

Oceanography - Spring 2024

OCE 3008 - Section 0001 (3 Credits)

Instructor: Dr. Geoffrey Cook

Office: Virtual Office Hours using webcourses discussion board or zoom by appointment

E-mail: geoffrey.cook@ucf.edu **(*NOTE* BEFORE emailing, read the email policies below).**

Phone: The best way to contact Dr. Cook is via email

Office Hours: 9:45am – 10:30am T/TH or by appointment

Class Meeting Times: Tuesdays and Thursdays, 10:30am-11:50am, Biological Science Building, Room 209

Email Policies:

- * **ALL questions regarding the class should be sent to me via email using webcourses or from your UCF email address.**
- * Before you ask me a question, check the syllabus and look at the class Webcourses page.
- * Please include your (1) full name and (2) course title (i.e. Oceanography)
- * I will try to respond within 48 hours. However, response time may be greater. Please plan accordingly by not waiting to the last minute to contact me with questions or concerns.
- * Due to confidentiality, grades must be discussed with the instructor and not via email.
- * Knight's E-Mail - I will only be able to send e-mail communications to Knight's E-mail addresses. If you email from your gmail, etc account, I will not be able to respond.

Intended Audience: This course is an optional restricted elective benefitting Biology majors, but targeted toward students in the Marine and Aquatic Biology track as one of three required electives.

Course Description: A comprehensive introduction to marine geology, physical, chemical and biological oceanography. We will cover a number of topics and integrate mathematics, physics, chemistry, and biology to understand the ocean. Lectures will cover plate tectonics and the geology of ocean basins; earth history; physical and chemical dynamics and processes involving seawater; Earth's energy budget; large scale atmospheric and oceanic circulation; marine sediments and transport; biogeochemical cycles; and benthic and pelagic ecology. Additionally many of the lectures are interdisciplinary and require linking concepts from multiple disciplines, and highlight implications for human society.

This 3 credit hour course will provide students with knowledge of the important geological, physical, chemical, and biological processes of the marine environment. Students are expected to master major concepts and basic terminology of Oceanography, and understand approaches of oceanographic study, including theory, observations, and experiments.

Course Goals for Students:

After successful completion of the course students will know how to:

1. describe geological and physical properties of the oceans and associated spatial and temporal scales of change
2. summarize the approaches used to understand geological, physical, chemical, and biological processes in oceans
3. explain interactions among physical, chemical, and biological ocean systems
4. demonstrate understanding of concepts from lectures and readings by applying quantitative reasoning and skills to evaluate contemporary marine-related problems and develop solutions

Course Prerequisites: A "C" or better in Chemistry Fundamentals 1 (CHM 2045C), Chemistry Fundamental II (CHM 2046), Biology I (BSC 2010C), and Biology II (BSC 2011C).

Required Text and Resources:

Textbook: Alan P. Trujillo and Harold V. Thurman, *Essentials of Oceanography*, Pearson Education, 13th Ed. (2020)

To enhance your learning experience and provide discounted access to the right course material, your course is part of an inclusive access model called First Day®. You can access the digital materials for class through the Course Materials tab in Webcourses.

UCF will bill you at the discounted price as a course charge for this course.

You have the option to opt-in/opt-out of this program in Webcourses.

<https://customercare.bncollege.com/hc/en-us/articles/360001655667-How-do-I-Opt-In-to-my-Inclusive-Access-courseware-materials-Florida-Only>

If you want to opt-in/out, you need to opt in/out by 01/14/2024. If you choose to opt-out, you will be responsible for purchasing your course materials elsewhere. The latest edition should be available online, through the UCF Book Store, or if you prefer, a digital or hard copy version is available for purchase online.

For more information and FAQs visit this website: customercare.bncollege.com

Internet Access and Webcourses - Oceanography in Spring 2024 is a face to face class (i.e. synchronous) with synchronous exams. **On exam days, students are required to attend class during the scheduled exam time (10:30am-11:50am).** Announcements, lecture notes, quizzes, grades, study tips, and relevant web links will be made available on webcourses. Use your NID and myUCF password to log in. Before emailing, please check the syllabus or webcourses for answers to frequently asked questions!

