

Marine Biology - EEES 1150 (UT Online)

3 credits

Instructor: Dr. Thomas B. Bridgeman, Dept of Environmental Sciences
Office Hours: By appointment (Bowman-Oddy Hall, Rm 2007)
E-mail: Please use e-mail function within the Marine Bio website. Emergency e-mail: Thomas.bridgeman@utoledo.edu
Phone: 419-530-5499
DL Helpline: **419-530-8835 (Keep this number handy!)**. There are also a number of other ways to contact online help, by email (utdl@utoledo.edu)

Description:

An exploration of life in the world's oceans, emphasizing how marine organisms thrive in broadly diverse environments. Topics include the major groups of marine organisms, major ocean habitats, and ecological relationships among associated flora/fauna. Research and news reports featuring the latest discoveries in Marine Biology will be used to teach scientific methodology and reasoning skills. The relevance of the study of marine life to human society will be presented in the context of ecosystem services and resources.

Student Learning Objectives

- Demonstrate an understanding of the significance of the scientific method in learning about the natural world and how the scientific method is used to test hypotheses.
- Search for and find news items on marine biology topics from reputable online sources and compose university freshman-level essays to communicate knowledge gained on marine biology topics.
- Demonstrate an understanding of the most important morphological characters, ecological significance, and economic importance of the major groups of marine invertebrates, fishes reptiles, birds and mammals.
- Demonstrate an understanding of ecological concepts: how species interact, competition, competitive exclusion, predator-prey interactions, and symbiosis
- Demonstrate an understanding of the most important physical characteristics and biological adaptations influencing communities of the ocean depths, coral reefs, surface waters, and intertidal zones.
- Demonstrate an understanding of the interaction of humans with the marine environment in terms of the exploitation of nonrenewable resources, maximum sustainable yield, overfishing, endangered and threatened species, and aquaculture.
- Communicate a marine biology experience or knowledge gained through self-guided activity (project) using a presentation medium such as powerpoint or prezi, demonstrating creativity in using marine biology information to enhance an area of personal interest to the student.

A Note on Distance Learning

This course is taught entirely online via UT Online using the Blackboard Platform. Online learning is largely *self-directed* through text readings, online practice quizzes, and other learning exercises. If you are the type of student who learns best by reading, the online format may suit you well. If you learn best by attending lectures then a traditional lecture course may be better for you. This course also depends heavily on timed multiple-choice quizzes and exams. If you do not do well in timed testing situations, then you may wish to choose a different course.

Pre-requisites: None

Required Text:

Marine Biology (9th Edition) by Peter Castro and Michael E. Huber. 2012. McGraw-Hill. (7th or 8th Editions are also OK). In order to make sure all students have ample time to obtain a textbook, the first several chapters of the textbook (7th edition) will be available online at the UT library website (search electronic reserves under professor ‘Bridgeman’) <http://libguides.utoledo.edu/reserves>

Grading:

30 % : Midterm exams (3 exams, 10% each)
15 % : Final exam
25 % : Quizzes (5 quizzes, 5% each)
30 % : Blog assignments,
20 % : Project

Grading Scale

A : 100-94
A- : 93-90
B+ : 89-87
B : 86-83
B- : 82-80
C+ : 79-77
C : 76-73
C- : 72-70
D+ : 69-67
D : 66-63
D- : 62-60
F : <60

This scale offers a guaranteed minimum grade. For example if you end up with an 83% average at the end of the course, you are guaranteed to earn at least a “B.” Adjustments to this scale are not likely to be needed, but if the overall distribution of class grades is lower than expected, a one-time adjustment may be made at the end of the term after the final exam is completed and all scores are in.

Important Dates:

MLK day, no classes
Last day to add/drop
Spring Break, no classes
Last day to withdraw
Last day of classes
Final Exam

Course Policies:

Internet Connection: It is important in any distance learning course for you to have a reasonably fast and very reliable internet connection. Connecting to the internet is the *student's responsibility*, and the inability to connect is not an excuse for missing deadlines for quizzes, discussions, and exams. Assignments are open for several days, therefore if connection problems arise, there should be ample time to fix the problem or find another computer. Do not wait until one hour before the quiz closes to log on as this will be too late to correct any connection problem you may have. If you cannot connect to the website to complete an assignment, **call or chat the DL Helpline or website immediately**, before the assignment availability closes. Give your name along with your message. The DL office will log your call/message and document the problem. In the rare event that the University of Toledo distance learning network crashes on the last day of a quiz availability, additional time will be provided.

