

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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Office hours: By appointment

TA: Nick Tuttle

Course web site: tritoned.ucsd.edu

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

Sections: WF 10-10:50 WLH 3030

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 Ted.

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 9 Introduction to the marine environment

W Jan 11 Physics of the marine environment

F Jan 13 Chemistry of the marine environment

M Jan 16 Holiday

W Jan 18 The Prokaryotic Cell

F Jan 20 Methods in Marine Microbiology A

M Jan 23 Methods in Marine Microbiology B

W Jan 25 Phylogenetic Diversity of Marine Prokaryotes

F Jan 27 Metabolic Diversity A

M Jan 30 **Quiz 1 (material through Jan 25)**

W Feb 1 Metabolic Diversity B

F Feb 3 Metabolic Diversity C **Assignment 1 Due in Class**

M Feb 6 Eukaryotic Diversity (Phototrophs)

W Feb 8 Eukaryotic Diversity (Heterotrophs/Mixotrophs)

F Feb 10 Marine Viruses

M Feb 13 Quiz 2
W Feb 15 Cold Deep Sea and Hydrothermal Vents
F Feb 17 Peter Franks

M Feb 20 Holiday
W Feb 22 The Microbial Loop
F Feb 24 Sea Ice/Changing Oceans **Assignment 2 Due in class**

M Feb 27 Paul Jensen: Marine Microbes and Natural Products
W Mar 1 Kelly Goodwin Marine Microbes and Disease I
F Mar 3 Marine Microbes and Disease II

M Mar 6 Quiz 3
W Mar 8 Marine Metagenomics in Diverse Environments
F Mar 10 Symbiotic Associations A

M Mar 13 Symbiotic Associations B
W Mar 15 Symbiotic Associations C **Assignment 3 Due in class**
F Mar 17 Current directions and developments in marine microbiology/

FINAL W March 22 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.