

# MARINE BIOLOGY

**BIO 412- Spring 2008 (4 credit hours)**

**Location: Kettering 129 (lect) and Kettering 327 (lab)**

**Time: 9:25-10:40 TTh (Lect), 1:00-3:00 T (Lab)**

**Instructor:** Dr. Mason Posner                      Phone #: (419) 289-5691  
Kettering 320    E-mail: mposner@ashland.edu

**Office Hours:** Monday and Wednesday, 11 am-noon

**Prerequisites:** Principles of Biology (Bio 201/202)

**Statement of Purpose:** This course will give a broad understanding of the many subjects studied by marine biologists with a focus on marine ecology.

**Course Objectives:** The goals of this course are for you to:

- Understand how physical and chemical processes affect life in the ocean
- Be able to recognize the diversity of marine organisms
- Develop a general understanding of marine ecology
- Analyze published studies in marine science
- Further develop your ability to read and understand the primary literature
- Further develop your written and oral communication skills

**Approach:** Two lectures and one two-hour lab per week.

**Grading:** Your grade will depend on the following work:

**Two 1-hour exams.** These exams will cover lecture material and any pertinent material covered in lab.

**Final exam.** This exam will cover primarily the last portion of the course, including questions on the presentations and information from the field trip. There will also be some cumulative questions covering the major themes of the course.

**Two lab practicals.** You will need to identify organisms seen in lab, and demonstrate an understanding of any techniques learned in lab.

**Presentation:** At the end of the semester each of you will present a 15-minute talk on a subject that interests you in marine biology. You will get more details on this talk during the first two weeks of class.

**Lab/Field notebook:** You will use a Field Notebook for sketches, observations and data collected in lab and in the field. This notebook will be collected periodically. The quality of your notebook will contribute 50 points to your grade.

**Journal article discussion:** During the semester we will read a number of reviews and primary literature from scientific journals. You will be writing answers to questions about these articles, and we will be discussing the articles in lab. Your written answers and discussion will contribute 60 points to your grade.

**Quizzes:** Quizzes will cover lecture and lab material. They will generally be announced, but they can be given as a surprise.

**Point summary:**

Lecture Exams	(2 @ 100 points/each)	200
Lab Practicals	(2 @ 50 pts/each)	100
Final exam		125
Presentation		100
Lab/Field Notebook		50
Quizzes		60
<u>Discussion of journal articles</u>		<u>60</u>
Total		695

Your final grade will be based on the percentage of the total possible points you obtain in class as follows:

90% - 100%	=	A- or better
80% - 89%	=	B- or better
70% - 79%	=	C- or better
60% - 69%	=	D- or better
0% - 59%	=	F or better

**Resources:** There is a web page devoted to the course, which can be found at [www.masonposner.com](http://www.masonposner.com). Be sure to check this site regularly for hyperlinks to resources discussed in class.

**Slide shows:** All slide shows used in the course can be downloaded from the course website.

**Reading.** You will be given reading assignments in the textbook and from the scientific literature ahead of each lecture and/or lab. You will also be given thought questions for most readings. Do the readings and think about the questions **BEFORE** coming to lecture.

**Excused Absences:** An absence will only be excused if: 1. You have a letter from university health services or a private physician stating that you were unable to attend class for health reasons. 2. You will be travelling for a university sponsored event. This must be brought to my attention before the absence so that alternate arrangements can be made. Only with an excused absence will you be able to make-up a missed exam. Make-up exams may be given as oral exams at my discretion.

**Academic Integrity Policy:** Any student cheating on or plagiarizing an assignment will receive an “F” on that assignment, will be reported to the registrars office, and may be expelled from the University. Your student handbook defines plagiarism as follows:

“Plagiarism is the intentional or unintentional presentation of someone else's words, ideas or data as one's own work. In the event the faculty member deems the plagiarism is unintentional he/she shall typically require the student to rewrite the assignment. In the event the faculty member believes the plagiarism is willful, the sanctions in this document will apply. If the work of another is used, acknowledgment of the original source must be made through a recognized reference practice, and, if verbatim statements are included, through quotation marks as well. To assure proper crediting, a student will acknowledge the work of others:

1. Whenever one quotes another person's actual words.
2. Whenever one uses another person's idea, opinion or theory, even if it is completely paraphrased in one's own words.
3. Whenever one borrows facts, statistics, or other illustrative materials-unless the information is of such common knowledge so as not to be questioned.”

**I will assume that you are knowledgeable of the definitions of plagiarism!**

**Note:** Although it is not technically plagiarism, do not extensively quote material from primary sources in your assignments. Use your own words unless there is absolutely no other way to avoid the original words of the author.

**NO DOUBLE DIPPING: Assignments done for this course cannot be used in other courses. Likewise, you cannot use assignments from other courses to fulfill requirements of this course.**

## TENTATIVE LECTURE SCHEDULE

<b>Day</b>	<b>Topic</b>	<b>Lab</b>
Jan 15	The Marine Environment	Oceanography
Jan 17	Oceanography	
Jan 22	Oceanography	Analysis of seawater
Jan 24	Ecological review/Larval ecology/Plankton	
Jan 29	Primary Production	Plankton
Jan 31	Primary Production	
Feb 5	Nekton	Algae
Feb 7	Nekton	
Feb 12	<b>**EXAM 1**</b>	Invertebrates part 1
Feb 14	Deep Sea Biology	
Feb 19	Deep Sea Biology	Invertebrates part 2
Feb 21	Shallow Water Subtidal	
Feb 26	Shallow Water Subtidal	<b>Practical 1</b>
Feb 28	Shallow Water Subtidal	
Mar 4	Intertidal Ecology	Invertebrates part 3
Mar 6	Intertidal Ecology	
Mar 10-14	<b>**Spring Break**</b>	
Mar 18	Intertidal Ecology	Vertebrates part 1
Mar 20	Intertidal Ecology	
Mar 25	Estuaries	Vertebrates part 2
Mar 27	<b>**EXAM 2**</b>	
Apr 1	Estuaries	TBD
Apr 3	Salt Marshes	
Apr 8	Salt Marshes	<b>Practical 2</b>
Apr 10	Barrier Islands	
Apr 15	Barrier Islands	Presentations
Apr 17	<b>**Field Trip to Outer Banks**</b>	
Apr 22	Tropical Communities	Presentations
Apr 24	Tropical Communities	
Apr 29	Human Impact on the Sea	No Lab
May 1	Human Impact on the Sea	

**FINAL EXAM:**

**Tuesday, May 6<sup>th</sup>, 8 am**