to make your learning more active and focused. Active learning involves practicing the same skills you must perform on exams. In other words, quick recall of the appropriate information and applying it.
- To do this you should: Treat studying like it's a job. Set a schedule, show up for work, pay attention (i.e., no multitasking) while on the job. A general rule of thumb is 2-3 hours for every hour of class.
- Practice by Self-Testing. Make your own study questions: If you are like most people, you do not remember what you read/hear in sufficient detail to then be tested. However, it may be unclear which details you remember/understand and which you do not. The point in study questions is to figure out prior to an exam what you don't understand or have trouble remembering and work on that material. You do not want to realize during an exam that you don't understand something as well as you thought you did as it is now too late!

Marine Biology Websites of Interest:

<https://environment.fiu.edu/aquarius/>
http://biology.fullerton.edu/biol317/marine_bio.html

Semester Schedule

Week	Lecture Topics	Readings
#1: 9 January	Principles of Marine Science Scientific Method Seawater and the Oceanic Environment	Mladenov Introduction SeaMester 1.2-1.5 Mladenov Chapter 1
#2: 16 January	The Oceanic Environment Marine Ecology	Mladenov Chapter 1 SeaMester Chapter 2
#3: 23 January	Marine Biological Processes Plankton/Protists	Mladenov Chapter 2 SeaMester Chapter 4 Marine Biodiversity Characteristics
#4: 30 January	Plankton/Protists Macroalgae/Macrophytes	SeaMester Chapter 4 SeaMester Chapter 5
#5: 6 February	Exam I Marine Invertebrates	SeaMester Chapter 6 Marine Biologist Interview
#6: 13 February	Marine Invertebrates	SeaMester Chapters 7, 8 Biological and Ecological Traits of Marine Species
#7: 20 February	Marine Fishes	SeaMester Chapter 9 Marine Molecular Biology
#8: 27 February	Marine Reptiles, Birds, and Mammals	SeaMester Chapters 10, 11 Noise in the Sea
#9: 6 March	Marine Organism Presentations Exam II	
13 March	Spring Break NO CLASSES	
#10: 20 March	Intertidal Estuaries	SeaMester Chapter 12, 13 Mladenov Chapter 7 Living with the Oceans Ch3
#11: 27 March	Estuaries Continental Shelf Marine Protected Areas	Mladenov Chapter 3 SeaMester Chapter 15 The MPA Guide
#12: 3 April	Coral Reefs Epipelagic	SeaMester Chapter 14, 16 Mladenov Chapter 5
#13: 10 April	Polar Marine Biology NO MARINE BIO CLASSES THIS WEEK ALL MATERIAL ON WEBCOURSES	Mladenov Chapter 4 SeaMester Chapter 18 The Birth and Death of Genes
#14: 17 April	Deep Sea Threats and the Future of the Seas	Mladenov Chapter 6, 8, 9 SeaMester Chapter 17, 19, 20
Tuesday, 2 May	Final Exam 1:00-3:50 pm	Cumulative

University Resources & Policies

COVID-19

- UCF EXPECTS that all members of our campus community who are able to do so get vaccinated.
- We EXPECT all members of our campus community to follow the latest CDC guidelines.
- If the instructor falls ill during the semester, there may be temporary changes to this course, including having a backup instructor take over the course or going remote for a short time. Please look for announcements or mail in Webcourses@UCF or Knights email for any temporary alterations to this course.
- Students who believe they may have been exposed to COVID-19 or who test positive should contact UCF Student Health Services (407-823-2509).
- Students should NOT come to campus if they are ill, are experiencing any symptoms of COVID-19 or have tested positive for COVID-19. Students should contact their instructor(s) as soon as possible if they miss class for any illness to discuss reasonable adjustments that might need to be made. When possible, students should contact their instructor(s) before missing class.

Academic Services and Resources

- A list of available academic support and learning services is available at UCF Student Services. Click on "Academic Support and Learning Services" on the right-hand side to filter.

Non-Academic Services and Resources

- During your UCF career, you may experience challenges including struggles with academics, finances, or your personal well-being. UCF has a multitude of resources available to all students.
- Please visit UCFCares.com if you are seeking resources and support, or if you are worried about a friend or classmate. Free services and information are included for a variety of student concerns, including but not limited to alcohol use, bias incidents, mental health concerns, and financial challenges.
- You can also e-mail ucfcares@ucf.edu with questions or for additional assistance.
- You can reach a UCF Cares staff member between 8 a.m. and 5 p.m. by calling 407-823-5607. If you are in immediate distress, please call Counseling and Psychological Services to speak directly with a counselor 24/7 at 407-823-2811, or please call 911.
- A list of non-academic support and services is also available at UCF Student Services. Click on "Support" on the right-hand side to filter.

