

OCEA-1-01: The Oceans

Online/Asynchronous (5 credit units)

Summer Session 1: June 22 – July 24, 2020

Instructor: Katlin Bowman, PhD (klbowman@ucsc.edu)

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Syllabus Disclaimer Statement: As different classes can present different needs, I may need to make changes to the syllabus during the semester. It is your responsibility to stay informed of these changes through Canvas alerts.

Course description: An interdisciplinary introduction to oceanography focusing on biological, chemical, geological, and physical processes. Covers topics such as origins and structure of planet Earth and its oceans, co-evolution of Earth and life, plate tectonics, liquid water and the hydrologic and hydrothermal cycles, salinity and elemental cycles, ocean circulation, primary production and nutrient cycles, plankton and nekton, life on the sea floor, near shore and estuarine communities, marine pollution and climate change.

Time zone: Due dates and times for this course are posted in Pacific Time (PT).

Course materials & technology

- This course is hosted on [Canvas](#). You do not need to sign up for an account, login with your CruzID and Gold Password at canvas.ucsc.edu. See [Canvas Getting Started Student Guide](#).
- Homework assignments will be completed using Google Docs. These assignments are provided through Canvas and can be stored in your [Google Drive](#), which is accessible through your UCSC email account.
- Video lectures are hosted on YouTube and require an internet connection to view. Office hours will be held using Zoom.
- Canvas, Zoom, YouTube lectures, and Google Docs can be accessed using smart phone apps, however, a computer is recommended for this course.
- Textbook: *Investigating Oceanography* by Sverdrup & Kudela (ISBN: 9781259911422), any edition (online or hardcopy)
 - If you purchased a new textbook or the electronic version, you should have access to Connect. Connect is **not required** for this course, but you might find the extra study tools helpful. The web address for this class is:
<https://connect.mheducation.com/class/k-bowman-summer1-2020-1>

Course design

Materials for this course are organized by week. Each week contains reading quizzes, video lectures, and an assessment (homework assignment or exam).

Reading quizzes: Each week will cover 2–4 chapters from your textbook. Reading assignments provide your first introduction to new topics covered in the course. At a minimum, you should skim through each chapter, paying close attention to graphics and diagrams. Reading quizzes are worth 15 points each and can be taken up to three times (your highest score will be recorded). You should have your textbook open and in front of you while taking reading quizzes. These quizzes are not designed to test your knowledge of new material, they are designed to strengthen your understanding of the text.

Video lectures: Each week includes 2–4 video lectures (40–60 minutes in length) that compliment reading assignments. Video lectures are hosted on YouTube (closed captioning available), you will need a good internet connection to watch. If you have questions during the video lectures (or during reading assignments), use the Discussion board for that week in Canvas.

Assessments: Each week includes one assessment (homework assignment or exam) that should be completed after watching video lectures and taking reading quizzes. The assessment for weeks 1, 2, and 4 is a homework assignment, provided as a Google Doc in Canvas. Each homework assignment is worth 30 points. The assessment for weeks 3 and 5 is an exam, provided as a quiz in Canvas. Each exam is worth 200 points. Once you begin taking the exam, you will have three hours to complete. You cannot complete part of the exam and finish later, and you must work alone. You may use your textbook, lecture slides, and notes during the exam. Plagiarism (i.e. copy and pasting answering from the internet) and copying answers from your classmates will not be tolerated. I am required to report instances of plagiarism to UCSC and you will receive a 0 on the exam (more information below under “Academic Dishonesty”). Unlike reading quizzes, you will only have one opportunity to take each exam.

Due dates: Assignment due dates are listed in the schedule below, and posted in the course calendar on Canvas. If you miss a due date, please reach out to me through email immediately. Extensions may be granted for extenuating circumstances.

Schedule

| <i>Week</i> | <i>Reading Quizzes</i> | <i>Video Lectures</i> | <i>Assessments</i> |
|-------------|---|-----------------------|--|
| 1 | Chapters 1-3 due Friday June 26 by 11:59 PM | Lectures 1-3 | Homework 1 due Sunday June 28 by 11:59 PM |
| 2 | Chapters 4-7 due Friday July 3 by 11:59 PM | Lectures 4-6 | Homework 2 due Sunday July 5 by 11:59 PM |
| 3 | Chapters 8-10 due Friday July 10 by 11:59 PM | Lectures 7 & 8 | Exam 1 (Chapters 1-9) due Sunday July 12 by 11:59 PM |
| 4 | Chapters 11-14 due Friday July 17 by 11:59 PM | Lectures 9-12 | Homework 3 due Sunday July 19 by 11:59 PM |
| 5 | Chapters 15 & 16 due Friday July 24 by 11:59 PM | Lectures 13 & 14 | Exam 2 (Chapters 10-16) due Friday July 24 by 11:59 PM |