Performance Evaluation:

Exams (4) = 100% Exams: Exam 1 = 25%, Exam 2 = 25%, Exam 3 = 25%, Exam 4 (Final) = 25%

Grading Scale

| | | | | | | | | | |
|---|-----------|----|----------|----|----------|----|----------|---|---------|
| A | 90 - 100% | B+ | 87 - 89% | C+ | 77 - 79% | D+ | 67 - 69% | F | 0 - 59% |
| | | B | 80 - 86% | C | 70 - 76% | D | 60 - 66% | | |

Grading and Evaluation:

Students will be graded and evaluated based on exam scores. The overall semester grade will be rounded to the nearest whole number. For example, a 79.49999 and below will round down to 79, while a 79.50000 and above will round up to 80). No matter where we set the limit, there will ALWAYS be someone who is close to the next grade. As there are many students in this class we strive for consistency and fairness. For this reason, there will be no exceptions to this policy and no other adjustments will be made to final grades.

Readings:

You will be responsible for both lecture material and assigned readings in the text. This class will closely follow the required text, but **some required material will be presented in lecture, but not in the assigned reading.** To succeed, students must read and understand materials presented in the textbook and lecture. Relevant chapters are included on the class schedule and readings need to complete **prior to class.**

Lectures:

Students should show proper classroom etiquette. *Please do not be late or leave early, this disrupts the class.* All cell phones should be turned OFF when entering the classroom. Students who arrive late or need to leave the lecture room early should sit towards the front and side to avoid disrupting the class. Students should not disrupt other students (or the instructor) in class by talking, texting, or using your computer for purposes unrelated to the lecture. People not adhering to these common courtesies will be asked to leave the class. Recording of lectures is permitted. PDF copies of the lectures will be provided on webcourses.

Exams:

There will be four exams. Technically the final exam (exam 4) is NOT comprehensive. It will focus on the material covered since the previous exam. **However, since Oceanography is inherently interdisciplinary, you will be required to integrate and apply knowledge gained in earlier classes.** The schedule for exams is listed in the

class schedule below. The questions will be primarily multiple choice but may also include matching, fill-in, and true/false. All questions will pertain to concepts and material covered in lectures and textbook readings.

Exam 1 – Tuesday, February 06, 2024 – 10:30am -11:50am

Exam 2 – Tuesday, March 05, 2024 – 10:30am -11:50am

Exam 3 – Tuesday, April 02, 2024 – 10:30am – 11:50am

Exam 4 (Final Exam) – Tuesday, April 30, 2024 – 10:30am - 11:50am

Exam Policies:

1. **All exam grades count towards your semester grade. No exam grades will be dropped.**
2. All exams will be based on both lecture material and text reading assignments.
3. You must bring:
 - a) a pencil
 - b) your UCF ID – **note:** failure to show your ID may result in a score of zero for the exam.
 - c) **IF** a calculator is needed it must be a nongraphing, nonprogrammable type of calculator capable of performing the type of calculations discussed in the text and lecture (e.g. Texas Instruments TI-30 or Casio fx-300MS). You may not use a cell phone.
4. Scantrons will be supplied. You do not need to bring your own.
5. Exams 1, 2 and 3 will begin promptly at the beginning of class and will require the full 80 minutes to complete. The final exam will occur at the same time during finals week (see class schedule below).
6. The final exam is not comprehensive and will only include the material covered since the previous exam.
7. **Do not arrive late.** A late student will not be allowed to access the exam after the first student has finished the exam. As soon as the first student finishes the exam, no students will be admitted to that exam. Under no circumstances will extra time be allowed.
8. Prior to the exam, all books, notes and bags must be stowed under your seat, all sunglasses removed, and all hat removed or turned backward.
9. Cell phones must be turned OFF and stowed during the exam period.
10. You will NOT be allowed to leave the exam. Make sure you have everything you need (pencil, ID, tissues, etc.) and use the restroom before the exam starts.
11. **You must print your PID number on the scantron and question sheet. Be sure you know it!**
12. Grades will be posted on WebCourses as soon as possible; we will inform the class when they are posted.
13. **REVIEW OF EXAMS** - Scantrons will not be returned to students. Instead, you may review your exam virtually during the office hours or by appointment (email for an appointment). Each exam must be reviewed prior to the next exam date (e.g. if you would like to review exam 1 this must be done before exam 2 is given).

