

SIO126 Marine Microbiology

Time and location: MWF 9-9:50. York 4080A

Instructor: Brian Palenik, 3110 Hubbs Hall,
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Office hours: By appointment

Teaching Assistant: Sam Mascuch smascuch@ucsd.edu

Course web site: email or ted.ucsd.edu

The lecture notes (overheads and slides) will be available on the week they are given.

Section: Sections will review material and/or discuss assigned papers

Grading: There will be three quizzes and a final exam. The final exam will count for 45% of the grade. The lowest quiz score will be dropped and the remaining two will count for 40%. 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. The paper discussions will involve the writing of a short summary of the paper(s) before class and will count for 5% each.

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.

Reference Texts: Marine Microbiology: Ecology and Applications. C. B. Munn. ISBN: 1-85996-288-2. On reserve at the Biomed Library. Referred to as **M** below. Brock Biology of Microorganisms (12th edition). Madigan, Martinko, Dunlap, Clark. On reserve at the Biomed Library. Referred to as **B** below.

Review Articles: An entire issue of Nature Reviews Microbiology has been devoted to marine microbiology (5:2007). The excellent series of review articles can be accessed at and downloaded from

www.nature.com/nrmicro/focus/marinemicrobiology/index.html.

DATE	TOPIC	READING
April 1 M	Introduction to the marine environment:	M (Ch. 1) B (687-692)
	Physics and Chemistry A	
April 3 W	Physics and Chemistry B	
April 5 F	Physics and Chemistry C	
April 8 M	The Prokaryotic Cell	M (Ch. 3.1-.8) B (67-105)
April 10 W	Methods in Marine Biology A	M (Ch. 2) B (Ch. 22)
April 12 F	Methods in Marine Biology B	

April 15 M	Quiz 1 Phylogenetic Diversity of Marine Prokaryotes	M (Ch. 5, 6)
April 17 W	Metabolic Diversity A	M (Ch. 4.1- (4.4) B (Ch. 20)
April 19 F	Metabolic Diversity B Paper Summary 1 Due	M (Ch. 4.1- 4.4) B (Ch. 21)
April 22 M	Metabolic Diversity C	
April 24 W	Eukaryotic Diversity A	M (Ch. 7)
April 26 F	Eukaryotic Diversity B	
April 29 M	Marine Viruses	M (Ch. 8)
May 1 W	Quiz 2 The microbial loop	M (Ch. 9)
May 3 F	Hydrothermal vents	B (717-720) M (Ch. 10.3)
May 6 M	Doug Bartlett: Cold Deep Sea	M (4.6.1-4.6.3) B (690-692)
May 8 W	Peter Franks: Red Tides	M (Ch. 12)
May 10 F	Sea ice/Changing oceans	
May 13 M	Paper summary 2 , discussion and review	
May 15 W	Marine Metagenomics and marine environs.	B (364-365, 665-666)
May 17 F	Quiz 3	
May 20 M	Symbiotic associations A	M (Ch. 10) B(720-721)
May 22 W	Symbiotic associations B	
May 24 F	Symbiotic associations C	
May 27	Holiday	
May 29 W	Paul Jensen: Marine Microbes and Natural Products	M (16.8)
May 31 F	Marine Microbes and Human Disease	M(Ch.11)
June 3 M	Marine Microbes and Human Disease	
June 5 W	Current directions and developments in marine microbiology/ Paper summary 3 , discussion and review	
June 7 F	Review	