Grading

| | |
|------------|----------------------|
| 240 points | Reading quizzes |
| 90 points | Homework assignments |
| 400 points | Exams |
| 730 points | Total points |

| Letter grade | Points earned (%) |
|--------------|-------------------|
| A | 90–100 |
| B | 80–89 |
| C | 70–79 |
| D | 60–69 |
| F | <60 |

Important Summer Session Remote 2020 Deadlines

Drop: Monday, June 29

Request for “W”: Friday, July 10

Summer is unique. **You will not be dropped for non-attendance or non-payment.** You must drop yourself. Dropping before the deadline results in a full-tuition reversal/refund. Withdraw posts a W for the grade and full tuition is charged (no refund).

For all dates and deadlines, including ‘change of grade option’ (P/NP) and grades due, here is the summer academic calendar: <https://summer.ucsc.edu/studentlife/index.html>

For questions about dropping, requesting a W grade for a course, or withdrawing from the summer quarter, email summer@ucsc.edu.

Communication

During this course we will communicate primarily through Canvas discussion boards and Zoom office hours, with some email communication. Please sign up for [Canvas notifications](#) and check your email frequently to stay informed.

- I will post announcements on Canvas every Monday to remind you of due dates for the week, and to provide any new updates.
- The following discussion boards are available through Canvas. Posting in discussion boards is recommended, but not required for this course.
 - **Weekly discussion boards:** Each week has a discussion board where you can post questions about the material (reading and lecture videos). Browse through questions posted by your classmates and ask new questions here. I will respond to questions within 24 hours Monday–Friday.
 - **General questions:** Post general questions about the course here (i.e., When is homework 1 due? How can I view my grade in Canvas?). This discussion board includes a link to a FAQ (Facts and Questions) document to further assist with general questions about the course.
 - **Let's work together:** Use this discussion board to connect with your classmates. You are welcome to work with other students on homework assignments, and virtual study groups may be helpful to prepare for exams.
 - **Icebreaker:** Virtual learning can be lonely! This discussion board provides a space for us to get to know each and stay connect throughout the summer session.

Office hours

Katlin is available for office hours through Zoom, every Friday from 9:00 AM to 12:00 PM, or by appointment. Email me directly through Canvas or at klbowman@ucsc.edu

Link to join office hours(same link each week):

<https://ucsc.zoom.us/j/97814276996?pwd=dXZEaG9oZ2xKWlVzaXE2a0cwTXhoQT09>

Password: bananaslug

Student Learning Outcomes

Week 1: Earth science (Chapters 1–3)

- Draw connections between the physical geology of Earth, plate tectonics, coastal features, and ocean basins.
- Identify seafloor features, and the geological processes that create islands, deep-sea hydrothermal vents and trenches.

Week 2: Water properties, air and water circulation (Chapters 4–7)

- Demonstrate an understanding of specific and latent heat, and changes of state.
- Explain global variations in surface seawater salinity.
- Write the chemical equations for photosynthesis and respiration.
- Conceptualize patterns air circulation cells and prevailing wind patterns across the globe.

Week 3: Waves, tides, and coastal habitats (Chapters 8-10)

- Label parts of a wave and distinguish between different wave types, generating, and restoring forces.
- Explain processes that create tides and characterize different tidal patterns.
- Characterize coastal habitats, and features belonging to depositional and erosional coasts.

Week 4: Life in the ocean (Chapters 11-14)

- Organize marine organisms into groups using taxonomy (domain and phylum), habitat, metabolism, and lifestyle classifications.
- Explain the evolution of life in the ocean, and its significance to the evolution of life on Earth.
- Identify trophic levels and explain energy transfer within marine food chains.
- Describe interspecific competition between marine organisms.

Week 5: Marine pollution and climate change (Chapters 15-16)

- Distinguish between natural and anthropogenic climate variations.
- Explain how climate change impacts marine habitats and contributes to sea level rise.
- Identify sources of marine pollution and threats of marine pollution.

Student resources

DRC Remote Accommodations: The Disability Resources Center reduces barriers to inclusion and full participation for students with disabilities by providing support to individually determine reasonable academic accommodations. Operations continue via remote appointments. If you have questions or concerns about exam accommodations or any other disability-related matter, email the DRC Schedulers at drc@ucsc.edu for an appointment.

