

Syllabus for GEOS212: Introduction to Oceanography, Spring 2021

(11 January 2021; Subject to revision)

Please note that there are six sections for Geos 212, as follows:

- Section 002 = Flex/In-Person mode, for Honor's students
- Section 002A = discussion for Honor's students enrolled in Section 002
- Section 003 = Fully On-Line mode, for non-Honor's students
- Section 004 = Fully On-Line mode, for Honor's students
- Section 004A = discussion for Honor's students enrolled in Section 004
- Section 005 = Flex/In-Person, for non-Honor's students

In practice, there will be no difference between the Flex/In-Person and On-Line modes. Early in the semester, in-person attendance will not be allowed for any student. Once in-person attendance is allowed, students from either mode will be able to attend lectures in person (perhaps with rotation to meet distancing requirements). But attendance will not be required -- students in either mode can complete all course activities on-line. Students in either mode will be able to complete all course work asynchronously.

Lectures: Tuesday and Thursday, 11:00 AM to 12:15 PM
(in Chem 134 if we are able to meet in-person, but attendance is not required)

Professors: George Gehrels
Department of Geosciences
Gould-Simpson 529
Office Hours: Tuesday/Thursday 12:30-1:30 PM (on Zoom)

Paul Goodman
Department of Geosciences
Gould-Simpson 305
Office Hours: Tuesday 1:00-1:55pm, Wednesday 11:00-11:55am

Teaching Assistants: Robert Hayes (rhayes@email.arizona.edu):
Tumaini Kamulai (tumainik@email.arizona.edu)
Terrance Delisser (tealde@email.arizona.edu):

MAIN CONTACT FOR COURSE = ua.oceanography@gmail.com

COURSE DESCRIPTION

This course provides an introduction to our amazing Oceans: their distribution/shape/depth today and in the past, the water and what's in it, how the water moves, how the oceans influence global climate, how life in the ocean has evolved, and some of the different marine communities that exist today.

EXPECTED LEARNING OUTCOMES

Upon successful completion of this course, you will be able to:

- Understand the natural cycles of water and sediment on Earth
- Articulate the central role of the ocean in controlling our climate
- Explain the forces that cause the water in the ocean to be in ceaseless motion
- Characterize common features and organizing principles of marine communities
- Discuss the impacts of human activities on the ocean
- Gather and assess information from maps, diagrams, photographs, videos, and (simple) equations!

GOALS

Our main goals for this class are to:

- enhance your appreciation for the significance and beauty of the oceans
- inform you about how the ocean affects your daily life
- help you do well in this course
- facilitate your success as a student at the University of Arizona

ABSENCES AND CLASS PARTICIPATION POLICY

There are no requirements for in-person attendance or class participation this semester. However, there are firm deadlines for submission of coursework (as described below). For general reference, following are UA Policies:

- The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>.
- The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, <http://policy.arizona.edu/human-resources/religious-accommodation-policy>.
- Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: <https://deanofstudents.arizona.edu/absences>.

REQUIRED MAP

World Map: There is **no textbook** for this class, but you need to purchase a copy of the **Physical Map of the World**, which is available from National Geographic, other vendors, and possibly the UA bookstore (for ~\$16.99). Here are some National Geographic codes to make sure you purchase the correct map:

Product Code = RE0622010T; ISBN = 9780792280880; UPC = 749717009059

You will be able to keep your map at the end of the semester (they will not be collected).

CLICKER DEVICE

You will not need to have a clicker device for this course.

D2L

- **All information** for this course is available on D2L (<http://d2l.arizona.edu>). Most material will be posted mainly on the "Course Home", "Announcement", and "Content" pages.
- We will provide lots of supporting information for you this semester (e.g., lecture outlines, lecture slides, worksheets) -- there is no need for you to acquire additional study materials (e.g., Notehall, ShareNotes, etc.).

LECTURE OUTLINES, SLIDES, ZOOM SESSIONS/RECORDINGS

- A lecture outline that includes the main points and diagrams from the lecture will be posted on the class web site (at D2L) prior to each lecture. These may help you organize your notes.
- Lecture slides are posted on D2L before each lecture.
- Every lecture will be available on a live Zoom Session (synchro viewing). Recordings will be available within an hour or two following each lecture (asynchro viewing). Links will be provided on D2L.