Become familiar with the DL Help Desk website <http://www.utoledo.edu/dl/helpdesk/index.html> One of the main reasons that students are unable to connect to DL courses is because they have forgotten to change their U. Toledo password every 6 months.

“If you are unable to login to Blackboard even though you can login to myUT Portal, please change your password at <https://myutaccount.utoledo.edu>. Passwords are set to expire every six months. Access to Blackboard may be denied when you attempt to use a password that is about to expire. Please remember to keep your username and password private.”

Quizzes and Exams: There are 5 quizzes in the class, or about one every 3 weeks, excluding exam weeks. Quizzes usually become available in the later part of the week and must be taken before the indicated date and time (check the calendar and quiz/exam tabs on the website as they become available). The deadline for quizzes is usually 11:55 pm on Sunday evenings, to allow students with weekday jobs to study and take the quizzes on weekends. Quizzes and exams are open book. Quizzes are comprised of multiple-choice questions and you will have limited amount of time to complete each quiz. Exams are simply longer versions of quizzes, typically 30 questions to be completed within 40 minutes. Exams are not cumulative.

Open Book guidelines: You are welcome to consult only your textbook and notes during quizzes and exams. You may not seek help from any other student or external source

during quizzes/exams. Please note that time limits are tightly controlled and you will not have time to look up all of the answers. Also, some questions may ask you to apply your understanding of a concept to a new situation. Therefore, not all answers will be in the book. A good strategy would be to study thoroughly and make notes so that you know the answers to most of the questions right away and then you will have time to consult the textbook on a few answers.

Assignments: Three blog assignments will be given during the course. These require a thoughtful response and often some additional fact-gathering. Blog assignments usually close on Mondays and no additional postings can be made after that time. Blog postings will be read by your classmates and will be graded by the instructor and the teaching assistant. Blogs are graded based on the degree of effort, thoughtfulness, logical reasoning, and writing skill demonstrated. A grading rubric is provided below.

Originality and Plagiarism

Blog entries must be original, however you are not expected to come up with all of the material on your own. You may restate what you have learned from online searches and reading in your own words. You may insert some text from websites or other sources as long as the text is enclosed in quotation marks and the source is clearly given. Failure to use quotation marks when using other peoples' sentences is **plagiarism** and will result in zero credit for the assignment. Before posting your blog, you may be required to submit your blog to 'SafeAssign', a utility that checks for possible plagiarism.

Blog Grading Rubric

10'00% Weight Sources	Sources of information: Did not give reference to 0 %	used, be easily followed' or inappropriate sources Sources given' but not cited well enough to 80 %	Cited and easily found. Reputable sources given, adequately 100 %
10'00% Weight Grammar	read or understood, making the entry difficult to Many grammatical errors 0 %	moderately distracting for readers for university freshman level. Errors are A few grammatical errors, but not excessive 80 %	pleasant to read, noticing errors. Blog entry was a are not distracting from the content by Very few grammatical errors. Readers 100 %
40'00% Weight Thought Logic &	thought given to entry Little apparent effort or 0 %	misunderstanding of the content, reasoning/conclusions or demonstrates a however may have some errors in and present ideas in a logical manner. Evidence of some thought about the topic 80 %	of the subject at hand. the student has a good understanding and effort went into the blog and that the impression that significant thought presented in a logical manner, giving information and interpretation were 100 %
40'00% Weight Topic Relevance of Content \	relevant topics chosen/discussed by assignment or was appropriate for the Topic was not relevant r 0 %	but needed more detail/explanation Topic was appropriate for the assignment 80 %	and informative assignment and was highly interesting Topic was appropriate for the 100 %
Criteria	Low	Medium	High
	Levels of Achievement		

Projects

You will be required to design and create a project related to Marine Biology for a significant part of your course grade (10-20%, to be determined). The project will take the form of some sort of online presentation such as a Youtube video, Prezi, Powerpoint, Facebook page, or other type of presentation. Details and examples will be provided.