Missed Exam Policy:

1. Official university business and religious holidays: Make-up exams for exams 1, 2, and 3 will be provided for students who must miss the exam due to official University business at which your presence was required (e.g. a university-sponsored team event) or absences related to a recognized religious holiday. The student is expected to inform the instructor of the scheduling conflict at the beginning of the semester, and absolutely **no later than 1 week prior to the scheduled exam**. Additionally, **documentation must be provided by 5:00pm the Friday before the scheduled exam** from the appropriate university body for the student to be eligible for a make-up exam.
2. Emergencies: Make-up exams for exams 1, 2 and 3 will be provided for students who must miss the exam as a result of a valid emergency, as defined by UCF and/or the professor (including but not limited to: major illness, serious family emergency, jury duty, military obligation, etc.). The student must contact the professor promptly (**within 24 hours or less**) after missing the scheduled exam and provide hard-copy documentation (e.g., a signed document from a doctor, police officer, judge, etc. – not by email) **within one week** of the scheduled exam for the student to be eligible for a make-up exam.
3. Non-official absences with prior knowledge: Make-up exams for exams 1, 2, and 3 *may* be provided to students who must miss an exam due to a prior planned event that conflicts with an exam (including but not

limited to: mandatory work trips, presenting at a conference, etc.). These cases will be evaluated on a case-by-case basis and it will be up to the discretion of the instructor to determine if a student is eligible for a make-up exam. The student is expected to inform the instructor of the scheduling conflict at the beginning of the semester, and absolutely no later than **1 week prior** to the scheduled exam. Additionally, documentation must be provided **by 5:00pm the Friday before the scheduled exam** for the student to be eligible for a make-up exam. Acceptable forms of documentation can be determined through a discussion with the instructor.

4. All unexcused absence from an exam or failure to comply with the deadlines outlined above will result in a zero for the missed exam.
5. **All make-up exams will be written/essay format, and will be completed in the Biology Testing Center (BIO 104 or 105). The testing center hours in Spring 2024 are from 1:30pm – 3:30pm on Tuesdays in BIO Room 105 and 1:30pm – 3:30pm on Fridays in BIO Room 104. All makeup exams will be completed within 3 weeks of the missed exam (i.e. before the next in-class exam).**
6. All students are required to take the final exam on the scheduled day and time of the final exam. There will be **no make-up exams or early exams for the Final Exam.**

Extra Credit: No forms of extra credit are accepted.

Study suggestions:

This is a fast paced class covering 16 chapters in the semester. To succeed it is essential that you stay caught up by reading, “attending” lectures, and studying the material. Students who prepare for the exams by simply attending lectures and reading their notes several times are unlikely to succeed on the exams. To succeed it is best to make your learning more active and focused. Active learning involves practicing the same skills you must perform on exams. In other words, quick recall of the appropriate information and applying it. To do this you should:

- A) Treat studying like it's a job. Set a schedule, show up for work, pay attention (i.e. no multitasking) while on the job. A general rule of thumb is 2-3 hours for every hour spent in class.
- B) Practice by Self-Testing. Make your own study questions: If you are like most people, you do not remember what you read/hear in sufficient detail to then be tested. However, it may be unclear which details you remember/understand and which you do not. The point in study questions is to figure out prior to an exam what you don't understand or have trouble remembering and work on that material. You do not want to realize during an exam that you don't understand something as well as you thought you did as it is now too late! For methods on how to most effectively write questions and use these questions, be sure to consult the study tips section on Webcourses.

Ethics and Academic Conduct:

Students are expected to follow UCF's standards for personal and academic conduct as defined and outlined in the Golden Rule (see: <http://goldenrule.sdes.ucf.edu>). Academic dishonesty in any form will not be tolerated. If you are uncertain as to what constitutes academic dishonesty, please consult The Golden Rule, the University of Central Florida's Student Handbook (<http://www.goldenrule.sdes.ucf.edu/>) for further details. As in all University courses, The Golden Rule Rules of Conduct will be applied. Violations of these rules will result in a record of the infraction being placed in your file and receiving a zero on the work in question AT A MINIMUM. At the instructor's discretion, you may also receive a failing grade for the course. Confirmation of such incidents can also result in expulsion from the University.