Policy Statements

- Students should familiarize themselves with UCF's Rules of Conduct. According to Section 1, "Academic Misconduct," students are prohibited from engaging in:
 - Unauthorized assistance: Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.
 - Communication to another through written, visual, electronic, or oral means: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.
 - Commercial Use of Academic Material: Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.
 - Falsifying or misrepresenting the student's own academic work.

- Plagiarism: Using or appropriating another’s work without any indication of the source, thereby attempting to convey the impression that such work is the student’s own.
- Multiple Submissions: Submitting the same academic work for credit more than once without the express written permission of the instructor.
- Helping another violate academic behavior standards.
- For more information about Academic Integrity, students may consult The Center for Academic Integrity.
- For more information about plagiarism and misuse of sources, see “Defining and Avoiding Plagiarism: The WPA Statement on Best Practices”.

Responses to Academic Dishonesty, Plagiarism, or Cheating

- Students should also familiarize themselves with the procedures for academic misconduct in UCF’s student handbook, The Golden Rule. UCF faculty members have a responsibility for students’ education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to academic misconduct. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a "Z Designation" on a student’s official transcript indicating academic dishonesty, where the final grade for this course will be preceded by the letter Z. For more information about the Z Designation, see <http://goldenrule.sdes.ucf.edu/zgrade>.

Inclusion, Safety, and Disability Accommodation at UCF

- The University of Central Florida considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. UCF expects every member of the university community to contribute to an inclusive and respectful culture for all in its classrooms, work environments, and at campus events. Dimensions of diversity can include sex, race, age, national origin, ethnicity, gender identity and expression, intellectual and physical ability, sexual orientation, income, faith and non-faith perspectives, socio-economic class, political ideology, education, primary language, family status, military experience, cognitive style, and communication style. The individual intersection of these experiences and characteristics must be valued in our community.
- Title IX prohibits sex discrimination, including sexual misconduct, sexual violence, sexual harassment, and retaliation. If you or someone you know has been harassed or assaulted, you can find resources available to support the victim, including confidential resources and information concerning reporting options at www.shield.ucf.edu and <http://cares.sdes.ucf.edu/>.
- If there are aspects of the design, instruction, and/or experiences within this course that result in barriers to your inclusion or accurate assessment of achievement, please notify the instructor as soon as possible and/or contact Student Accessibility Services.
- For more information on diversity and inclusion, Title IX, accessibility, or UCF’s complaint processes contact:
 - Title IX – EO/AA - <http://www.eeo.ucf.edu/> & askanadvocate@ucf.edu Disability Accommodation – Student Accessibility Services - <http://sas.sdes.ucf.edu/> & sas@ucf.edu
 - Diversity and Inclusion Training and Events – www.diversity.ucf.edu
 - Student Bias Grievances – Just Knights response team - <http://jkrt.sdes.ucf.edu/>. UCF Compliance and Ethics Office - <http://compliance.ucf.edu/> & complianceandethics@ucf.edu
 - Ombuds Office - <http://www.ombuds.ucf.edu>
- To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <https://my.ucf.edu/Links> to an external site. and logging in. Click on “Student Self Service” located on the left side of the screen in the toolbar, scroll down to the blue “Personal Information” heading on the Student Center screen, click on “UCF Alert”, fill out the

information, including e-mail address, cell phone number, and cell phone provider, click “Apply” to save the changes, and then click “OK.” Students with special needs related to emergency situations should speak with their instructors.

- Students who are deployed active duty military and/or National Guard personnel and require accommodation should contact their instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make related arrangements.
- This course may contain copyright protected materials such as audio or video clips, images, text materials, etc. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. Please do not copy, duplicate, download or distribute these items. The use of these materials is strictly reserved for this online classroom environment and your use only. All copyright materials are credited to the copyright holder.
- During this course you might have the opportunity to use public online services and/or software applications sometimes called third-party software such as a blog or wiki. While some of these could be required assignments, you need not make any personally identifying information on a public site. Do not post or provide any private information about yourself or your classmates. Where appropriate you may use a pseudonym or nickname. Some written assignments posted publicly may require personal reflection/comments, but the assignments will not require you to disclose any personally identity-sensitive information. If you have any concerns about this, please contact your instructor.

In-class Recording

- Students may, without prior notice, record video or audio of a class lecture for a class in which the student is enrolled for their own personal educational use.
- A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach enrolled students about a particular subject.
- Recording class activities other than class lectures, including but not limited to lab sessions, student presentations (whether individually or part of a group), class discussion (except when incidental to and incorporated within a class lecture), clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, private conversations between students in the class or between a student and the faculty member, and invited guest speakers is prohibited.
- Recordings may not be used as a substitute for class participation and class attendance, and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University’s Student Code of Conduct as described in the Golden Rule.