

Oceanography

MAR 104, Stony Brook Southampton

Summer II, 2021; July 6-19

Course Description: An examination of the World Ocean and the chemical, geological, biological, and physical processes that control its major features and the life that inhabits it. While primarily a lecture based course, extended boat trips into Shinnecock Bay and offshore will occur on Mondays. This short-term intensive course is specifically designed for both undergrads & motivated high school students wishing to earn college credit.

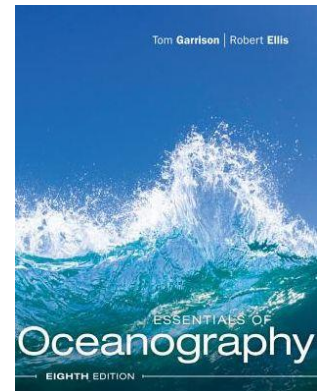
Course meeting time: Marine Station 215, Southampton Campus;
Tues - Fri, 10 am-2pm; Mondays 10-3:30 (exam and boat trip)

Required text: Essentials of Oceanography, 8th edition, Tom Garrison
Purchase and read the entire textbook **before** the course begins.

Instructor: Dr. Kurt Bretsch, kurt.bretsch@stonybrook.edu

Graduate TA: Lucy Donahue, lucy.donahue@stonybrook.edu

Attendance: Required at all activities.
Plan to arrive at least 5 minutes early.



Lectures: Incomplete PowerPoint lecture notes will be posted on Blackboard 1 week prior to the start of the course. You may bring printed handouts of the lecture notes to class, or you may elect to bring a laptop. During lecture, laptops can only be used for class activities. Use of your laptop for other activities is a distraction to your fellow students, and will result in revocation of laptop privileges.

Exams: Each exam will assess students on their understanding of the material presented in lecture and the textbook from the previous week (i.e. the second exam is not comprehensive). Exams are a mixture of multiple choice and short answer questions.

Quizzes: Quizzes will be distributed at the end of each lecture-day and due the next day at the beginning of class. Late submissions will not be accepted.

Worksheets: During lunch, students will complete worksheet activities that reinforce their understanding of concepts discussed during lecture. Due at the end of the lunch break. Worksheets will also be completed during field activities.

Field Trips: Come prepared to get wet and dirty. Close toed shoes (e.g. lace up sneakers) are REQUIRED. Sandals and flip flops are not permitted. Be sure to bring a pencil, sunblock, sunglasses, water, and a light jacket (it's always colder on the water than on land). Consider bringing a camera (in a waterproof bag). There will be space to store a backpack.

Classroom Engagement: Students are expected to ask and answer questions during lecture, attend and fully participate in field trips, and contribute to group & partner activities.

Other:

Mobile communication devices must remain off and stowed during class.

Academic dishonesty will not be tolerated. Any instance will be reported to the Academic Judiciary Committee and will typically result in an F for the course.

Americans with Disabilities Act: If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services at (631) 632-6748 or <http://studentaffairs.stonybrook.edu/dss/>. They will document your disability and determine with you what accommodations are necessary and appropriate. All information and documentation is confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: <http://www.sunysb.edu/ehs/fire/disabilities.shtml>

Students requesting accommodations for **documented** disabilities must do so with the instructor **before** the start of the course.

Grade Breakdown	% of final course grade
Exam 1	30
Exam 2	30
Quizzes (8)	16
Worksheets (10)	20
Classroom Engagement	4

Completion of **ALL** activities is a **REQUIREMENT** to pass the course.

Final Course grade will be determined using the scale below:

A = 95-100
A- = 90-94
B+ = 86-89
B = 82-85
B- = 78-81
C+ = 74-77
C = 70-73
C- = 66-69
D+ = 62-65
D = 60-61
F = < 60

MAR 104, Summer II, 2021

Schedule

Day	Date	Topic	Reading
Tues	July 6	Introduction to Course & Oceanography; Ocean History & Exploration	Ch 1
Weds	July 7	Earth Structure; Plate Tectonics; Bathymetry	Ch 2 – Sec 3.4
Thurs	July 8	Marine Sediments; Properties of Water Offshore Field Trip (group 2)	Sec 3.5 – Ch 4
Fri	July 9	Atmospheric Circulation; Oceanic Circulation	Chs 5 & 6
Mon	July 12	EXAM 1, Shinnecock Bay Field Trip (group 1)	
Tues	July 13	Waves; Tides; Coastal Zone Shinnecock Bay Field Trip (group 2)	Chs 7 & 8
Weds	July 14	Marine Life; Plankton	Ch 9
Thurs	July 15	Pelagic Communities	Pg 193 – Sec 10.3
Fri	July 16	Benthic Communities; Humans and the Ocean Today	Sec 10.4 – Ch 11
Mon	July 19	EXAM 2, Offshore field trip (group 1)	

Take note:

Complete each assigned reading BEFORE the lecture.

Readings are inclusive (e.g. Sec 3.5 – Ch 4 means start with Sec 3.5 and read through the entirety of Ch 4).

The field trips are weather dependent and might be changed. Groups will be determined on day 1.

Daily schedule (Tues-Fri)

10:00-11:30, Lecture 1

11:30-12:30, Lunch and worksheet

12:30-2:00 (approximately), Lecture 2

2:00-2:30, review with instructor & TA (optional, but recommended)

Evening: complete take home quiz and textbook reading for the next day

Daily schedule (Mondays)

10:00-11:30, Exam

11:45-3:30, Field Trip and worksheet (group 1)