

SIO126 Marine Microbiology

Time and location: MWF 9-9:50. Warren Lecture Hall 2207

Instructor: Brian Palenik, 3110 Hubbs Hall, SIO
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Course web site: triton.ed.ucsd.edu

The lecture notes (ppt slides) will be available usually on the day of the lecture.

Sections: WF 10-10:50 WLH 2114

Grading: There will be three quizzes and a final exam. The final exam will count for 35% of the grade. The lowest quiz score will be dropped and the remaining two will count for 50%. The quizzes will be a combination of multiple choice, short answer, and short essay and will cover the material immediately preceding them. The final will be comprehensive and will be similar to the quizzes in format. Three short assignments will count for 5% each. These are typically short 1 page paper reviews of assigned papers.

Cheating: The University imposes strict guidelines on academic integrity (www-senate.ucsd.edu/manual/appendices/app2.htm) and these will be enforced. Anyone caught cheating will receive an F for the course and will be reported to the Academic Integrity coordinator. Please bring a photo ID to all exams and quizzes. You may be required to sign an attendance sheet when you turn in your exams.

Recommended Texts:

There will be required reading posted on TritonEd.

Review Articles: An entire issue of Nature Reviews Microbiology has been devoted to marine microbiology (5:2007).

<http://www.nature.com/nrmicro/focus/marinemicrobiology/index.html>

M Jan 8 Introduction to the marine environment

W Jan 10 Physics of the marine environment

F Jan 12 Chemistry of the marine environment

M Jan 15 Holiday

W Jan 17 The Prokaryotic Cell

F Jan 19 Methods in Marine Microbiology A

M Jan 22 Methods in Marine Microbiology B

W Jan 24 Phylogenetic Diversity of Marine Prokaryotes

F Jan 26 Metabolic Diversity A

M Jan 29 **Quiz 1 (material through Jan 26)**

W Jan 31 Metabolic Diversity B

F Feb 2 Metabolic Diversity C **Assignment 1 Due in Class**

M Feb 5 Eukaryotic Diversity (Phototrophs)

W Feb 7 Eukaryotic Diversity (Heterotrophs/Mixotrophs)

F Feb 9 Marine Viruses

M Feb 12 Cold Deep Sea and Hydrothermal Vents
W Feb 14 Paul Jensen Marine Natural Products
F Feb 16 Quiz 2

M Feb 19 Holiday
W Feb 21 The Microbial Loop
F Feb 23 Sea Ice/Changing Oceans **Assignment 2 Due in class**

M Feb 26 Peter Franks
W Feb 28 Kelly Goodwin Marine Microbes and Disease I
F Mar 2 Marine Microbes and Disease II

M Mar 5 Quiz 3
W Mar 7 Marine Metagenomics in Diverse Environments
F Mar 9 Symbiotic Associations A

M Mar 12 Symbiotic Associations B
W Mar 14 Symbiotic Associations C **Assignment 3 Due in class**
F Mar 16 Current directions and developments in marine microbiology/

FINAL W March 2, 8-11.

Writing assignments on provided papers (different from class readings)

- 1) What questions was the paper trying to address and why?
 - 2) What methods did it use?
 - 3) What were its conclusions? Did this contribute to our understanding of the field?
- Papers are meant to be about 1 page of about three paragraphs. DO NOT USE LISTS.
Please turn it in as a hard copy in class.