CLASSROOM POLICIES

This is not relevant for the beginning of the semester, as in-person attendance is not allowed. Following are a few policies that will be followed if we are able to have students in the classroom later in the semester. But please note that attendance is not required for any students -- all work can be completed on-line and asynchronously.

A) Learning Environment: To foster a positive learning environment, students and instructors have a shared

responsibility. We want a safe, welcoming, and inclusive environment where everyone feels comfortable and is able to succeed.

- B) Attendance:** Whether you are in the Flex/In-Person or On-Line section, attendance is strongly suggested but is not required. We will never take attendance.
- C) Note-taking:** If you do attend lecture, we strongly encourage you to take notes during lecture, as this will help you learn the material.
- D) Computers (Laptops/iPads):** As long as you are not disrupting the learning environment, the use of laptop computers or iPads/tablets is permitted during class for taking notes or class-related activities.
- E) Cell phones:** The use of cell phones for voice or text communication during class is a distraction to the learning environment and is therefore prohibited. If you have to make or receive a call/text during class, please step into the hallway and return when you are done.

ONLINE POLICIES

Following are the policies that we will follow for any on-line interactions (e.g., during Zoom lectures or office hours).

- A) Learning Environment:** To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where everyone feels comfortable and is able to succeed.
- B) Synchro versus Asynchro lectures:** We encourage you to participate in lectures, which will be offered during the regularly scheduled time (Tues/Thurs @ 11:00-12:15 Tucson time). But we understand that this is not always possible, so you are also welcome to view the lecture recordings whenever convenient for you.
- C) Note-taking:** Regardless of whether you view the synchro or asynchro lectures, we strongly encourage you to take detailed notes. You should write down the important concepts presented, and draw every diagram that we take the time draw! Learning is not a passive activity -- you need to engage in the material! It's just like learning to shoot free throws, play an instrument, or draw a portrait -- practice is the only way to get better.
- D) Zoom settings:** During a synchro lecture, please keep your audio and video turned off. You are encouraged to ask questions with the Chat function. During office hours it is best to have audio and video on. Please sign in with your UA zoom account so that we can keep track of your participation (see below).

GRADED ACTIVITIES

Because this course will be conducted entirely on-line for at least part of the semester, we will not have any high-stakes exams, homework assignments, or quizzes. In our experience, students are better able to learn material, and demonstrate their knowledge, through a larger number of lower-stakes activities. Following are the four ways that you will be able to earn points this semester:

A) Lecture Assessments:

- Students are expected to complete a 20-point assessment following each lecture (available from the Assessments=>Quizzes tab on D2L). Each one will have several questions that focus on material presented during the most recent lecture and several questions that cover material covered in previous lectures. Most assessments will have ten questions, each worth two points.
- You are encouraged to work with other students to review material in preparation for an assessment. Once you begin an assessment, you may look back through any information that we have provided (e.g., lecture slides), but you may not interact with anyone else. And you may not tell other students what material was covered on an assessment. Either would be a violation of class policy and the UA Academic Code.
- When you submit your assessment, you will receive a note that your work has been accepted. After the due date for an assessment you will be able to see your answers, the correct answers, and your score.
- Assessments for Tuesday lectures will be due on Thursdays at 11:00 AM (Tucson time); Assessments for Thursday lectures will be due on Mondays at 11:00 AM (Tucson time). No late work will be accepted. But the good news is that we will drop your lowest ten scores!

B) Lecture Assignments:

- Students are expected to complete a 10-point assignment following each lecture (available from the Assessments=>Assignments tab on D2L). Each one will have a set of activities that must be completed, for example drawing a diagram, describing a process, describing a personal experience or perspective, or summarizing information found on the internet.
- You are encouraged to work with other students to review material in preparation for an assignment. Once you begin an assignment, you should follow the provided instructions about gathering information from other sources (e.g., lecture slides, the internet, your World Map), but you may not interact with anyone else. And you may not tell other students what material was covered on an assessment. Either would be a violation of class policy and the UA Academic Code.
- When you submit your assignment, you will receive a note that your work has been accepted. Your score will be available a few days after the due date.
- Responses will be entered in D2L or drawn on a sheet of paper (e.g., a worksheet) and then photographed and uploaded to D2L. Assignments for Tuesday lectures will be due on Thursdays at 11:00 AM (Tucson time); Assignments for Thursday lectures will be due on Mondays at 11:00 AM (Tucson time). No late work will be accepted. But the good news is that we will drop your lowest ten scores!