Plagiarism and cheating - presenting another's ideas, arguments, words or images as your own, using unauthorized material, or giving or accepting unauthorized help on tests - contradict the educational value of these exercises. Students who attempt to obtain unearned academic credentials that do not reflect their skills and knowledge can also undermine the value of the UCF degrees earned by their more honest peers.

UCF faculty members have a responsibility for your education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to infringements of academic integrity. Penalties can

include a Z-designation, failing grade in an assignment or in the course, or suspension or expulsion from the university. See <http://www.osc.sdes.ucf.edu/> for more information about UCF's Rules of Conduct.

ZDesignation: UCF faculty members have a responsibility for your education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to infringements of academic integrity. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a "Z Designation" on a student's official transcript indicating academic dishonesty, where the final grade for this course will be preceded by the letter Z. If you are guilty of committing academic dishonesty, and it is determined that a "Z designation" will be applied, you will be assigned a zero for the assignment, and your final grade will be preceded by the letter Z on your permanent UCF transcript. For more information about the Z Designation, see <http://z.ucf.edu/>.

The current UCF policy concerning **incomplete grades** will be followed in this course. Incomplete grades are given only in situations where unexpected emergencies prevent a student from completing the course and the remaining work can be completed the next semester. Your instructor is the final authority on whether you qualify for an incomplete. Incomplete work must be finished by the end of the subsequent semester or the "I" will automatically be recorded as an "F" on your transcript.

As of Fall 2014, all faculty members are required to document students' academic activity at the beginning of each course. In order to document that you began this course, we will document attendance during at least the first couple weeks of class. Failure to attend class will result in a delay in the disbursement of your financial aid and incur the wrath of the administrative bean counters.

Disability Access:

The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students who need accommodations must be registered with Student Disability Services, Ferrell Commons Room 185, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.

- SEE NEXT PAGE FOR THE LECTURE, READING AND EXAM SCHEDULE -

- **Lecture, Reading and Exam Schedule (Subject to change):**

| Week | Date | Lecture Topic¹ | Chapter |
|-------------------------|----------------------------|---|----------------|
| 1 | January 09, 11 | Introduction Introduction to Planet Earth | 1 |
| 2 | January 16, 18 | Plate Tectonics and the Ocean Floor | 2 |
| 3 | January 23, 25 | Marine Provinces | 3 |
| 4 | January 30, February 01 | Marine Sediments | 4 |
| 5 | February 06,08 | Tuesday, Feb 06 = EXAM 1 (CHs 1, 2, 3, 4) Water and Seawater Chemistry | 5 |
| 6 | February 13, 15 | Air-Sea Interactions | 6 |
| 7 | February 20 February 22 | Ocean Circulation Virtual IRL Symposium – Study Day | 7 |
| 8 | February 27, 29 | Waves and Water Dynamics | 8 |
| 9 | March 05, 07 | Tuesday Mar 05 – Exam 2 (CHs 5, 6, 7, 8) Tides | 9 |
| 10 | March 12, 14 | Beaches, Shoreline Processes, and the Coastal Ocean | 10 |
| Spring Break | March 19, 21 | Spring Break (No Classes) | |
| 11 | March 26, March 28 | Marine Pollution Marine Life and the Marine Environment | 11 12 |
| 12 | April 02, 04 | Tuesday April 02 = Exam 3 (CHs 9,10,11,12) Biological Productivity and Energy Transfer | 13 |
| 13 | April 09, 11 | Animals of the Pelagic Environment Benthic Ecology Meeting - Study Day | 14 |
| 14 | April 16, 18 | Animals of the Benthic Environment The Oceans and Climate Change | 15 16 |
| | | | |
| Finals | April 30 | Tuesday, April 30, 2024 10:30 am - 11:50 am*** = Exam 4 (CHs 13, 14, 15, 16) | |

¹ The dates of these topics serve as a guideline and are subject to change.

*****NOTE***** The final exam will occur at the same time and location as our normal lectures/exams.