Student Learning Outcomes for Project

- Explain a marine biology experience or knowledge gained through self-guided activity
- Communicate the marine biology project through a presentation medium such as powerpoint or prezi.
- Demonstrate creativity in using marine biology information to enhance an area of personal interest to the student.

Exams: Exams are merely longer versions of quizzes and include only material covered since the previous exam. Each exam contains about 30 multiple choice questions and you will have about 40 minutes to complete each exam. The available time period for exams is usually shorter, about 2 days. The final exam is worth more but it will be similar in length and format to the previous mid-term exams.

How to Succeed in this Course: Distance learning courses require an additional measure of self-motivation and self-discipline on the part of the student. Students who keep up with the assignments every week usually pass Marine Biology. Students who don't log in for weeks at a time will miss quizzes and exams and often end up failing the course. Therefore, the key to success is *keeping up*.

- Make Marine Biology part of your weekly routine. You should plan to devote as much time to this course as you would to any 3 credit hour course – the suggested time is a total of 9 hours per week.
- Complete every assignment. Even if you didn't have time to study for a quiz and receive a low grade, that is much better than receiving a zero.
- Use the study tools and practice quizzes at the Marine Biology learning center. (see link on Blackboard)

Academic Honesty

Students are expected to adhere to principles of academic honesty in all aspects of this course. We follow the University policies on academic dishonesty (http://www.utoledo.edu/catalog/2008catalog/general_2008.html). Infractions may therefore result in a failing grade for the course.

Topics

Week 1

Chapter 1 and 2: The Science of Marine Biology and The Sea Floor

The Science of Marine Biology

The Scientific Method

The Water Planet
Origin and Structure of the Ocean Basins
Geological Provinces of the Ocean

Chapter 3: Chemical and Physical Features of the World's Oceans

Week 2

Waters of the Ocean
Ocean Circulation
Waves and Tides

Quiz 1 (Chapt 1,2, 3)

Chapter 4: Fundamentals of Biology

Week 3

Ingredients of Life
Living Machinery
Challenges of Life in the Sea
Perpetuating Life
Diversity of Life in the Sea

MIDTERM EXAM I: (Chapters 1-4)

Chapter 5 and 6: The Microbial World and Primary Producers

Week 4

Viruses
Prokaryotes
Single-celled Algae
Protozoans and Fungi
Seaweeds and Plants

Quiz 2 (Chapters 5 and 6)

Chapter 7: Marine invertebrate animals

Week 5

Sponges and worms
Jellyfish and Corals
Mollusks
Arthropods
Echinoderms and others

Chapter 8: Marine Fishes

Week 6

Types of Fishes
Biology of Fishes
Quiz 3 (Chapters 7 and 8)

Chapter 9: Marine Reptiles, Birds, and Mammals

Week 7

Marine Reptiles

Seabirds

Marine Mammals

MIDTERM EXAM II : Chapters (5-9)

Chapter 10: Marine Ecology

Week 8

Organization of Communities

Major Marine Lifestyles and Environments

The Flow of Energy

Week 9

SPRING BREAK:

Chapter 11: Between the Tides

Week 10

Rocky Shore Intertidal Communities

Soft-bottomed Intertidal Communities

Quiz 4 (Chapter 10, 11)

Chapter 13: Life on the Continental Shelf

Week 11

Physical Characteristics of the Subtidal Environment

Continental Shelf Bottom Communities

Chapter 14: Coral Reefs

Week 12

Reef-building Organisms

Types of Reefs

Ecology of Reefs

MIDTERM EXAM III: Chapters (10, 11, 13, 14)

Chapter 15: Life Near the Surface

Week 13

Organisms of the Epipelagic

Living in the Epipelagic

Epipelagic food webs

Chapter 16: The Ocean Depths

Week 14

The Twilight World

The World of Perpetual Darkness

The Deep-Ocean Floor

Hot Springs, Cold Seeps and Dead Bodies

Quiz 5 (Chapters 15, 16)

Chapter 17: Resources From the Sea

Week 15

The Living Resources of the Sea

Non-Living Resources From the Sea Floor

Non-Living Resources From Seawater

Chapter 18: The Impact of Humans on the Marine Environment

Week 16

Modification and Destruction of Habitats

Pollution

Endangered Species

Conservation

FINAL EXAM

Week 17