

SIO 30: The Oceans - Syllabus

Location: Sequoyah Hall 148 Class Hours: 2:00-5:30pm Tues / Thur Summer Session 1, 6 Jul - 5 Aug	Instructor: Bryce Inman, binman@ucsd.edu Office Hours: 11:00am-1:00pm Tues Galbraith Hall 364
Class Resources: All reading, quizzes, and class information available at tritoned.ucsd.edu. Textbook: Garrison, Oceanography, 9th Edition. No need to purchase, available online.	

Course Description: No matter where we live, the oceans influence our lives by shaping land masses, yielding food resources, modulating climate patterns, and more. The goal of the course is for students to learn the fundamentals of marine geology, physics, chemistry, and biology so that they can competently discuss modern problems facing our oceans and planet with people outside of academia. In this vein, the main project for the course is writing a well-researched letter to your government representatives about the ocean issue of your choice. These letters will be mailed to your representatives during the last week of class.

Learning Outcomes: By the end of our course, students will be able to:

1. Explain the relevance of topics in ocean geology, physics, chemistry, and biology to their own lives.
2. Defend the following statement: "oceanography is by necessity a multidisciplinary science because of the interconnected nature of the fluid environment."
3. Apply the scientific method to a non-scientific problem.
4. Select and implement peer-reviewed literature to support an argument relevant to ocean science.
5. Construct an argument about the future of the oceans using knowledge you gain in this course and contribute to a discussion with a non-scientist.
6. Plan and write a position letter about the future of ocean (science) to your representative.

Grading: Your grades do not depend on the performance of other students (e.g. no curves).

Any assignments turned in late will initially lose 30% of the grade, and will not be accepted 24 hours after the deadline.

10% Reading Quizzes: Summer Session is short and there's 1 billion km³ of ocean to learn about! The reading is intended to give you more exposure to the material covered in class. Quizzes are to be completed on TritonEd before the start of each class.

15% Group Work and Class Participation: *Certain class activities will be turned in to assess participation.* Although the letter writing projects are to be completed individually, you will practice skills and constructively evaluate your work in groups at each stage of the project. More details below.

20% Letter to Representatives: You will choose an ocean-themed issue and construct a well-reasoned argument for why this problem merits action by your representatives in congress (or other applicable level of government). The letter will include citations and

an illustration or figure from peer-reviewed literature that backs your points. A rubric for the letter project will be available soon. The letters will be mailed the last week of class!

55% Exams: There will be no late or make-up exams.

15% Midterm 1: 50 min long, multiple choice and short answer covering lectures 1-8.

15% Midterm 2: 50 min long, multiple choice and short answer covering lectures 9-16.

25% Final Exam: 2 hours, first half covering lectures 17-21, second half cumulative.

Attendance Policy

Regular attendance will be essential to succeeding in this course although I will not take any formal daily attendance. Absent students will miss points related to anything we do in class that day including group work, participation in class activities, and exams. Previously made travel plans, family events, and poor planning are not acceptable excuses. If you do miss class, it is your responsibility to get notes from your group members.

Group Work Policy

The purpose of group work is to explore class topics in more detail and to get timely, directed feedback on the components of your individual letter projects. Although you will not be grading each other, you will be graded on the constructive criticism that you provide your group members via worksheets. Groups will be chosen by the instructor to represent a diversity of majors, class years, and social styles based on the pre-class survey.

Academic Integrity

The class will be conducted in an environment of mutual respect and integrity. Academic integrity stands for principles of honesty, originality, and self reliance in every aspect of academic life. Student are expected to follow UCSD policy on academic integrity, including, but not limited to: *“No student shall complete examination or assignment for another person; or knowingly allow any examination or assignment to be completed for himself or herself by another person; plagiarize or copy the work of another person and submit it as his or her own work; use aids excluded by the instructor in undertaking course work or in completing any exam or assignment; alter graded class assignments or examinations and then resubmit them for regrading; submit substantially the same material in more than one course without prior authorization.”* as detailed by the [UCSD Policy on Integrity of Scholarship](#). Violation of UCSD academic integrity policy and any misconduct during class may lead to serious disciplinary action.

What you can expect from the instructor

If there are any circumstances that affect your ability to succeed in this class, please let me know and I will do my best -- within reason -- to accommodate them.

Title IX Compliance

The University recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical and/or psychological abuse will NOT be tolerated. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological

abuse, I must report the matter to the [Title IX Coordinator](#). If you would like to speak to a confidential source you may contact the [Counseling Center](#).

Disability Access

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD). Students are required to present their AFA letters to Faculty (please make arrangements to contact me privately) and to the OSD Liaison in the department in advance so that accommodations may be arranged. Contact the [OSD for further Information](#).

Schedule

Please note that this schedule will be subject to change. Any changes will be reflected in this document and will be announced in class. Topic codes are L for lecture and G for group work. Guest lecturers are noted in parentheses. *Readings have the textbook chapter in bold followed by the subsections.*

Week	Date	Topics	Reading	Assignments Due
1	6 Jul Thurs	Welcome L1: Origin of the Earth and Oceans L2: Ocean Basins and Plate Tectonics G: Scientific Method, Choosing Topics	Ch1.1-4 Ch3.1,2,8-12 ,18-22	Pre-Class survey
2	11 Jul Tues	L3: Properties of Seawater L4: Atmospheric Circulation L5: Ocean Circulation G: Summary and Position	Ch6.2,6,7,10 ,15-19,21-24 Ch8.1-4	Quiz: Ch.1,3,6 Topic Choice
	13 Jul Thurs	L6: Waves L7: Tides L8: Observational Tools (Kasia Zaba) G: Research Citations	Ch9.1-4 Ch10.1-8 Ch11	Quiz: 8,9,10 Position Summary Field Trip Forms
3	18 Jul Tues	Midterm 1: L1-8 L9: Life History and Biodiversity L10: Primary Production G: Research Citations 2	13 14	Quiz: 11,13,14
	20 Jul Thurs	L11: Communities and Food Webs L12: Marine Chemistry L13: Sediments and the Benthos G: Analyzing Figures	16 7 5	Quiz: 16,7,5 Research Citations
4	25 Jul Tues	L14: Coastal Processes L15: Coral (Amanda Carter) L16: Carbon Chemistry	12 15	Quiz: 12,15 Figure Analysis

		G: Who are your reps?		
	27 Jul Thurs	Midterm 2: L9-16 Field Trip to Scripps Pier, Fish Collections, and Hydrolab	TBA	Who are your reps?
5	1 Aug Tues	L17: Marine Mammals (Ashlyn Giddings) L18: Climate Change (Yassir Eddebbbar) L19: Fisheries G: Letter Draft	17 18	Quiz: 17,18 Letter Draft
	3 Aug Thurs	L20: Marine Policy (Natalya Gallo) L21: Marine Resources Final Review	TBA	Quiz: TBA Final Letter
	5 Aug Sat	Final Exam: L17-21 and Cumulative 3-5pm, Location TBA		