C) Class Project: You will be expected to contribute to a class project which focuses on climate change. The four steps in this project are as follows:

1. Prepare and submit a list of ten good things that individuals can do to help combat climate change, and a list of ten bad things that individuals should avoid doing. These lists will be worth 20 points, and are due at 5:00 PM on Feb 4. Your write-ups should be 2 pages in length, single-space, 12 point font, and 1" margins.
2. Consider all class submissions, and help choose the top ten for each category.
3. Participate in creating small (2"x3") cards that present the essential information about climate change, and provide our two lists. These will be available for distribution virtually (e.g., by email or through social media) and perhaps as printed cards if distancing restrictions are no longer in place.
4. Share your card with 10 people, chat with them about their views regarding climate change, and write a two-page summary of your conversations (20 points). Your reports are due at 5:00 PM on April 29. Your reports should be 2 pages in length, single-space, 12 point font, and 1" margins.

Additional details will be provided.

As an example, here's the card that students created in Spring 2020 for their project on Seafood Sustainability:



D) Interaction with TA's or preceptors during Office Hours. Interactions should focus on course content/activities, and will take place during our Zoom sessions. You will receive five points for each

interaction, for a maximum of 50 points. Note that only one interaction per lecture assessment/assignment will count.

Please note that late work will not be accepted, and there are no opportunities to earn extra credit points this semester.

GRADED WORK

- Grades will be available through D2L.
- All grades will be entered into D2L within a few days of the due date.
- **LATE ASSIGNMENTS WILL NOT BE ACCEPTED.** This is because answer keys are posted and graded papers are returned soon after the due date.
- University policy regarding grades and grading systems is available at <http://catalog.arizona.edu/policy/grades-and-grading-system>

GRADING

690 points are available as follows:

- Lecture Assessments = 400 points (20 of 30 counted)
- Lecture Assignments = 200 points (20 of 30 counted)
- Class Project = 40 points
- Interactions with Teaching Team = 50 points

Grades are straight A, B, C, D, E calculated by percent out of 690 points:

A = $\geq 89.5\%$ = ≥ 617 points

B = 79.5% to 89.5% = 548-617 points

C = 69.5% to 79.5% = 479-548 points

D = 59.5% to 69.5% = 410-479 points

E = $< 59.5\%$ = ≤ 410 points

Note that you can easily calculate your current grade during the semester just by adding up the points you have earned, dividing by the points possible for the completed work, and then multiplying by 100 to convert to percent. Note that D2L will provide an accurate record of your scores, but total grades will not be accurate until the end of the semester (when your ten lowest scores for lecture assessments and assignments will be dropped).

Please note that every point counts! At the end of the semester we will NOT adjust your grade, or offer new opportunities to earn extra points, even if you miss the cutoff for the next letter grade by only 1 point.

HONORS STUDENTS

Honors students will earn Honors credit in this course by signing up for Sections 002A or 004A of Geos 212. You will earn honors credit by serving as a preceptor in the course. This involves attending (virtually) a once-per-week meeting on Fridays @ 1:00-1:50 PM, and hosting two one-hour sessions (for office hours) per week. Students will join your sessions for assistance with the lecture assessments and assignments, so it will be important for you to be familiar with the material. We will provide you with all essential information on the Fridays before your upcoming sessions. During office hours, you will need to keep track of who joins your session, and pass these names to our Teaching Assistants. During our first meeting, on Jan 15, we will determine when you will do your office hours each week. Please contact George or Paul if you have questions, or are interested in switching into the Honor's section of this course.

INCLUSIVENESS

- Inclusive Excellence is a fundamental part of the University of Arizona's strategic plan and culture. As part of this initiative, UA embraces both the principles and the practices of diversity and inclusiveness. These values are expected, respected, and welcomed in this course.
- This course supports elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request. As the course includes group work and in-class discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect.