Small Group Tutoring: Small Group Tutoring (SGT) supports students academically to advance educational equity by designing inclusive learning environments outside of the classroom. In SGT, you can expect the Tutor to facilitate cooperative group activities designed to have students work together on the course content and develop study skills for the course. SGT is offered at least three times each week for the entire quarter. The Tutor is an undergraduate student who took the class, did well, and is trained to facilitate group sessions to focus on students' needs to succeed in the course. SGT is open to all students enrolled in the class and they must sign up on our online system: TutorTrac. When students sign up for SGT, they are committing to attend every week. For Summer 2020, students can begin signing up for tutoring on **Monday, June 22rd** and tutoring will begin **Wednesday, June 24th**. Students only have to sign up once for tutoring and their appointments will repeat weekly. Sign-ups will close on **Friday, August 14th** for all Summer Session Sign-Ups. This means that after **August 14th**, no new students can sign up for tutoring.

Want SGT to be successful for you? Bring your books, lecture notes, questions, and be open to working collaboratively with your peers. You can sign up using this link: <https://ucsc.go-redrock.com/tracweb40/NoAccess.4sp?errText=insufficient%20credentials%20to%20view%20content> You can also find the link on our website: <https://lss.ucsc.edu/index.html>

Academic Dishonesty: Academic integrity is the cornerstone of a university education. Academic dishonesty diminishes the university as an institution and all members of the university community. It tarnishes the value of a UCSC degree. All members of the UCSC community have an explicit responsibility to foster an environment of trust, honesty, fairness, respect, and responsibility. All members of the university community are expected to present as their original work only that which is truly their own. All members of the community are expected to report observed instances of cheating, plagiarism, and other forms of academic dishonesty in order to ensure that the integrity of scholarship is valued and preserved at UCSC.

In the event a student is found in violation of the UCSC Academic Integrity policy, he or she may face both academic sanctions imposed by the instructor of record and disciplinary sanctions imposed either by the provost of his or her college or the Academic Tribunal convened to hear the case. Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student's transcript. For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the [Academic Integrity page](#) at the Division of Undergraduate Education.

Title IX: The university cherishes the free and open exchange of ideas and enlargement of knowledge. To maintain this freedom and openness requires objectivity, mutual trust, and confidence; it requires the absence of coercion, intimidation, or exploitation. The principal responsibility for maintaining these conditions must rest upon those members of the university community who exercise most authority and leadership: faculty, managers, and supervisors.

The university has therefore instituted a number of measures designed to protect its community from sex discrimination, sexual harassment, sexual violence, and other related prohibited conduct. [Information about the Title IX Office](#), the [online reporting link](#), applicable campus resources, reporting responsibilities, the [UC Policy on Sexual Violence and Sexual Harassment](#), and the UC Santa Cruz Procedures for Reporting and Responding to Reports of Sexual Violence and Sexual Harassment can be found at titleix.ucsc.edu.

The Title IX Office is actively responding to reports and requests for consultation. If you are not currently working with someone in the office and want to make a report/request a consult, you can expect the fastest response by using our [online reporting link](#). For more information please visit the [Title IX Operations under Covid-19](#) page.

Tips for Success:

1. Read the text –scan the figures and read captions.
2. Practice effective note taking (study “Ten tips for taking good class notes” below).
3. Ask questions on Canvas discussion boards and during office hours.
4. Do not copy answers from your classmates on homework assignments, make sure you can do all calculations on your own.
5. Link or copy the Canvas calendar to your own calendar to remember important due dates.
6. Check Canvas announcements and your email often for course reminders and announcements.
7. Attend office hours and come prepared with questions.
8. Get a study network going with your fellow students.

Ten tips for taking good class notes

1. Arrive to class early and settle in, warm up your mind. Review your current notes and ask your instructor for clarification where needed.
2. Write your notes on paper rather than typing on a laptop. Typing notes may lead to transcribing the lecture, while writing notes requires that you conceptualize and summarize information.
3. Write your notes neatly so they are easy to study. Leave extra blank spaces (rather than cramming everything into a small space) so that you can go back and expand on topics later.
4. Scan your notes at the end of class for any illegible words, symbols, or sketches. Clarify these errors before you leave class while the information is still fresh in your mind.
5. Make key words and concepts stand out by highlighting, writing in a bold font, or underlining.
6. Pay extra attention to the most important points emphasized by your instructor. These will be concepts that your instructor covers repeatedly or with extra emphasis (slower pace, extra media, class participation).
7. Sketch and doodle! Drawing is an excellent way to help visualize lecture material.
8. Find the perfect writing tool. Having the right pen or pencil will make you more prepared to take effective class notes.
9. Politely ask your instructor to slow down if your note taking cannot keep up the pace of the lecture.
10. It is normal to lose focus or miss part of lecture – talk to your classmates during lecture breaks or after class to help fill in the gaps.

Adapted from: Nilson, L.B. 2016. Teaching at its best: A research-based resource for college instructors (Fourth Edition). John Wiley & Sons, Inc., San Francisco, CA.