ACCESSIBILITY AND ACCOMMODATIONS

- Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let us know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268, <http://drc.arizona.edu/>) to establish reasonable accommodations.
- If you have reasonable accommodations, please plan to meet with George or Paul by appointment or during office hours to discuss accommodations and how course requirements and activities may impact your ability to fully participate.
- Please note that we provide lecture notes for DRC students who have accommodation for note-taking. These will be posted on D2L (under Groups) before each lecture.
- Please be aware that the accessible table and chairs in our classroom should remain available for students who find that standard classroom seating is not usable.
- **If at any time you are not doing as well in the class as you would like to be, please seek assistance!**

ADDITIONAL RESOURCES FOR STUDENTS

- UA Academic policies and procedures are available at: <http://catalog.arizona.edu/policies>.
- Student Assistance and Advocacy information is available at: <http://deanofstudents.arizona.edu/student-assistance/students/student-assistance>
- Office of Diversity (<http://diversity.arizona.edu/>)
- Campus Health Counseling and Psych Services: <http://www.health.arizona.edu/counseling-and-psych-services>
- Campus Health OASIS Sexual Assault and Trauma Services: <http://www.health.arizona.edu/oasis-sexual-assault-and-trauma-services>

CODE OF ACADEMIC INTEGRITY

Policies of the University of Arizona

See <http://deanofstudents.arizona.edu/codeofacademicintegrity> for the complete policy.

- Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog.
- The University Libraries have some excellent tips for avoiding plagiarism, available at <http://new.library.arizona.edu/research/citing/plagiarism>.
- Violations of the UA Code of Academic Integrity are serious offenses at the University of Arizona. As your instructors, George and Paul will deal with alleged violations in a fair and honest manner. As students, you are expected to do your own work and follow class rules on all tests and assignments. Alleged violations of the UA Code of Academic Integrity will be reported to the Dean of Students Office and may result in sanction(s) (i.e., loss of credit on assignment, failure in class, suspension, etc.)

Here's a simple guide for working on Lecture Assessments and Lecture Assignments:

Do This → When you are preparing for an assessment/assignment, feel free to work with other students, use information from other sources, and/or receive assistance from your Instructor/TA/preceptor. Once you start working on an assessment/assignment, please feel free to use your class notes or any other course materials, and you may seek assistance from a TA or preceptor (during their office hours). Make sure that what you write/draw is your own work (both content and format).

Do not do this → Once you have started working on an assessment /assignment, you may not receive assistance from anyone except an Instructor, TA, or Preceptor. Everything that you turn in must be in your own words or drawing. Identical papers will receive zero points the first time, and will be submitted to the Dean of Students the second time.

DISRUPTIVE BEHAVIOR

UA Policy on Disruptive Behavior In An Instructional Setting:

See <http://deanofstudents.arizona.edu/accountability/disruptive-student-behavior> and <http://policy.arizona.edu/education-and-student-affairs/disruptive-behavior-instructional-setting> for the complete policy.

- **Disruptive Behavior is Prohibited:** “Disruptive behavior” means conduct that materially and substantially interferes with or obstructs the teaching or learning process in the context of a classroom or educational setting (e.g., zoom session). Disruptive behavior includes conduct that distracts or intimidates others in a manner that interferes with instructional activities, fails to adhere to an instructor’s appropriate classroom rules or instructions, or interferes with the normal operations of the University.
- Students are asked to refrain from disruptive conversations with people sitting around them during lecture (if we have in-person sessions) or engaging in disruptive behavior during Zoom sessions. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave the lecture or Zoom session, and may be reported to the Dean of Students.

THREATENING BEHAVIOR

UA Policy on Threatening Behavior By Students:

See <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students> for the complete policy.

- **Threatening Behavior is Prohibited:** “Threatening behavior” means any statement, communication, conduct or gesture, including those in written form, directed toward any member of the University community that causes a reasonable apprehension of physical harm to a person or property. A student can be guilty of threatening behavior even if the person who is the object of the threat does not observe or receive it, so long as a reasonable person would interpret the maker’s statement, communication, conduct or gesture as a serious expression of intent to physically harm.
- The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself.

NONDISCRIMINATION AND ANTI-HARASSMENT POLICY

UA Policy on Nondiscrimination and Anti-harassment

See <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy> for the complete policy.

- The University is committed to creating and maintaining an environment **free of discrimination**.
- Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

CONFIDENTIALITY OF STUDENT RECORDS

<http://www.registrar.arizona.edu/personal-information/family-educational-rights-and-privacy-act-1974-ferpa?topic=ferpa>

SUBJECT TO CHANGE STATEMENT

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.